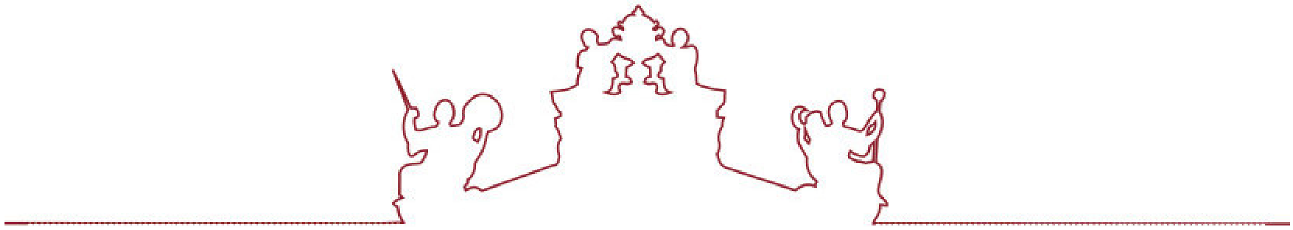

Universidade de Évora - Instituto de Investigação e Formação Avançada

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Universidade Nova de Lisboa - Escola Nacional de Saúde Pública

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Tese de Doutoramento

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A tese de doutoramento foi objeto de apreciação e discussão pública pelo seguinte júri nomeado pelo Diretor do Instituto de Investigação e Formação Avançada:

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Évora 2021

To my beloved family

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ABSTRACT

Patient-centred care (PCC) as idea, process and practice

This thesis contributes to the stream of studies that indicate a transformation of the future education of medical professionals to better address patients' needs and promote a positive attitude towards patient-centredness in medical education. The main goal is to identify the characteristics of patient-centred care (PCC) as ideas, processes, and practices from a medical student's perspective in Portugal and Sweden. The comparative study aims to answer where the differences between these two students' groups stand within PCC education, patient-centred beliefs, and self-perceived ability to practice PCC and, specifically, how Portuguese medical students perceive Portuguese PCC practice and potential barriers. Quantitative (questionnaires) and qualitative data collection (curriculum analysis and interviews) are performed. Curriculum analysis indicates that learning about the PCC phenomena in both countries is fragmented across the various courses, considering that in Portugal a significant number (40%) of courses are elective. While the Portuguese curricula focus on the knowledge, the Swedish encourages skills development. Medical students show more caring than sharing attitudes in both countries, and female medical students have a more positive attitude toward PCC. Previous work experience does not affect the attitudes of a medical student to the PCC; nonetheless, it does affect the self-perception of medical student confidence in the information and power-sharing segment and dealing with communicative challenges. Portuguese students consider that the barriers to the implementation of the PCC in Portuguese practice come from the system, doctor, and patient. The implications of the study findings are discussed concerning both wider theoretical perspectives and practical solutions for policymakers and doctors on these aspects of their work. The present study reveals the need for developing an *In-Service PCC Guide* with all the key elements and activities that reflect the essence of the PCC concept in practice, and that could help medical students when they start their daily practical work with patients.

Keywords*: medical education; patient-centred care; medical students; medical practice*

RESUMO

Cuidado centrado no paciente (PCC) como ideia, processo e prática

Esta tese contribui para a corrente de estudos que apontam para uma transformação, no futuro, da educação dos profissionais médicos para melhor atender às necessidades do paciente e promover uma atitude positiva em relação à centralização no paciente, da educação médica. O objetivo principal é identificar as características dos cuidados centrados no paciente (PCC), nomeadamente ideias, processos e práticas na perspetiva dos estudantes de medicina em Portugal e na Suécia. O estudo comparativo realizado visa conhecer as diferenças entre esses dois grupos de estudantes relativamente à educação/formação em PCC, as crenças centradas no paciente e capacidade auto percebida de praticar o PCC; e ainda, compreender como os estudantes de medicina portugueses percebem a prática portuguesa do PCC e as potenciais barreiras à mesma. Foram realizadas recolhas de dados quantitativos (questionários) e qualitativos (análise curricular e entrevistas). A análise curricular indica que a aprendizagem sobre o fenómeno PCC nos dois países está fragmentada nos vários cursos, sendo que em Portugal grande parte (40%) ainda integra currículos optativos. Enquanto o currículo de português se concentra no conhecimento, o sueco incentiva o desenvolvimento de habilidades. Os estudantes de medicina mostram atitudes mais carinhosas do que compartilhadas em ambos os países, e as estudantes femininas têm uma atitude mais positiva em relação à PCC. A experiência anterior de trabalho não afeta as atitudes do estudante de medicina em relação à PCC; no entanto, afeta a autopercepção da confiança do estudante de medicina no segmento de partilha de informações e poder e de lidar com os desafios comunicativos. Os estudantes Portugueses consideram que as barreiras à implementação da PCC na prática portuguesa vêm do sistema, do médico e do paciente. As implicações dos resultados do estudo são discutidas em relação a perspetivas teóricas mais amplas e soluções práticas para os formuladores de políticas e para os médicos, sobre esses aspetos de seu trabalho quotidiano. Este estudo revela a necessidade de desenvolver um "In-Service PCC Guide" com todos os elementos e atividades que refletem a essência do conceito de PCC na prática e que possam ajudar os estudantes de medicina quando iniciam o seu trabalho prático quotidiano com os pacientes.

Palavras-chave: *educação médica; cuidados centrados no paciente; estudantes de medicina; prática médica*

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List of Acronyms and Abbreviations

AHRQ	Agency for Health Research and Quality
APA	American Psychological Association
CAHPS	Consumer Assessment of Health Plans Survey
CBE	Competency-based Education
CHO	Consumer Health Organizations
EBP	Evidence-based Practice
ESPCH	European Society for People-Centred Health Care
GPCC	The University of Gothenburg Centre for Person-centred Care
HADS	Hospital Anxiety and Depression Scale
IAPO	International Alliance of Patients' Organization
IMAI	Integrated Management of Adolescent and Adult Illness
IOM	Institute of Medicine
MeSH	MED-LINE Subject Heading
NHS	National Health Service
NPM	New Public Management
NPS	New Public Service
NQB	NHS National Quality Board
OECD	Organization for Economic Cooperation and Development
OMA	Ontario Medical Association
PCC	Patient-centred Care
PCERI	Patient-Centered Education and Research Institute
PPOS	Patient–Practitioner Orientation Scale
PPP	Public-private Partnership
PCQ-infertility	The Patient-Centredness Questionnaire- infertility
QMS	Quality Management System
QoL	Quality of Life
SDM	Shared Decision-making
SEPCQ-27	Self-efficacy in Patient-centredness Questionnaire-27
VBHC	Value-based Health Care
WHO	World Health Organization

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Chapter 1

ORIENTATION TO THE STUDY

1.1. INTRODUCTION AND BACKGROUND

Patient-centred care (PCC) is one of the dimensions of a broader high-quality health care concept along with safe, effective, timely, efficient, and equitable care that is strongly interconnected in everyday practice (IOM, 2001). In the literature there seems to be no agreed definition of PCC; yet, all available definitions of PCC and patient-centeredness have a common attribute - the patient is understood as the primary driver of health care, and the patient's experience of health care is seen as the vital element of the concept. Mostly, PCC is defined as health care that establishes a partnership among practitioners, patients, and their families to ensure decisions are made that respect wishes, needs, and preferences of patients. The Eight Picker Principles of PCC: *Respect for Patients' Values, preferences and expressed needs; Coordination and Integration of Care, Information, Communication and Education; Physical Comfort, Emotional Support and Alleviation of Fear and Anxiety; Involvement of Family and Friend; Transition and Continuity and Access to Care* comprehensively describe the dimension of PCC with embracing attributes. The most comprehensive arguments for taking a patient-centred approach from a quality-enhancing perspective include lower health-related costs, effective and efficient delivery of health services, improved patient satisfaction with care, rights and disease-related knowledge; yet, also to encourage patient responsibility for health status and behaviour, improve health outcomes and contribute to organisational learning (Bertakis & Azari, 2011; Groene, 2011; Castro et al., 2016; Robinson et al., 2008). Care considered to be patient-centric implies the absence of a 'one size fits all' approach because the PCC depends on the context and has specific characteristics of multidimensionality (Bensing, 2000; Kelly et al., 2013; Robinson, Callister, Berry, & Dearing, 2008; Schmid Mast, Hall, & Roter, 2007).

Understanding the characteristics of PCC facilitates the implementation and measurement of PCC. (Robinson et al., 2008). The experience of everyone who has received any kind of health care should be positive. PCC is a core component of a health care system that ensures that all patients have access to the kind of care that works for them (Davis, Schoenbaum, & Audet, 2005). However, there is a chasm between the types of care that patients should receive and the care that they actually receive (Bensing, 2000; IOM, 2001). The barriers to the achievement and delivery of a comprehensive and quality PCC originate at the individual level (individual coping strategies, physical and emotional well-being, skills and capabilities and attitudes towards PCC, lack of motivation and holistic view, interest, limitation of beliefs), from the organisation level concerning structure, strategy, process and culture and also the level of the healthcare system concerning regulations and patients' rights or the climate of policy (Hower et al., 2009). Besides, PCC practice is affected by a lack of shared understanding of teamwork, team coordination, and patient centrality in care (Esmaeili et al., 2014).

Although it was initially developed as a method of clinical care, the growing importance of PCC may be underpinned by a tendency to understand patient-centredness as a morally valuable and desirable feature of doctor-patient interaction (Duggan et al., 2006). Doctor-patient interaction in the negotiation model involves elements from consensus and conflict models, reflected in the expectation of both the doctors and patients, to demonstrate the different behavioural patterns (Bury, 1997). Principles of ‘new public management’ (NPM) and ‘new public service’ (NPS) provide an excellent opportunity for restructuring the relationship between doctor and patient from doctor-centred to patient. With increasing time and productivity pressures affecting health professionals, the relationship between the doctor and the patient often undermines the quality and organisation of health services. However, the quality of medical services is not only linked to the personal factors of the patient and the doctor, but also to factors related to the organisation and system of health care (Mosadeghrad, 2014).

Positioned between a patient on the one hand, and health system and organisation on the other, a new generation of medical doctors to develop set new competencies to complement existing ones (clinical competencies) is required. Within NPM and NPS approaches, doctors appear to have a new position as a conduit between patient and a system requiring continuous self-improvement and ability development (e.g. leadership and new management skills) towards more excellent knowledge and action latitude. The literature review on the definition of PCC competencies presents difficulties, such as defining the PCC phenomenon. The core competencies of the PCC, which are required of all health professionals, are defined as the ability to understand the patient’s perspective, to guide patients to appropriate sources of information on health and healthcare, to educate patients on how to protect their health and prevent the occurrence or recurrence of disease, to elicit and take into account patients’ preferences; communicate risk and probability information, to share treatment decisions; to support self-care and self-management; to work in a multidisciplinary team and to manage time effectively (Coulter, Askham, & Parsons, 2008). Competencies could serve as a foundation for health care training for the 21st century, possibly implemented in a variety of well-established training contexts, including pre-service education, continuing education or in-service experience (WHO, 2005). Some medical schools that are currently introducing curriculum changes are also beginning to focus more on non-cognitive factors as part of their student selection processes, such as communication skills.

1.2. DESCRIPTION OF THE PROBLEM

Academics and practitioners scrutinising patient-centeredness for several decades. The health system is a dynamic entity, and all actors need to be taken into account. Scoping the review of available literature has helped us to identify three aspects of PCC's approach in the literature (Chapter 3): patients, providers (patients' family, organisations, and medical staff) but much less from the perspective of medical students as the future medical staff. The doctor-patient relationship, as an integral part of medical care, had already been recognised in the early '50s by Balint (1957); however, this subject gained further attention in the early '80s in Engel’s work (1980). The doctor remains the most powerful element in any kind of health care system as long as patients do not boycott the profession, which is likely never to happen (Anderson, 1979). In a way, Kitson (2002) raises the question of our expectations for a health professional to deliver PCC politely and respectfully. All health professionals should be trained to deliver PCC as members of an interdisciplinary team, emphasising evidence-based approaches to quality improvement practices and informatics (IOM, 2003). Verheij (2011) argues that medical care, by definition, is patient-centred because health care professionals are trained to listen and take their patients seriously while caring for them. However, the education of future medical professionals in medical schools neglects the need for education to improve their communication skills, humanistic attitudes, and professional values (Haidet et al., 2002). The situation is even more urgent since the average number of doctor consultations per person increased in many EU countries from the year 2000 onwards; yet, the duration of the consultation is lengthier in some countries, as is now the case in Sweden, which means that doctors and patients enter into longer and probably better quality interactions (OECD, 2016).

The importance of the medical workforce in the new century is recognised in the WHO publication 'Preparing a health care workforce for the 21st century: the challenge of chronic conditions' (2005) calling for the transformation of future training of the workforce to meet the needs of patients better. Health care workforce abilities and skills refer to the PCC as one of five competencies. From our point of view, professional competence goes beyond clinical competence and encompasses a set of soft skills and PCC competencies in health care (see Chapter 4). To establish a capable, qualified and proactive health service, more attention needs to be paid to the PCC. Research still indicates significant deficiencies and perhaps insufficient attention, focusing on the role of future medical forces in implementing strategies to improve patient-centredness. Monchy et al., (1988) argue in favour of encouraging a positive attitude towards patient-centredness in medical student education and the PCC as part of the early years’ curriculum. Nevertheless, educating students about the concept of PCC is not sufficient *per sé* and will not ensure that students adopt PCC; therefore, students need to learn about their self-efficacy in providing PCC care in clinical settings based on Young et al. (2012) argumentation. Self-efficacy beliefs have received increasing attention in the field of educational research. Patient-centredness is a belief in one's capability to organise and execute the course of action required to manage prospective situations (Bandura, 1995). Self-efficacy depends upon a person's self-awareness and ability to create connections between values and actions (Gaufberg et al., 2014). There is no evidence in the literature on medical education of students' attitudes towards PCC and their self-reported competencies in providing PCC. To identify the characteristics of the PCC as an idea, process and practice, we wanted to assess the attitudes of medical students to the PCC and their self-perceived effectiveness in providing PCC care. Through an opportunity to discover what the attitudes of medical students are and how they perceive their ability to act in a patient-centric manner, we will be able to understand how they would contribute to PCC operationalisation in practice.

We believe that if we measure the student's self-efficacy beliefs, we will be able to get a clue as to his actions regarding patient-centred practice based on the argument that attitudes and actions exist in a kind of balance (Duggan, Geller, Cooper, & Beach, 2006). Although it is difficult to difficult to ascertain a direct relationship between attitudes and behaviour, it is still an essential puzzle for future predictions, but it is based on the framework for clinical assessment "*knows - knows how -shows how - does*" (Miller, 1990). Owning a variety of attributes, such as theoretical knowledge and practical skills, does not ensure that work is carried out correctly (Sandberg, 2000). Nevertheless, we believe that medical students are an endless source of information about PCC as an idea, process, and practice coming from their experience in practice.

Internal value systems shape the attitude of a person. No study in our knowledge reveals data on the importance of PCC domains for a group of medical students. In line with the previous studies, it is assumed that medical students attribute different values to the elements of the PCC and that there is a difference between the two countries (Portugal and Sweden). It is of importance to know what future medical force values as an essential PCC element. It will be possible to correlate with their attitudes and self-perceived competencies. In line with the above-mentioned negotiating model of the doctor-patient relationship, we are looking for insight on how future doctors understand what the phenomenon of the PCC is, how they perceive the phenomenon during their study and practice, what they see as the key advantages/disadvantages of implementing the concepts of the PCC, what they consider as possible obstacles for the performance and guideline for improvement. We believe that this study is the first to assess attitudes and self-reported competencies in the PCC in these two contextually different countries, Sweden and Portugal, in the group of medical students in their final years of education.

1.3. RESEARCH AIM AND QUESTIONS

The main objective of the research study is to identify the characteristics of the PCC as ideas, processes and practices. In particular, the aim is to answer the following questions:

- To what extent do PCC phenomena exist in the curricula of medical students in Portugal and Sweden; are there any differences between countries and what are they?
- Is there a difference between medical students from Portugal and Sweden in their belief in the PCC as an idea, process and practice, and in their self-perceived ability to practice PCC?
- What do medical students in Portugal see as the advantage of learning about and applying PCC and what do they recognise as barriers to PCC in practice?

1.4. SCOPE OF THE STUDY

PCC, as an idea, a process and a practice as complex social phenomena, goes beyond the personal meaning that requires us to extend it from a variety of perspectives. In the theoretical part, there is a connection between the actualisation of PCC phenomena and their operationalisation in practice through different models; yet, we identified actors and a set of factors that, in different ways and intensities, contribute to the existence of this phenomenon in practice. In the research process, we used literature from a variety of disciplines, such as medicine, education, sociology, business and management. We have identified many theoretical and empirical findings that confirm that beliefs and attitudes, together with self-perceived competencies in PCC, construct practice in a clinical setting. In addition to the comparative analysis and discussion of medical curriculums from Portugal and Sweden, we have chosen to examine the perspective of future medical doctors - Portuguese and Swedish medical students, expecting to obtain from them variable and valuable information on PCC in terms of theoretical means and practical implications for health and education policy improvement.

1.5. OVERVIEW OF THE RESEARCH METHODOLOGY

Our research is based on an interdisciplinary approach, which is designed as a cross-sectional study within an interpretative paradigm. To answer each question, we needed to apply multiple methods as described in the *Study research map* (*Figure 10*).

Methods of data collection. We used a scoping review method as an appropriate method to quickly map key concepts and attributes underpinning the research area and the main sources and types of evidence available (Mays, Roberts, & Popay, 2001). Due to the complexity of the PCC phenomenon, this method is chosen to identify the relevant literature expected to deliver in-depth and broad results on the PCC phenomenon as an idea, process, and practice (Arksey & O'Malley, 2005). However, scoping review was used to identify research gaps in existing literature where no (sufficient) research has been conducted, to summarise and disseminate research findings, and to identify the relevance of full systematic review in specific areas of research (Arksey & O'Malley, 2005). Besides, we chose to carry out a systematic review of medical curricula to show how medical universities train students to gain PCC competencies. In comparative research, we examined in detail the available medical programs and course contents of eight medical faculties in Portugal and seven medical faculties in Sweden. Following the eighth dimension of Picker's PCC, we searched for a specific course that deals extensively with the PCC concept or any of the eight dimensions of the PCC and courses that provide a medical student with theoretical knowledge and practical skills related to the PCC. To answer the research question about the beliefs and attitudes of medical students towards PCC and their self-perceived competencies in the provision of PCC, we chose a quantitative study. Firstly, for measuring medical students' self-perceived competencies in the provision of PCC, we used the Self-efficacy in Patient-centredness Questionnaire (SEPCQ-27) developed by Zacharie et al. in 2015. The questionnaire includes 27 questions divided into three factor groups: Factor 1- Exploring the patient perspective (10 items); Factor 2- Sharing information and power (10 items) and Factor 3- Dealing with communicative challenges (7 items). SEPCQ-27 is a five-point Likert scale with response options from 'to a very low degree' (0) to 'to a very high degree' (4). Second, given that the previous scoping review resulted in several methods and techniques that measure the beliefs and attitudes of medical students towards PCC, we decided to carry out a systematic analysis. The aim was not to assemble a complete body of instruments used to measure the beliefs and attitudes of the PCC, but rather to draw a sample of questionnaires and studies reflecting the beliefs and attitudes of medical professional students and health professionals about the PCC that we will use in our research. A systematic literature search was conducted following two questions (1) Which instruments were used to measure students' attitudes and beliefs toward the PCC? and (2) What were the methodological characteristics of previous empirical studies on the topic? Given the nature of the study, we reviewed empirical research connected to healthcare and health care education, from 1996-2016 available in the literature using PubMed and CINAHL electronic databases. The inclusion criteria were peer-reviewed articles and empirical studies, published in English focusing on medical or nursing students while exclusion criteria were duplicate texts; non-empirical studies (editorials, letters, conceptual papers); studies connected to other (no)medical specialities as students of pharmacology, and material published in a language other than English. A total of 16 studies were identified that met the inclusion criteria as it is presented in the Prisma Flow Diagram (*Figure 12*). The analysis of the methodological characteristics of the empirical studies included the name of the authors, year, the instrument(s) used, purpose, study design, sample and the key findings (*Table 9*). Our systematic review reveals Patient–Practitioner Orientation Scale (PPOS) as an instrument the most frequently (9 out of 16 studies) used to measure PCC beliefs and attitudes in different culture and contexts. The PPOS developed by Krupat et al. (1999) contains two subscales: Sharing (9 items) and Caring (9 items), designed as a six-point Likert scale with response options range from Strongly Agree (1) to Strongly Disagree (6) whereas higher scores correspond to more patient-centred attitudes. Two standardised questionnaires were accompanied by a set of additional questionnaires, including a set of socio-demographic questions (gender, age, country/university, previous work experience, level of parent education). We used already validated questionnaires in English firstly, to prevent problems with the validation process such as low response rate participants and low psychometric questionnaire characteristics; secondly, the linguistic and semantic sense of the PCC can be confusing once it has been translated; and, thirdly, medical students very much respond to empirical evidence in English. To answer our research question and understand medical students' beliefs, attitudes, and experience with the PPC phenomena, we have decided to conduct a qualitative data collection through a semi-structured interview. Based on the important topics discussed in the literature in the form of seven themes, each was developed in a series of specific questions that appear as important for an in-depth discussion with students in light of content analysis (APPENDIX IV). To verify the suitability of the question and to improve the interview technique, it was tested in a carefully examined pilot interview. After the introductory part and the student agreement to follow up on the interview, all the interviews began with a single, open-ended question: 'Have you ever heard of the term patient-centred care?'. The first set of questions deals with the subject of defining the concept of PCC, the second PCC as a process, and the third set of questions deals with the subject of the student experience in the practice of PCC. The fourth set of questions concerns students' beliefs about the role of students and doctors in the practice of PCC, while the fifth concerns the competencies of PCC that doctors should have. The sixth set of questions related to how medical students learn about PCC, while the seventh sets out their opinions on possible appropriate solutions for improving PCC in the country's health care system.

Population and sampling. Medical students have participated in the quantitative part of the research in their final years of study because they may have acquired non-clinical knowledge from (hidden) curricula in the course of medical studies and have already practised and contacted patients during clinical practice in clinical settings. Medical students (n=205) have been recruited from two countries: Portugal (n=138) and Sweden (n=67). Participants were medical students in their final years (4th, 5th, and 6th year) from the medical faculties in Lisbon, Portugal (the University of Lisbon and NOVA University of Lisbon), and one in Linköping, Sweden (Linköping University). Observing a gender distribution in the total sample, the majority of participants 64.6% were female (n=135) and 35.4% male (n=70) with an average age of 24.3 years. Most of the total sample of medical students (67,3%) did not report prior work experience, which is not the case in Sweden, where 2/3 of students had some kind of work experience. Medical students came from parents with a high level of education. A number of 10 medical students from two Portuguese medical faculties based in Lisbon who were in their final years of study (the same inclusion criteria as quantitative studies) participated in the qualitative research of the study. Similar to the quantitative data collection, the percentage of female students (70%) was higher than that of males (30%).

Data analysis. Quantitative data analysis is based on the level of the factors for the finding of a correlation between two PPOS and three SEPCQ-27 factors for both the total and the Portuguese and Swedish samples (*Figure 13*). Nevertheless, the social-demographic factors of the student were correlated with PPOS and SEPCQ-27 and their subscales and factors, respectively. Version 24 of the Statistical Package for Social Sciences (SPSS) for Windows was used for data analysis. Qualitative data were analysed using the content analysis method and the QDMA Miner Lite program. Content analysis as a research method is designed to provide new insights and understanding of a specific phenomenon, and to gain a broader and more condensed description of the phenomenon, as well as to describe and quantify the phenomenon. (Moldavska & Welo, 2017). All data fits into seven predefined themes in the interview guide (deductive analysis). Since the data for each of these dimensions is extensive, we use the deductive method to identify categories and inductive methods to determine the subcategory (Johnson, Onwuegbuzie, & Turner, 2007). However, eight Picker dimensions of the PCC have served as a model of analysis in some themes.

1.6. ETHICAL CONSIDERATIONS

The research was approved by two Ethical Committees: The University of Evora (n°150/20) and NOVA Medical School (n°27/2016/CEFCM). Research at the Faculdade de Medicina da Universidade de Lisboa was authorised (e-mail from 01/06/2016) while the Medical Faculty at Linköping University did not have the approval requirements for data collection in this study. Medical students were invited by e-mail to participate voluntarily in the study. Data collection was anonymous, and information obtained from the medical student's response was kept confidential during and after the entire research study process. For quantitative data collection, we used a program with a feature to determine the link that leads students directly to the pool without disclosing any personal data. It was only possible for the researcher to use personalised credentials to access the quantitative database. In qualitative data collection, we used the Informed Consent for Medical Students. Before starting the interview, the medical student had the opportunity to learn more about the project by talking to the researcher or contacting the researcher by e-mail or phone, as indicated in the Inform Consent. During the interview, students may skip the question or stop at any time if any problems arise; However, even after the completion of the data collection procedure, students had the opportunity to withdraw their consent. For Skype interviews, we used a free version of the 'ALMOTO' program call recorder for Skype that does not support video recording. Even when we used a video call simulating face-to-face conversation, only audio data was recorded after the students had been given permission to start the interview, keeping their identity anonymous.

1.7. DEFINITION OF KEY TERMS

Patient-centred care (PCC) is health care that establishes a partnership among practitioners, patients, and their families (when appropriate) to ensure that decisions respect patients' wants, needs, and preferences and that patients have the education and support they need to make decisions and participate in their care (IOM, 2001).

Self-efficacy refers to an individual's belief in the capacity to execute behaviours necessary for producing specific performance (Bandura, 1977; 1995) and confidence in the ability to exert control over one's motivation, behaviour, and social environment (Carey & Forsyth, 2009).

1.8. STRUCTURE OF THE STUDY

Chapter 1 provided a brief overview of the rationale for, and methodology for, the study, the research objective and questions. Chapter 2 illustrates the ongoing discussion on the emergence of PCC in the 21st century (even though phenomena are not new) and the positioning of phenomena within the conceptual trichotomy disease-illness-illness and 'doctor-patient relationship' negotiation model. Chapter 3, in a multidisciplinary approach, outlines the different theoretical perspectives and examples of PCC models and defines the theoretical framework of the research study. We started by conceptualising PCC phenomena by reflecting on ongoing discussions about how PCC phenomena are explained, existing conceptual analysis, and highlighting the difference between interchangeably used concepts, such as patient satisfaction. Examples of practice-based PCC frameworks that help identify actors, their roles at different levels of health care, and examples of favourable behaviour considered to be patient-centric are also provided. Adopting Picker's eight dimensions of PCC as a model in our study, we discuss these eight dimensions in more detail. Scoping review helps us to identify attributes for each dimension. Chapter 4 explains the health and medical education policy aspects of the PCC and the context of this study. It begins by addressing the PCC phenomenon in the context of the two dominant approaches of the New Public Management (NPM) and the New Public Service (NPS), in which emerging PCC calls and PCC-related competencies have occurred. In a systematic review, we looked at teaching and learning patient-centred care in undergraduate medical curricula in Portugal and Sweden. The research methodology, starting with an explanation of the research design, the process of collecting and analysing the data, is described in Chapter 5. Results obtained from systematic curriculum analysis are presented in Chapter 6. Quantitative data generated by medical students from Portugal and Sweden are presented in Chapter 7. Qualitative data from interviews with Portuguese medical students are presented in Chapter 8. Chapter 9 also included syncretisation and discussion of the results of the three datasets. Concluding, Chapter 10 includes synthesised study results, identifies several significant findings that respond to research objectives and questions and provides a set of theoretical and practical implications.

Chapter 2

EMERGENCY OF PATIENT-CENTRED CARE

INTRODUCTION

In Chapter 2, our efforts are focused on understanding the current ongoing discussion among researchers and available information on the phenomena of patient-centred care (PCC). We intend to reveal the reasons behind the emergence of the PCC (Section 2.1.) and becoming a matter of the importance of the 21st century, even though it has existed for decades (Section 2.4.). Besides, we discuss the PCC phenomena in the context of conceptual trichotomy disease-illness- sickness (Section 2.2.) and as part of the 'doctor-patient relationship' negotiation model (Section 2.3.).

2.1. EMERGENCY OF PCC: WHY NOW?

The phenomenon of patient-centred care (PCC) itself is not new. As some authors argue, the root of patient-centredness in health care is possible to find in the Hippocratic oath 4000 BC. “The oath dictates the obligations of the physician to students of medicine and the duties of the pupil to teacher. […] the physician pledges to prescribe only beneficial treatments, according to his abilities and judgment; to refrain from causing harm or hurt, and to live an exemplary personal and professional life“ (Encyclopaedia Britanica). The doctor-patient relationship expressed in this document is somewhat limited to the doctor's medical knowledge and his behaviour toward the patient's safety and relatively far from what the PCC phenomenon is considered to comprise nowadays.

The cradle of PCC, how it is understood nowadays, can be found in the literature from the '60s and '70s. PCC as a contrast to “illness-centred medicine” was introduced by Balint, M. Hunt, J. Joyce, D. et al. (1970) for the first time to bring attention to patient perspective in health care as a matter of importance, ‘understanding the patient as a unique human being’ and opposing a general apprehension of medicine as being ‘disease-centred’. A comprehensive distinction between three central concepts in the theory of health- disease, illness, and sickness- is provided by Andrew Twaddle. Twaddle (1994, p.7), explains distinction among these three concepts in a comparative framework which encompasses five dimensions: definition, action system, key signs and symptoms, primary data sources, and main statistical measures. According to Twaddle (1994), the disease is a physiological malfunction and sickness is more of social identity (individual defined by others and their social activity); nevertheless, Illness is a subjective definition of health status on the basis of body state perception and feelings of competence and consists of an individual's internal experience which cannot be known other than through an individual's report or expression. Besides, he argues that disease and illness match two different theories- disease with positivism and illness with idealism because reality is what we experience subjectively; what is 'objective' can be known indirectly. In the case of a disease, the action system is an organism and key symptoms are physiological changes. For the illness, it is personality and feeling state changes, while for the sickness, the action system is society and changes in health status as defined by others. Twaddle states that these three concepts - disease, illness, and sickness - have three sources, overlapping on an individual level. They are collection of measurements of state (direct and indirect) and statistical measurements. In the case of disease, laboratory tests and observation are direct, interviews of the subject and others are indirect sources while disease rate is recognised as the primary statistical measure. In the case of illness and sickness, interviews with the subject and others are the main sources, and, as in the case of illness, interviews with the subject are a direct source and the indirect source is interviews with others. The sickness includes an observation of interaction as a form of direct source. Self-reports of symptoms and self-rating of health status are the main statistical measures, that can be accomplished either by social survey techniques or interviews in clinical settings (illness case).

2.2. POSITIONING PCC PHENOMENA

Some authors argue for conceptual trichotomy disease-illness- sickness- and the importance of distinguishing differences between the concepts. Bury (1997, p.20) in his book “Health and Illness in a Changing Society” recognised the opposition between illness and diseases as one of the major topics in medical sociology during the '70s. According to him, illness and disease express duality between, on the one hand, what is considered to be lay beliefs, subjectivity, and the world of patients, and, on the other hand, knowledge, objectivity, and the world of medical professionals. He expresses concern about a possible trap of falling into treating all lay ideas as if they are true and expert ideas as inherently suspect. Previously, Kleinman (1988) provided a conceptual distinction in the constructs of the disease, illness, sickness trichotomy from the medical anthropology perspective concerning emphasising the role of cultural context on this difference. According to his argumentation, disease is an underlying malfunctioning of biological and psychological systems, while illness, as a more social construct, presents the reaction to the disease by the patient, family, community, or practitioner. Kleinman argues that infection, as a purely social concept that belongs to a cultural context, has a more significant impact on lay health than on the biomedical category and provides an example of asthma or schizophrenia when sickness can be analysed in terms of its disease or disease components. Following the constructs trichotomy of disease, illness, sickness, we argue that the PCC phenomenon with its characteristics and attributes have their own place within the illness construct.

2.3. PCC PHENOMENA AS AN INTEGRAL PART OF 'DOCTOR-PATIENT RELATIONSHIP' NEGOTIATION MODEL

Another phenomenon that has importance in PCC construction in history is a ‘doctor-patient relationship’. The doctor-patient relationship and the essence of its engagement became the subject of scholarly and public discussion in the 1960s and 1970s. Bury (1997) states that the 'doctor-patient relationship' has a root in the UK context and development of general practice (family doctor). Based on the sociological work post-Second World War, he provides us with a summary of three models of 'doctor-patient relationship': (1) *consensus*, (2) *conflict,* and (3) *negotiation* models. (1) The Parsons-based *consensus model* is a work that has understood that the doctor-patient relationship is based on trust and consensus, although he was aware that this could be problematic in modern life. (2) The *conflict model* is recognised in Freidson's theory, which saw 'medical dominance' in the doctor-patient relationship and suppressed conflict, as did Parson's perception of legitimate authority and trust in that relationship. Conflict arises from the fact that patients and doctors inhabit two different socio-cultural worlds and realities, which is why patients with illness and a doctor with disease conflict were likely to be a structural feature, not merely a function of poor performance. (3) The *negotiation model* includes the elements of consensus and conflict models, and the doctor-patient relationship is 'emergent.' The emergence of this model reflects the expectations of both doctors and patients that they can demonstrate different behavioural patterns. Bury (1997) identifies the offers in this model that come from both sides. On the one hand, the doctor and his behaviour are aimed at providing clear information on treatment options and their risks and benefits. The patient is on the other side and will be willing to assess information, ask questions and take more responsibility for accepting/refusing treatment options. This model assumes the presence and degree of conflict, as well as the willingness to work towards an agreement.

Bury's argument (1997) has limited the doctor-patient relationship in the process of determining and developing social change. Each of the doctor-patient models presented is decontextualised in the literature and does not refer sufficiently to environmental changes where this relationship takes place, but rather to the context of modern medical practice. According to Bury, this means practically that the patient has an active role in the negotiation model, but this model does not provide us with enough information about changes in the cultural and political context.

Bury (1997) identifies three sources of change that have a particular impact on the doctor-patient relationship: (1) Challenges in illness patterns are linked to the increasing prevalence of chronic illness, the growing importance of self-help groups, the process of patient negotiation and active illness management. Bury (1997) argues that this challenge implies increased patient confidence and experience in self-management and reduced doctor's authority in illness and treatment. In these circumstances, someone can see the doctor-patient relationship conflict and negotiation model as an option. (2) The decline of the medical authority due to the dissemination of medical information and the decline in the influence of social movements, while at the same time increasing legal, managerial and consumer challenges to medicine. Bury (1997) argues that medical dominance and medicalisation are enhanced characteristics of modern society and that the doctor-patient relationship is one of a number of relationships that people can form in addressing health and illness issues, forming part of a more 'reflexive' and pluralistic social structure. He gave us the British example which introduced a consumer-led approach in the National Health Service (NHS) by launching the "Patient's Charter" (consumerism in health care) and managerial changes in organisation and outlook to make the service more patient-oriented (managerial revolution). (3) A rapid increase in the assessment of health care with respect to accountability. Bury (1997) argues that, alongside consumerism and managerialism, the role of research and evidence in health care is increasing. However, it is not clear how this affects the relationship between the doctor and the patient. In his opinion, the conflict may arise from a doctor's desire to keep patients informed while maintaining the demand for treatment and medical knowledge of the disease under their control. As a potential alternative, Bury sees the negotiating paradigm between the doctor and the patient in such a way that the doctor tells the patient the advantages and disadvantages of the procedure, while the patient trusts the doctor's clinical judgment. Bury points out that the doctor-patient relationship challenge is followed by another change related to the transfer of power to other professional groups, such as nurses, lawyers and managers.

2.4. GROWING IMPORTANCE OF PCC PHENOMENA

Although PCC phenomena has been around for a long time in the history of doctor-patient relationship, it was not recognised until almost five decades later. Over the decades, there has been a shift in considerations around the basic principles of how doctors should look at patients and how clinical care should be performed in a more patient-centred manner (from conflict and consensus to a negotiation model). Several reasons for the growing importance of PCC can be identified, referring to Bury's sociological view of an increased interest in quality of life (QoL). According to Bury (1994), the reasons are possible to find: (1) in the changing demographic profiles and health characteristic of ‘late modern’ society; (2) in ‘political economy’ and its relation to health care policy and the concept of ‘restructuring of welfare’; and (3) in a cultural context. (1) Bury's first argument is based on the fact that the social context has an impact on health and disease change. He also followed Rosenberg's (1989) dichotomy of "frames and framers" of disease. Rosenberg, according to Bury's interpretation, states that "frames" related to health and disease are human and social products that are affected by disease experience and its impact. Bury argues that the importance of the QoL concept arises from real changes in experience, growing population ageing and chronic illness for all stakeholders-individuals, carers and providers. (2)

The second reason lies in a changing economic and political context and an increased link to 'value for money.' For Bury, the tension between social and clinical medicine was part of a more comprehensive transformation of health and welfare systems in the English context in the late 1970s and early 1980s. Health care has become more extensive and expensive with the result that the interest in efficiency and effectiveness of health services has been a concern for politicians who wanted to reduce public health expenditure. Shortly after that, the QoL measure shifted from the economic to the managerial and health policy domain as a potential factor for shaping policy regulations. (3) The central part of Bury's third reason relates to arguments about the growing expansion of information as part of the rapid institutional and everyday transformation of life, as well as moving away from survival concerns to 'standard living.' There appears to be a clear need to build on such approaches in a way that takes us 'beyond the pill,' to develop far more adequate levels of service for those who endure the heavy burden of illness (Miles & Asbridge, 2013). In response to WHO's observation that healthcare has become more scientific and increasingly depersonalised, a European Society for People-Centred Health Care (ESPCH) was established in 2014. Medicine is good for science, but humanism is limited, and the division between the 'care' and 'cure' roles of medicine diminishes its work and does not improve it (Miles & Asbridge, 2013).

Although it was initially developed as a method of clinical care, the growing importance of the PCC may be underpinned by a tendency to understand patient-centredness as a moral concept, which is precisely the moral value and desirable feature of doctor-patient interaction as identified by Duggan et al. (2006, p. 271). The analysis of Duggan et al. (2006) considers patient-centredness in the context of three major schools of ethical thought focusing on the different features of the PCC: (1) *Consequentialist moral theories* focus on positive outcomes of providing the PCC or decreased cost; (2) *Deontological theories* emphasise how many of the features of the PCC are consistent with important ethical norms and principles, such as the ethical principle of respect for persons and shared decision-making based on the ethical principle of respect for autonomy; the outline of duties, ideals and standards of conduct must be upheld because they are considered to be inherently correct; and (3) *virtue-based moral theories* (occupying the middle ground between consequentialist and deontological theories) focus on a doctor's moral capacity for self-reflection and a desire to understand better and to adopt those attitudes and dispositions that have a positive effect on their behaviours. The moral commitments inspire the doctor’s patient-centric behaviour; therefore, the doctor treating the patient in the PCC manner is the way for good clinical but also ethical practice (Duggan et al., 2006).

2.5. Summary

In this chapter, we illustrate the prominent position of the PCC phenomenon in social and moral theories. In line with Rathert and May (2007), who argue that PCC has begun to take shape through communication and shared decision-making between patients and physicians, we argue for PCC phenomena as part of the negotiation model proposed by Bury. We believe that communication, shared decision-making processes (as a form of shared power) and trust in doctors are vital characteristics of the PCC phenomenon and a precondition for establishing a patient-doctor relationship within the negotiation model.

Chapter 3

PATIENT-CENTRED CARE: CONCEPTUALISATION AND OPERATIONALISATION

INTRODUCTION

In Chapter 3, our aim is clarification and conceptualisation of the PCC phenomena. We identify concepts that are often used interchangeably with PCC phenomena, their inherent multiple terms, and identify similar and different attributes that distinguish the PCC concept *per sé*. Due to its nature, we approach this phenomenon from various perspectives based on the interprofessional literature available (medicine, psychology, social science, management). We reflect on an ongoing discussion in the literature on how PCC phenomena are defined, existing conceptual analysis, and what distinguishes PCC from other interchangeable phenomena (Section 3.1. and 3.2.). Further, we discuss PCC frameworks, give examples of models from various healthcare areas, highlighting the actors, their roles on a different level of health care, and favourable behaviour considered as patient-centric (Section 3.3. and 3.4.). Moreover, in light of conceptual analysis, we discuss the teaching of the eight domains recognised as an essential part of PCC phenomena and their attributes (Section 3.5.1.-3.5.8.).

3.1. UNPACKING PCC PHENOMENA

Exploring the phenomenon of patient-centred health care, we came across a wide range of other phenomena which are used interchangeably, such as: "*person-centred care", "patient-satisfaction", "patient-friendly care", "individualised-care", "client-centred care", "resident-centred care", "consumer-oriented"*. McCance et al. (2011) state that in the healthcare literature there is an evident use of the PCC term as one related to person-centred care which appears to refer to a similar idea. PCC is also used to describe some other phenomena such as patient empowerment (Castro, van Regenmortel, Vanhaecht, Sermeus, & van Hecke, 2016). Terms are conceptually similar as they are putting the patient, person, family in the centre of health care, but there are differences in attributes that determine patient-centred care as phenomena *per sé.* Morgan and Yoder (2012) find that the main argument for such a variance lies in the context in which care is provided; accordingly, hospitals use the term *patient-centred care,* whereas nursing homes use *resident-centred care*.

In health science, particularly in nursing literature, most of the authors applied Walker and Avant's concepts analysis method (Nuopponen, 2010). This method represents an organisational framework in the process of concept development which encompasses eight iterative steps: "select a concept, determine the aims or purpose of analysis, identify all the uses of the concept that you can discover, determine the defining attributes, identify a model case, identify borderline, contrary, invented, and illegitimate cases, identify antecedents and consequences and define empirical referents" (Walker & Avant, 2011, p. 160). The concept is not as words, but as a mental image of a phenomenon; it is an idea or a construct of a thing or an action (Walker & Avant, 2005). By following this idea, Beckwith et al. (2008) argue that the core of the concept cannot be captured in words; therefore, the concept has its pure expression only in the mind of the individual. Cronin et al. (2016) argue that the words used in language are not concepts themselves, but how they are articulated and communicated; therefore, there needs to be a common consensus on the meaning of the concept to communicate efficiently or to gain understanding. Further, Walker and Avant (2005) observe the dynamics of one of the characteristics of concepts mainly due to the exponential growth of knowledge and the subjective (analysis) interpretation of knowledge.

Although there are no strict rules for conducting a concept analysis, some guidelines for carrying out this method would include clarification of the definition of attributes, antecedents and consequences of the term used in theoretical and operational definitions (Nuopponen, 2010; Walker & Avant, 2005). The attributes of a single concept are the essences of the concept derived from the necessary and sufficient conditions, which remain unchangeable over time (Rodgers, 2000b in Cronin et al., 2016). The ultimate aim is to be able to describe ideas in such a simple way that their true meaning can be determined in respect of any circumstance or entity (Cronin et al., 2016). The difficulties of concept analysis in health care science are due to the existence of concepts that are not objects (e.g. social support, health, trust, adherence, distress) and the possibility that they may invoke substantially different images depending on their context; in many cases, definitive measurements cannot be made (Cronin et al., 2016).

3.2. INTERCHANGEABLE PHENOMENA

In the following lines, the existing analysis of the PCC concept will be reviewed. The following also covers how patient-centred health care differs from related concepts and borderline terms of patient satisfaction and person-centred care. These bordering concepts are of great importance as they are interchangeable with the PCC concept and may influence the identification and collection of data that we have experienced in some way. Our findings are the results of a comprehensive review of literature from diverse cultural backgrounds in Europe, America, Australia and Canada. The ongoing discussion on the concept of PCC is followed by the identification of leading players and stakeholders in patient-centred care delivery. The PCC, as a phenomenon, is approached from different perspectives and is positioned in the context of other phenomena.

3.1.1. Patient Satisfaction

Patient satisfaction as a term has been referred to as Consumer Satisfaction from the period 1966-1991 and as a term has appeared in the literature of the National Library of Medicine since 1992. According to the definition of the MED-LINE subject heading (MeSH), patient satisfaction is the degree to which the individual regards the health care service or product or how the provider delivers it as useful, effective, or beneficial. Patient satisfaction has been defined as an individual's positive evaluations of health care dimensions (Linder-Pelz, 1982) and of a received service where the evaluation contains both cognitive and emotional reactions (Flisser, Scott, & Copperman, 2007). Patient satisfaction emphasises more evaluation of the service received, rather than including all aspects of care. As Kupfer and Bond (2012) point out, patients are not always able to evaluate the clinical competencies of medical staff; therefore, they tend to rely on those peripheral elements that occur in the course of patient encounters — the kindness and quality of personal interactions as such. They underline the fact that many providers use patient satisfaction surveys as a tool to assess the quality of care provided but remain open to question whether those patients who show higher satisfaction also received better care and experienced improved health outcomes. Patient assessment does not reflect the patient's experience with care, and, in that sense, patient satisfaction is not a comprehensive concept, but could instead be considered complementary to PCC. However, in addition to the perception of patient experience as a means of assessing healthcare delivery, it is recognised as a method for measuring patient-centredness (Edwards, Duff, & Walker, 2014).

3.1.2. Person-Centred Care

The phenomenon that seems to be more challenging to distinguish in such a strict manner is 'person-centred care.' Simultaneously, with increasing familiarity within the health and social care at the global level, the body of literature on person-centred care is growing (McCance et al., 2011). Despite ongoing academic debate on how to develop this concept, Broderick and Coffey (2013) underscore evidence of lack of clarity and understanding. However, some authors do make a significant contribution to the patient-centred concept of clarification. Miles and Asbridge (2013) argue in light of the discussion of science with humanism, so the term 'person' is preferred over the term 'patient' because the patient is not a dependent subject, but rather an autonomous individual rich in biography. Furthermore, the word 'person' captures the attributes that represent humanity and how we build our lives (McCance et al., 2011).

According to McCance et al., 2011, the person-centredness concept has been introduced through humanistic psychology and the work of Rogers (1980) and Heron (1992) and has to describe a standard of care where the patient is at the centre of care delivery. Being aware of, what they call 'proliferation of terms' used to reflect person-centredness in the review of nursing literature, they define person-centred care as the formation of specific, therapeutic relationships between professionals, patients, and others who are important to them, and that these relationships are built on mutual trust, understanding, and sharing of collective knowledge (McCance et al., 2011). Based on the previous literature review, McCance et al. (2011) argue for four core person-centred nursing concepts: (1) *being in relation*-the concept involves embracing interpersonal processes that enable the development of a relationship with therapeutic benefit; (2) *being in a social world* considers persons to be interconnected with their social world, creating and recreating meaning through their being in the world; (3) *being with self* is closely linked to being in a social world and emphasises the importance of persons 'knowing self' and the values they hold about their life and how they make sense of what is happening to them and (4) *being in place* encourages us to pay attention to 'place', recognising the impact of the 'milieu of care' on the care experience. Also, Morgan and Yoder (2012) argue that care should be individualised around the person regardless of the setting of health care (context in which care is provided) as the delivery of care itself tends to be consistent. McCance et al. (2011) agree on the apparent multidimensional character of a person-centred concept and that being a person has a central position. Some questions remain open and unexplained such as: what distinguishes persons from non-persons, what makes us unique as human beings, and how do we engage with the world.

This interdisciplinary concept is the subject of numerous policy papers and has been defined by several organizations that have at the core of their study the notion of person-centred care. For example, person-centred care refers to a more holistic approach to care that considers the individual as a whole, including preferences, well-being and a broader social and cultural background, not just their condition or symptoms (de Silva, 2014). The person-centred care derives from the patient's experience of his situation and the specific conditions, resources and constraints; hence, it represents a partnership between patients/caregivers and professional caregivers based on the patient's narrative, which, together with the physical examination and test results, contributes to the mutual care plan (goals, implementation and follow up) (GPCC, 2019). Person-centred care emphasises the importance of experience as patient-centred care, but it has a much more sophisticated approach to using a person's narrative to develop a more comprehensive care strategy (GPCC, 2019). The boundary between concepts is blurred; nevertheless, differences appear to exist in the light of a holistic approach to the person in need of care. In the literature, however, there is a concept of family-centred care that underpins the concept of person-centred care. Family-centred care has been defined as a way of caring for children and their families in health facilities that ensures that treatment is provided for the whole family, not just the specific child/person and that all family members are respected as caregivers and recipients (Shields, Pratt, & Hunter, 2006 in McCance et al., 2011).

3.3. PATIENT-CENTRED CARE (PCC)

Patient-centred care (PCC) phenomena become increasingly familiar in health care at a global level, whereas different actors in the health care arena have defined the concept in many ways. The term has been used in American nursing since the 1970s (McCance et al., 2011). A vital attribute of all available PCC definitions is the subjective experience of the patient. Patient-centredness as a term introduced in 1993 is defined by the MED-LINE subject heading of the National Library of Medicine (MeSH, 2020) as the design of patient care where institutional resources and personnel are organised around patients rather than around specialised departments. The recommendations for improving health care set out by IOM, the lack of definitions by health professionals, but also the need to understand the fundamental elements of PCC as essential in the provision of health care today, explain the importance of the need for a conceptual analysis of these phenomena.

We take a look at a comprehensive PCC concept analysis based on a comprehensive literature review for which Walker and Avant's conceptual analysis method was used. Lusk and Fater (2013) provide a comprehensive analysis of the concept of PCC (in nursing settings). An analysis of the interprofessional literature used in their research (from nursing, medicine, social and psychological sciences, physical and occupational therapy) shows the complexity of the phenomenon. Research-based articles in English from 2001-2010 identify relevant information for the description of the PCC (e.g. variables) and relevant information for measuring the concept in practice (operational PCC definition) resulting in a total of 24 publications from Europe, North America and Asia. Lusk and Fater (2013) findings suggest that PCC is the essence of high-quality care with positive outcomes for all stakeholders in the care process (patients, organisations and healthcare professionals) and underpin the research on PCC with Watson’s (1988) nursing theory of the importance of interaction. According to their interpretation, nursing is a holistic practice where human care involves values, will, commitment to care, knowledge, caring action and consequences. Caring in nursing relates to inter-subjective human responses to health conditions, knowledge of health-illness, environmental, personal interactions, a knowledge of the nurse caring process, self-knowledge, knowledge of one’s power and transaction limitations. Authors argue for ten creative factors from Watson's theory that share commonality with the PCC namely: following humanistic-altruistic system of values, faith-hope, sensitivity to one’s self and others, helping-trust relationship, expressing positive and negative feelings, creative problem solving, caring process, transpersonal teaching-learning, supportive, protective, and (or) corrective mental, physical, societal, and spiritual environment, human needs assistance and existential phenomenological-spiritual forces (Watson, 1988 in Lusk & Fater, 2013).

Further, Lusk and Fater's analysis shows that the concept of PCC is used in health care and has been defined from multiple perspectives, while the most predominant themes are consistent with those identified in the public policy documents provided by the Institute of Medicine (IOM) and the Agency for Health Research and Quality (AHRQ). According to the documents mentioned above, PCC is a way of providing coordinated care that involves patients in the decision-making process and empowerment of patients, improving the quality of interactions between patients and health care providers, but it also includes advocacy and listening (IOM, 2001; IOM, 2011; AHRQ, 2001 in Lusk & Fater, 2013). Besides, findings from Lusk and Fater's (2013) analysis shows that the PCC concept encompasses communication and listening, together with teaching and learning as the key for the PCC provision. In addition to this, access to care, coordination of care, and control of costs are integral components of PCC. While the patient's need is recognized to guide PCC relationship development, the individual's preferences and expectations guide the PCC caring process (measuring physical, psychological, social, and somatic experiences). These individual preferences and expectations should be part of the patient's care plan built on the shared decision-making (SDM) process and individualization attribute.

The delivery of PCC depends on the patient care environment and the type of care provided, which ultimately influences the definition of PCC (Lusk & Fater, 2013). Lusk and Fater (2013) identify three interconnecting attributes associated with PCC, most of which are related to patients and providers: *power, shared decision-making and patient autonomy*. Power refers to the dominance of one over the other and can be seen in the connexion between the health care provider (as an expert) and the patient, but in the power of patient autonomy, implemented through the process of shared decision-making (Lusk & Fater, 2013). According to them, power and shared decision-making appear to be characteristics of patient autonomy that are operational in the PCC concept. They provide an example of choosing the treatment that should be one shared decision-making process that includes health and experiential knowledge as well as patient preference and social responsibilities (if necessary). Besides, it refers to these concepts as caring factors of creative problem solving and transpersonal teaching-learning where autonomy gained by patients find meaning in their existence, improving their capacity to find internal control and solve problems (Watson, 1988 in Lusk & Fater, 2013).

Furthermore, Lusk and Fater (2013) underline two attributes inherent to healthcare providers: caring attributes and the importance of individualized patient care. First, the caring attribute "emerges as a reoccurring quality" (p.94) and in the nursing literature is defined as "a moral and ethical obligation […] which encompasses intention, commitment, attitudes, and actions […] faith-hope, sensitivity to one's self and others, helping-trust relationship, expressing positive and negative feelings, and human needs assistance" (Watson 1988, p. 75 in Lusk & Fater, 2013, p.94). Lusk and Fater argue for the abovementioned caring factors and importance in caring behaviour aspects associated with PCC. Caring behaviours are pivotal for understanding patient experience (Galland, 2006 in Lusk & Fater, 2013); therefore, it is difficult to speak about PCC if the caring behaviour by a health care provider is lacking. The second attribute, the importance of individualizing patient care, according to Lusk & Fater's interpretation of Wolf's et al. (2008) definition, represents one collaborative process for patient's physical, psychological, and social preferences, which, in the final instance, results in the patient's tailored plan of care towards achieving the goals of treatment defined in SDM process. Individualizing patient care attributes emphasizes the importance of relationship patient – health care providers. After a comprehensive analysis, Lusk & Fater (2013) summarize the findings into three main attributes of the PCC concept from the nursing perspective as: encouraging patient autonomy, caring attitude of the nurse, and individualizing patient care by the nurse. They posit that these three overlapping and continuous attributes are surrounded by other behaviours which they explain as a framework (*Figure 1*).

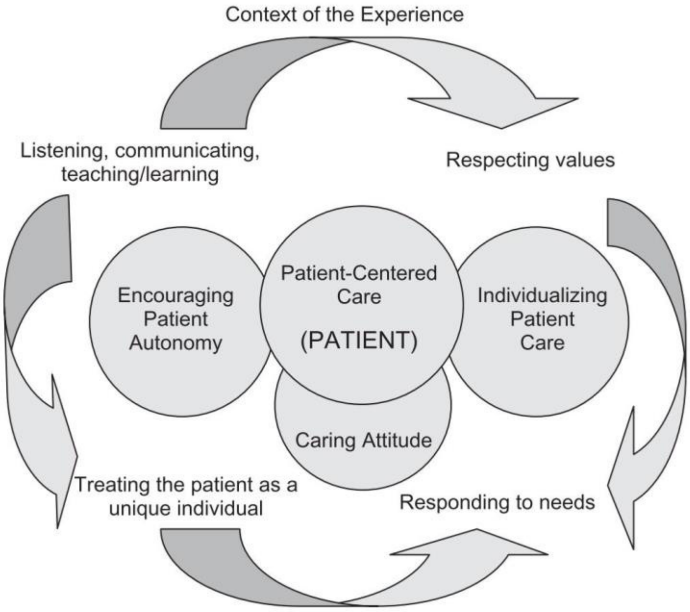

Figure 1. Attributes and Behaviours Needed to Provide Patient-centred Nursing Care (Lusk & Fater, 2013, p. 95)

Delivered from results, (Lusk & Fater, 2013, p. 97) provide a definition describing PCC in nursing settings as "health care provision in each context which encompasses nurse's caring attitude toward patient and his/her individualizing care as well as the attributes of empowering patient autonomy". This definition has been the subject of criticism, although the importance of Lusk's and Fater's contribution to defining PCC has been acknowledged. Richards (2015, p. 216) agrees with emphasizing PCC in light of "the personal interactions between the provider and the patient, and the importance of showing respect and treating the patient as a unique individual" but she is questioning autonomy as a central aspect of PCC and its operational definition through shared decision making; therefore, she calls for consideration of autonomy and its role in the decision-making process.

The second comprehensive PCC concept analyses are provided by Castro et al. (2016) based on Avant and Walker's (2005) concept analysis method and the simultaneous concept analysis of Haase et al. (1992). Castro et al. (2016) explore the differences among patient-centredness, patient empowerment and patient participation in a hospital setting. Findings were based on peer-reviewed papers in medical, sociological, psychological and nursing literature published in English for the period in the last ten years (2006-2016) and included 20 definitions of patient empowerment, 13 definitions of patient participation and 20 definitions of patient-centredness for further consideration. The Castro et al. (2016) analysis shows all these three concepts, closely connected due to historical roots and concepts' evolutions during time, yet has different interpretations (a theory, a process, an intervention, an outcome, a feeling or a paradigm) in interprofessional literature (e.g. psychology, sociology, nursing and social work). PCC has been approached from perspectives of various actors from the health care arena (the patient, the health care provider or the health care system) at several levels (micro-individual care; mezzo- development of service and its planning, delivery and evaluation and care provider education and training, and macro-policy level). Castro et al., (2016) posit PCC in between two other concepts: "patient participation is a strategy to achieve a patient-centred approach in health care, and patient-centredness seems to be a precondition to facilitating patient empowerment" (Castro et al., 2016, p. 9). A patient-centred approach is considered to be one of the important antecedents of patient empowerment (but not the only one) while patient participation, often used interchangeably in the literature, is seen as a key prerequisite for PCC and calls for the necessary patient competencies (knowledge, attitudes and skills) to participate actively in a dialogue with health care providers (Castro et al., 2016).

Patient participation and patient empowerment are not used interchangeably with PCC, but the understanding of these concept attributes is essential for the clarification and understanding of the PCC concept; therefore, there is a need for their explanation. Castro et al. (2016) argue for two aspects of patient participation and patient empowerment concept: from individual and collective perspectives. Individual patient participation emphasizes the patient's rights and opportunities to be engaged in the SDM process of his care guided by his preferences, experiences, and knowledge. Collective patient participation outlines an active patients' role in their representing organizations toward creating health care services by applying their knowledge and experience in all undertaken actions. While individual patient empowerment emphasizes the importance of increasing patients' competencies and awareness of the need to take over more control over their health-related issues, collective patient empowerment relates to group power to express the needs of patients' and the set of actions towards meeting these needs with the overall aim of improved quality of life (Castro et al., 2016). Understanding PCC as a consequence of patient participation and the precondition of patient empowerment, Castro et al. (2016, p. 8) posit patient-centredness (micro-level analysis) as "a biopsychosocial approach and attitude that aims to deliver care that is respectful, individualized and empowering. It implies the individual participation of the patient and is built on a relationship of mutual trust, sensitivity, empathy, and shared knowledge". Three core PCC attributes contribute to PCC definition according to Castro et al. (2016) as follows: (1) patient's biological, psychological and social dimensions, (2) treating the patient as a unique person by understanding patient's expectations, perceptions, and experiences, showing empathy, listening and treating patient with dignity and respect (it refers to term 'individualized care'); (3) sustainable and genuine patient-caregiver relationship based on mutually beneficial partnerships between the patient, his family, and the health care provider, and is characterized by open communication of knowledge. Castro and colleagues consider PCC promotes that patient empowerment is based on patient participation; therefore, the interconnection between their concepts is evident and needed in practice.

3.4. PCC DIMENSIONAL FRAMEWORK AND ATTRIBUTES

The lack of a universally agreed definition of patient-centredness has hampered conceptual and empirical developments (Mead & Bower, 2000); therefore, Constand et al. (2014) stress the need for clarity of definition, an operational PCC framework, and a joint agreement on what the key components of PCC phenomena are. These actions are pivotal in determining further evaluation of the PCC and ensuring fidelity when implemented, as this lack of theoretical and conceptual clarity has led to poor understanding and communication among researchers, health practitioners and policymakers, and problems in measuring and comparing studies across different hospitals (Castro et al., 2016). Hence, this results in heterogeneous use of the term, unclear measurement dimensions, inconsistent results on the effectiveness of patient-centred interventions and, finally, in difficulties with the implementation of the PCC (Scholl, Zill, Harter, & Dirmaier, 2014). These frameworks do not instruct health care providers in their day-to-day activities, but rather provide some sort of guidance for desirable and expected PCC behaviour, indicating at the same time the values of patient need and patient involvement in the shared decision-making process.

The PCC phenomenon had been on the margins of medicine for a long time until 1995 when Steward et al. provided the first comprehensive explanation of the PCC to put this phenomenon at the centre of clinical practice and medical education (Stewart et al., 2003). The patient-centred clinical method encompasses six interactive elements. The first three components focus on the interactive process between the patient and the physician and the second focuses on the context of the interaction between the patient and the doctor: (1) exploring both the disease (history, physical, lab) and the illness experience (feelings, ideas, effects on function and expectations); (2) understanding the whole person (the persons' life history, personal and developmental issues; the proximal context such as family, employment, social support; and the distal context such as culture, community, ecosystem; (3) finding common ground regarding management (problem and priorities; goals of treatment and management; roles of patient and doctor); (4) incorporating prevention and health promotion (health enhancement; risk avoidance; risk reduction; early identification; complication reduction); (5) enhancing the doctor-patient relationship (compassion; power; healing; self-awareness; transference and countertransference) and (6) 'being realistic' about personal limitations and issues such as the availability of time and resources (time and timing; teambuilding and teamwork; wise stewardship of resources) (*Figure 2*). The way in which the framework is implemented reflects the clinical method as a practice, but it also gives us an explanation of the characteristics of each of these framework components.

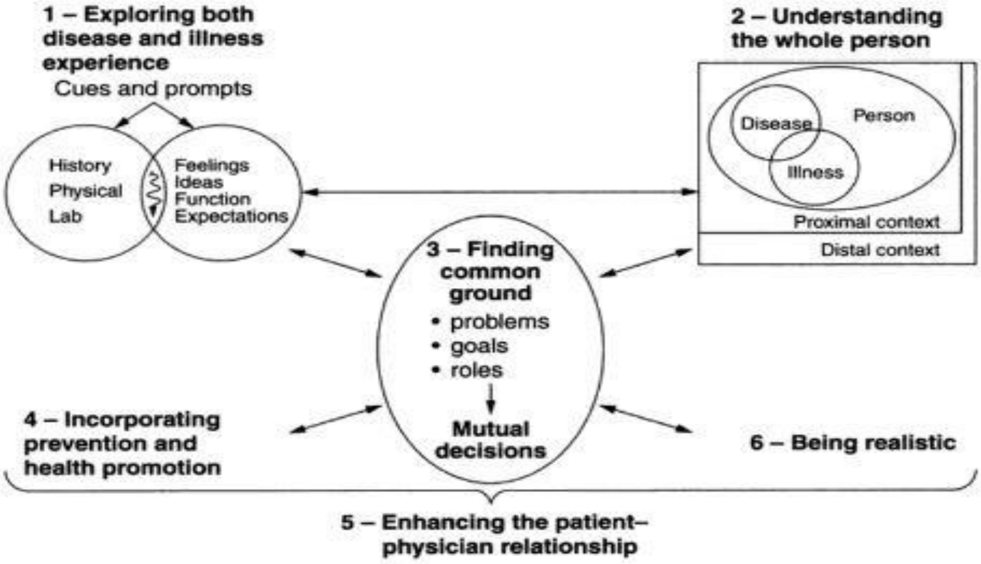

Figure 2. The patient-centred clinical method: six interactive components (Stewart et al., 2003, p. 6)

For example, the first component, which explores both the disease and the disease experience, is consistent with the discussion in Chapter 1. While the disease is a theoretical construct examined by conventional medical methods that result in the definition of diagnosis, illness is a subjective construction of a patient's personal experience of illness (Stewart et al., 2003). Stewart's argument that illness is a 'unique' and complex patient experience, encompasses four dimensions that are up to the doctor to explore: patient feelings (e.g. fear), ideas about what is wrong; what the effects of illness on their functioning are and patient expectations of the doctor; however, expanding the focus of research from disease to patient experience will provide a more successful, more meaningful and more efficient outcome for all participants. According to Stewart et al. (2003), the second component of understanding the person as a whole is the inclusion of multiple aspects of the patient's life – personality, life and developmental history, life cycle, but also the proximal context of the patient (family, financial security, employment, education, social support and leisure) and the distal context (geography, socio-historical, economics, health care, and ecosystem, community cultural, the media). Following an exploratory analysis that encompasses medical examination, the patient's personal means of illness, and the doctor's understanding of the patient as a whole, finding common ground is the next component proposed by Stewart et al. (2003). They recognize the third component as a point where the information sharing process begins, where further mutual discussion of the problem, potential treatment options and management objectives is based on the full responsibility of the doctor to define and describe the problem. In the light of significant changes, as the fourth component, all health professionals must use each contact to incorporate the prevention and health promotion aspects of patients through the use of a patient-centred clinical method as a facilitator of these actions. Health enhancement, risk prevention, risk reduction, early identification, and complication reduction depend on the patient's health status and commitment to these actions or processes. The fifth component focuses on improving the doctor-patient relationship by stressing the need for compassion, sharing power, trust and healing during encounters with self-awareness as a prerequisite and appreciation of transference and counter-transference as possible unconscious outcomes of the relationship. As a sixth component, a clinician must be 'realistic' about personal limitations and other issues such as availability of time and resources, time management, but also active participation in team building and teamwork, and understanding the importance of wise resource management.

The relevant PCC framework is provided by Mead and Bower (2000) shaped by the social and behavioural sciences and mostly developed by that time in general practice. Five dimensions of patient-centredness are defined as (1) a biopsychosocial perspective, (2) a patient as a person, (3) a shared power and responsibility, (4) a therapeutic alliance, and (5) a doctor as a person. According to them, a biopsychosocial perspective means that health care providers must broaden their attention from a biologically explanatory perspective on illness to include psychological and social aspects/factors that affect the health/illness of patients. This dimension is not sufficient *per sé*, and it implies the need for a medical professional to understand the patient as a person, in particular, the patient's personal meaning of illness. The patient's personal meaning of illness is multidimensional, although each dimension has a different meaning for each patient, which ultimately influences the patient's interpretation of illness. By understanding the individual's experience of illness and biopsychosocial characteristics, medical professionals have an excellent potential for a comprehensive understanding of illness, which should underpin the ideal of an equal doctor-patient relationship and shared power and responsibility. Mead and Bower (2000) argue that once there is a significant shift from passive recipients of medical care to increasingly active 'consumers,' patients are given the opportunity to practice rights, namely the right to be informed, to be treated with respect and dignity, and to participate actively in treatment decisions. Besides, the biomedical model of the therapeutic alliance is a function of the relationship between the physician and the patient, which includes: (a) the patient's perception of the relevance and potency of the interventions offered; (b) agreement on the objectives of the treatment; and (c) the cognitive and affective components of the relationship (e.g. the perception of the physician as caring, sensitive and sympathetic concerning the patient) (Roth & Fonagy, 1996 in Mead & Bower, 2000). In this relationship, a doctor is a person who brings a level of subjectivity and can influence this relationship by their own uncertainty; therefore, Mead and Bower call for attention because doctors are considered to be remediable through education and better instrumentation. According to Morgan and Yoder’s (2012) interpretation, the person-centredness of Mead and Bower is a core value of the quality of care, while the emphasis is on the doctor's understanding of the uniqueness of each person and his ability to create interpersonal relationships.

Scholl et al.’s (2014) literature review resulted in a clarification of the dimensions of the PCC to the development of a comprehensive model of patient-centredness, while each dimension highlights the importance of different aspects of the PCC. They have created a conceptual framework by identifying a dimension that reflects the conceptual dimension of 417 articles from North America and Europe. In the setting of PCC integrative model development, Scholl et al. (2014) specified the quality of each dimension by dividing the 15 identified dimensions into three main categories: (a) principles (e.g. fundamental propositions that lay the foundations for PCC), (b) enablers (elements that promote PCC) and (c) PCC related activities (e.g. specific patient-centred behaviour) mapped to different levels of PCC health care (the micro level- inside and around the clinical encounter: the mezzo level is the level of healthcare institutions, and the macro-level is legislation, policy, payment, regulation, and accreditation of healthcare). In *Figure 3*, the inner circle is the micro-level, the middle circle is the mezzo level, and the outer circle is the macro level of care. For Scroll et al., the principle relates to the fundamental proposal for the construction of the PCC, and therefore argues for four principles of the PCC: (1) the essential characteristics of the clinician; (2) the clinical-patient relationship based on collaboration; (3) the patient as a single person, and (4) the biopsychosocial perspective. According to Scroll et al. (2014), one of the cornerstones of the PCC model is the recognition of the importance for a doctor to retain a set of qualities in practice such as sympathy, respectfulness, tolerance, honesty, accountability, compassion, commitment to the patient, self-reflectiveness of the clinician (especially in emotional responses) and self-disclosure. Still, these qualities are not sufficient *per sé* for one doctor to be patient-centred. Besides, clinicians should have the professional expertise, basic psychological skills as well as a commitment to evidence-based practice (EBP) and to establish a relationship with patients based on collaboration and mutual relationship that is characterized by constancy, trust, relationship, mutual care, mutual knowledge, positive relationship building, guidance and mutual understanding. Further, Scholl et al. (2014) advocate understanding the patient as a unique person with his or her specific individual needs, preferences, values, feelings, beliefs, concerns, ideas, and expectations; who has an idea of how illness affects his or her daily life; the effects of illness on the patient and the family. Since that patient is unique by his biological, psychological, and social context, he is a unique person with proximal and distal context, referring to Mead and Bower (2000) and the clinician must be responsible for understanding these non-medical aspects of problems (Scholl et al., 2014). Also, Scholl et al. (2014) identify five enablers in their model as elements that foster PCC: (1) clinical-patient communication; (2) integration of medical and non-medical care; (3) teamwork and team building; (4) access to care; and (5) coordination and continuity of care. According to Scholl et al. (2014), interpretation, the manner of verbal and non-verbal communication between clinician and patient, can enhance patient-centredness where general communication skills play an important role: using open-ended questions, summarizing important information, asking the patient to repeat, making eye contact, nodding. In the care process, a clinician must be sensitive to non-medical/complementary medicine and be integrated with medical care (e.g. offering support services, such as self-help groups, psychological support during treatment). During the health care process, medical and non-medical care must cooperate between units, departments and healthcare institutions based on teamwork and team-building principles, which should lead to interdisciplinary and multi-skilled patient-centred teams, and advocate for the development of PCC teams through training and education programs. “Patient-centred teams are characterized by their ability to communicate, respect and trust among team members, mutually shared values, goals and visions, information sharing, constructive feedback, equal distribution of responsibility, accountability, and power and awareness of one’s own abilities and priorities" (Scholl et al., 2014, p. 4). Access to care as the enabler of PCC, according to Scholl and colleagues' interpretation, refers to the provision of appropriate and preferred access to care that is conveniently located for the patient (decentralized services, availability of transport) and that may be accessed in time; access to specialists or specialty services when referrals are made and clear instructions to patients on when and how to get referrals. In any case, care should be coordinated and continuous, e.g. front-line patient care with ancillary and support services, transitions from inpatient to outpatient or vice-versa, and providing follow-up.

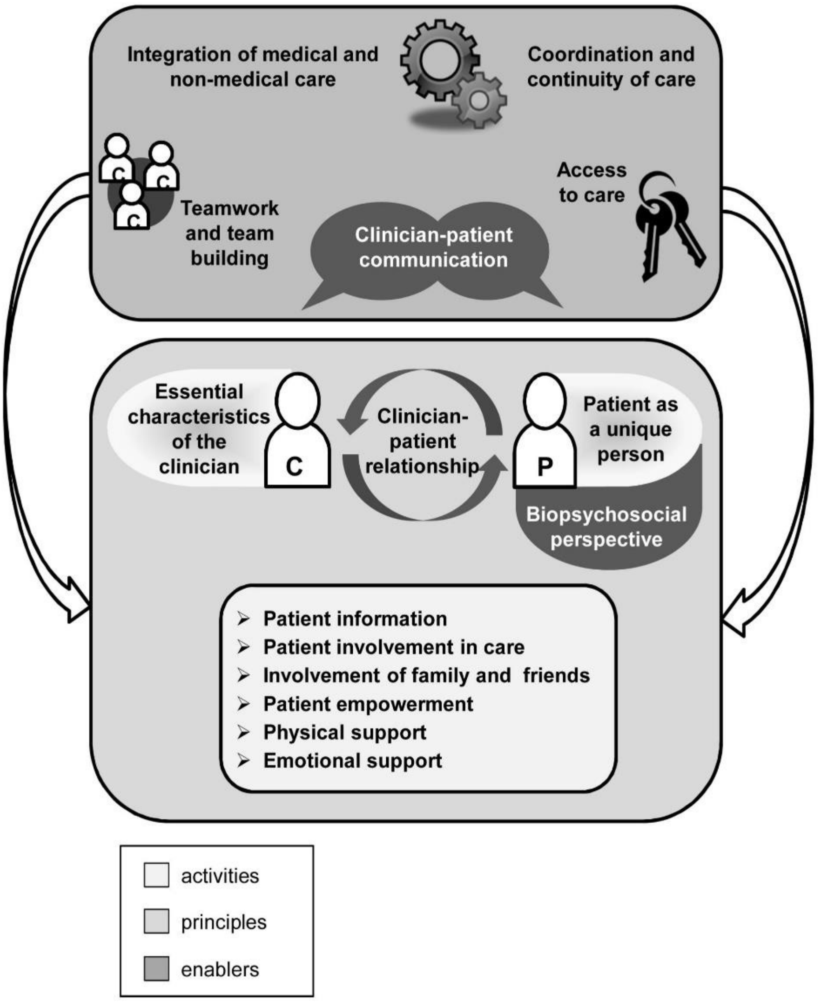

Figure 3. An integrative model of patient-centredness (Scholl et al., 2014, p. e107828)

Activities in an integrated model of PCC that is proposed by Scholl and colleagues (2014) is a set of six attributes related to specific patient-centred behaviour of the PCC and defined as (1) patient information; (2) patient involvement in care; (3) involvement of family and friends; (4) patient empowerment; (5) physical support, and (6) emotional support (*Figure 3*). The sharing of information between doctors and patients appears to be a reciprocal process with respect to different aspects of care and information on how to access different supports in the health care process. Scholl et al. (2014) argue that the activity of the patient in the PCC integral model is to provide the physician with information on symptoms and dilemmas, while the doctor uses this information to tailor specific information for the specific patient to meet the needs, values and preferences of the patient. The means of communication of the information is broad and can be supported by a set of available resources and tools (audio, video, multimedia, leaflets). Scholl et al. (2014) argue that patient involvement in care now plays a more proactive role for patients in the consultation process, while the doctor has a role to play in engaging patients in the decision-making process on their own health ('Sharing Power and Responsibility') and helping patients to make informed choices ('Informed Consent'), while, of course, respecting patient preferences for invoking. For Scholl et all. (2014), the family of patients and friends are certainly involved in care, and therefore the need for a variety of support, to be informed and to play an active role in the decision-making process on patient care (where the patient prefers or is in need) is prominent in building up the PCC. Scholl et al. (2014, e107828), explain patient empowerment as a "patient's perceived ability to self-manage important aspects of his or her illness, activating and encouraging the patient to take responsibility to solve health-related problems and to take actions to improve his or her health and becoming an expert regarding the management of his or her health condition". According to them, offering educational programs, patient activation and health promotion interventions are some of the actions of patient's empowerment. While physical support encompasses the actions of caregivers to provide physical comfort to the patient (e.g. managing pain, helping with activities and ensuring safe day-to-day care), emotional support focuses on emotional issues related to the physical status, treatment and prediction in the future, and the ability to overcome disease (medication, psychotherapy or teaching skills) (Scholl et al., 2014).

Furthermore, a qualitative exploratory study about the PCC concept conducted by Esmaeili et al. (2014a) based on the perception of 21 nurses from critical care units in educational hospitals in Iran, has resulted in three main themes: (1) acceptance and understanding the patient; (2) improved care as the result of skill and expertise; and (3) adherence to patients' rights charter. According to their findings, for nurses, PCC means accepting the patient as a human being, which further leads to enhanced communication and respect for the culture, customs, preferences and needs of patients during the treatment process. Moreover, being timely in responding to patient demands is a way of providing patient comfort and contributing to the value and dignity of the patient. Empathy about patients and their conditions helps to understand patients and expectations in the same way that nurses would expect from care if they were to be in the same condition as patients (Esmaeili et al., 2014a). During the patient care process, nurses recognized the importance of skills and expertise to improve care towards patient-centredness and regular improvement through training and specialized courses as a way to keep up-to-date knowledge. Nurses distinguish between two issues that contribute to the development of the PCC. First, managerial skills in caring are the skills of nurses who contribute to the PCC with timely follow-up (testing, counselling), provision of health care in order to avoid unnecessary hospitalization and associated costs, and follow-up of the patient after discharge, which, according to the nurse, leads to increased patient satisfaction. Second, the importance of getting acquainted with the patient, especially during their first encounter, is important for the achievement of the PCC. Nurses should be able to pay attention to the patient's medical history, to obtain comprehensive information about the patient's condition and the patient's awareness of the situation, which should result in the patient's tailored plan of care, followed by patient monitoring, regular communication with the patient and regular consideration of the patient's complaints (Esmaeili et al., 2014a). Adherence to and respect for patient's rights during the treatment process play an essential role in the achievement of PCC. Good quality care means a fair and humane provision free of social discrimination between patients, with the right of patients to choose their nurses, to obtain information on care and treatment, to educate them towards self-care empowerment. According to Esmaeili et al. (2014b), the PCC is affected by the holistic attention and understanding of the patient as a human being and his condition by positioning himself as a patient, avoiding harm and alleviating the pain of the patient during a collaborative and team-based care process; interpretation, coordination, and cooperation of all health care workers as well as a common understanding are effective strategies in achieving PCC as a means of interactive human communication with the patient and his family.

PCC phenomena do not have a uniformly accepted definition; however, the literature shows existing conceptual analyses based mostly on definitions provided by health professionals and researchers, but much less from a patient perspective. It is important to understand patients' understanding of PCC phenomena for conceptualization. Marshall et al. (2012) explored patient care experience at one surgical unit in Australia, which resulted in a comprehensive conceptualization of what the patient's PCC was. This phenomenological study allowed the patient to tell their personal story (experience) about the care they had received in their words and language, perspective, priorities and meaning to discover potentially hidden PCC attributes. When patients were speaking about their experiences with care, it was in light of (1) staff care provision and (2) the system in which staff operates (*Figure 4*).

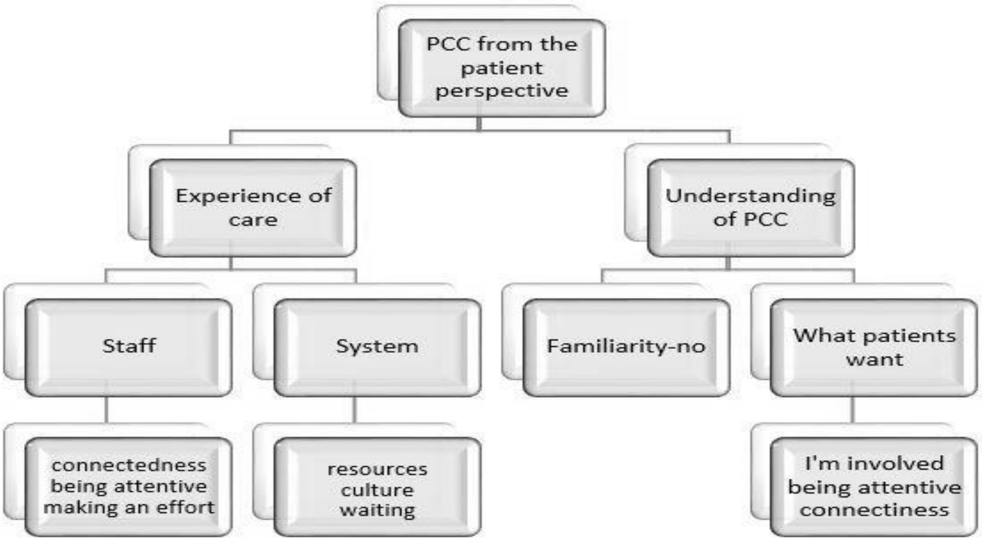

Figure 4. Patient-centred care from the patient's perspective (Marshall et al., 2012, p. 2668)

Results from Marshall et al.'s (2012) study show that a patient sees medical professionals as a collective entity without distinguishing them between professional groups like doctors and nurse. However, medical professionals are a synonym for care provision which encompasses elements of being attentive (including being helpful and timely); making an effort (including meeting needs and being pleasant); and connectedness (a relationship with the staff, good communication, and advocacy). Being attentive to the patient's perceptions means that the staff was helpful when they were called upon to respond promptly, the staff took time for the patient, checked on them regularly, asking about conditions, non-verbal communication, making the patient physically and emotionally comfortable. Behaviour, as such, creates a sense of care for a person; therefore, it explains the association between medical professionals and care for patients. Further, medical professionals' behaviour of being attentive, not just motivated but making an effort towards endeavouring to care for the patient, and sometimes beyond, was a need or required. As an integral part of PCC, patients preserved the relation and interaction between them and staff in a caring, understanding, and respectful way regardless of the structured nature of the relationship and the power differential. Humour has been linked to a doctor-patient relationship as a coping strategy and as a way to communicate with staff and feel engaged in the process of consultation, information sharing and equity. What is important to a patient is the feeling of being viewed as a person rather than just another patient. By being linked at a personal and professional level, there will be more trust and understanding between the patient and the professional (Marshall et al., 2012). In comparison to the positive experience with the provision of personnel services, patients have negatively reported environmental problems in which care experience has taken place. According to the study, Marshall et al. (2012) identified three key themes within the system dimension from a patient perspective that had an impact on patient experience but also on staff as follows: resources, culture, and waiting. Physical environment (hospital building, food, bedding), staff overload, perceived power disparity and waiting time as an endemic problem were integral parts of patient care experience within a given organizational context. When patients spoke about their perception of PCC, it was in the light of what they expected from treatment, but they did not know what the word PCC meant. From patient understanding, PCC means: (1) being involved; (2) being attentive; and (3) connectedness. The dimension of being involved, from a patient perspective, is quite complex. It relates to creating a sense of being actively involved in a decision-making process based on multi-directional communication, while their feelings and opinions have been properly heard and incorporated, along with medical expertise, to a proactive approach and information-seeking not only from ward staff, but also from other members. Patients expect staff to be attentive to consider the needs of patients and to 'meet' those needs based on prioritizing the needs of these patients over other activities and demands. Patients expect the workers to be linked at a personal level, with a free flow of contact and respect for values. Despite the lack of medical expertise, patients hold their experience on illness, body, needs and want; thus, they deserve to be regarded as equal partners in the treatment process and expect the staff to ensure that they advocate for the interests of patients.

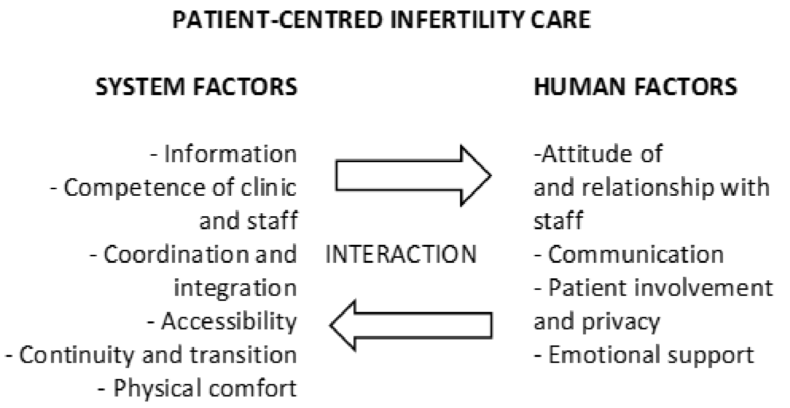

Figure 5. The interaction model of patient-centred infertility care (Dancet et al., 2011, p. 829)

A similar dichotomy is given by Dancet et al. (2011) who claim that there are 10 PCC dimensions (in infertility care) divided into the mechanism and human factors with current two-way interactions (*Figure 5*). System factors, in order of patient's priority, are the provision of information, the competence of clinic and staff, coordination and integration, accessibility, continuity and transition and physical comfort. Human factors include the attitude of and relationship with staff, communication, patient involvement, and privacy and emotional support (Dancet et al., 2011).

Evidence illustrates one main outcome at the operationalization level: care providers, and patients do not have a clear understanding of the PCC and its measurements. Caligtan et al.'s (2012) study demonstrates how secure PCC, information and coordination are a problem for urgent inpatient treatment from the viewpoint of patients and nurses. While patients listed as a priority information about the hospital environment, their health status, procedure and plan of care (activities, treatment plan, discharge), nurses were mostly concentrated on care, the importance of patients' safety and precautions (e.g. having information available at the bedside to protect the patients, manage the needs of the patient and his family, team communication). Other research from reproductive medicine reveals how patients and doctors have a distinct viewpoint on the relevance of patient-centredness for patients, while both appreciate the effectiveness of fertility treatment. For example, the success of therapy measured as evidence-based practice (e.g. birth rates) was comparatively more important to doctors. Patients were willing to trade-off a higher pregnancy rate for patient-centredness attitude than physicians recommended (in trade-off percentage around 10% for patients and around 6% for physicians). These findings are because patients assign considerable importance to the patient-centredness of fertility care as a process (in terms of attributes: physician's attitude, information on treatments and continuity of care, travel time of fertility care). Doctors significantly underestimate the importance of PCC to patients (e.g. patients perceived pregnancy rates 1.5 times as important as the doctor's attitude, while physicians perceived it 2.4 times). The main non-medical reason that affected patients 'decision to change the fertility hospital was a lack of patient-centredness, which is why van Empel et al. (2011) argue that patients' preferences should be taken into account in the process of providing high-quality care.

Kitson et al. (2013) reveal the core elements of PCC based on a narrative review and synthesis of the literature from health policy, medicine, and nursing care. The study included health policy documents (n=7), medical (n=22) and nursing studies (n=31) regarding PCC in the acute care setting for the period from 1990-2010. Three core themes were identified through the literature as a common attribute to the PCC concept: (1) patient participation and involvement, (2) the relationship between the patient and the healthcare professional, and (3) the context where care is delivered. Kitson et al. (2013) stress the gap in understanding of the PCC between various groups, in particular professional groups, which ultimately affect the effective implementation of the PCC in practice. Various professional groups tend to focus on different themes. Medical studies regarding PCC show a tendency to focus on the therapeutic relationship between the doctor and the patients, while health policymakers and nurses understand this relationship in the broader system and context; medical studies in the doctor-patient relationship put attention on understanding the nature of the informed decision-making process while nursing articles focus on respecting patients' values and beliefs in promoting PCC (Kitson et al., 2013). The authors identified also two existing gaps in the literature. The first is a lack of sufficient discussion about the personal skill set that professionals must hold in working with patients and the second, is related to physical and emotional comfort provision for patients. Kreindler (2015) went further in his study of the PCC phenomenon and found the PCC itself could be used to pursue conflicts between managers, health professionals, patient organizations and others, suggesting that a protentional tension between individuals is embedded in gaps in group interaction in the PCC definition. Even if groups believe in the importance of PCC, creating a system in which all groups work together for patients could be challenging. It is therefore essential to understand the PCC dimension to address the intergroup conflicts that impede the joint accomplishment of the PCC and the system.

3.5. MODELS OF PCC

Jayadevappa and Chhatre (2011) proposed a detailed PCC conceptual model (*Figure 6*). They describe PCC as a process with current multiple domains as inputs (different collection of attributes of all stakeholders as demographics and clinical features of patients, the degree to which patients desire to be engaged in decision-making, attributes of care providers) that eventually affect the choice of treatment, the process of care and outcomes. For Jayadevappa and Chhatre (2011), the PCC is a joint decision-making system between the patient and the doctor based on already shared information where the patient: 1) understands the risk or seriousness of the disease or condition to be prevented; 2) understands the preventive service, including the risks, benefits, alternatives and uncertainties; 3) has considered his values regarding the potential benefits and harms associated with treatment; and 4) has engaged in decision making at a level that he desires and feels comfortable with. According to a further interpretation, one of the main features of PCC is that service providers (doctors and nurses) tailor care to the patient's expectations and desires and strive to build trust in their patients.

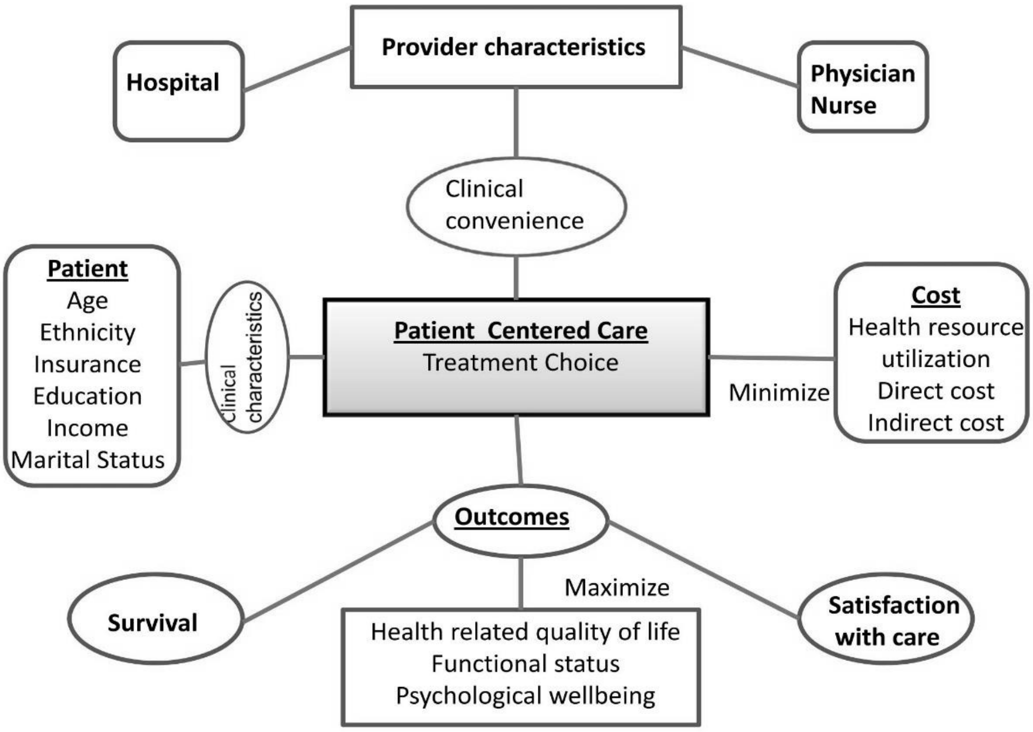

Figure 6. Conceptual model of patient-centred care (Jayadevappa & Chhatre, 2011, p. 21)

The goal is to improve the characteristics of micro-level patient-centred care by macro-level policy initiatives and incentives at the institution and system level to conduct practices linked to patient-centred treatment that involve an unanticipated level of dedication and substantial changes in organizational processes, the position of doctors and the confidence of patients (Jayadevappa & Chhatre, 2011). Multiple dimensions and diverse contexts of the operational models appear in the literature; thus, current patient-centred models display a lack of conceptual consistency. A review of the scientific and policy literature already demonstrate difficulties in the conceptualization of PCC phenomena and its operationalization in practice. Docteur and Coulter (2012) conclude that there is no standard, international agreement on the model in place. A certain number of models that are in use, each specifying different conceptual dimensions, applied models in different types (critical care, GP practice, cardiology, infertility) and levels of care (from primary, secondary, tertiary care, community care).

Literature offers an example of PCC in the primary care setting, specifically in family medicine. Stewart et al. (2003; 2005) describe a patient-centred clinical method in the primary care setting as a six components model. The first component of the patient-centred clinical method is the physician's exploration of two conceptualizations of ill health: the patient disease and illness experience. The practitioner tries to reach the world of the patient through the latter's limited assessment of illness (e.g. how he feels about being ill, how it affects his life, and what he expects of the doctor) as a complementary measure to the determination of the patient's disease process and medical examination. The second aspect of the clinical method incorporates the definition of illness and disease through the physician's view of the patient as a whole in his personal (personality, life cycle), proximal (family) and distal context (community and physical environment). The third aspect is known as the most critical component of the patient-centred clinical method because it forecasts favourable patient outcomes (Stewart et al., 2000). It includes finding common ground in the care process, as all stakeholders (patient and physician) play an active role in describing the problem, setting treatment or intervention priorities and establishing responsibilities for both of the actors. The fourth component underlines the importance of the doctor to make use of any patient experience to integrate prevention and health promotion activities. The fifth component goes beyond the practices listed above and includes the role of the doctor to use any patient interaction to create a patient relationship focused on compassion, empathy, trust, spirituality and sharing of power. The sixth component is the necessity for patient-centred practice to be realistic about potential personal constraint, while teamwork and time will assist in the execution of complicated tasks.

On a macro level, Glasgow et al. (2003) also address the concept of the PCC in the context of the 5As Model of self-management support (assess, advise, agree, assist and arrange). In WHO's Integrated Management of Adolescent and Adult Illness (IMAI) project, the '5As' approach to patient-centred health care means equipping health care professionals to deliver PCC in a way that is understandable and usable

(WHO, 2005). Guidelines and related training programs enable health care professionals to collaborate with patients and decide about their treatment priorities and care plans while respecting the interests and desires of patients and encouraging prevention, adherence to treatment and self-management. Effective health care implementation begins with the identification of patients and appropriate treatments based on the patient's willingness to comply.

Following the Picker's distinction of eight PCC dimensions (more in Section 3.6.), Silow-Carroll et al. (2006) developed a set of eight core components of a comprehensive PCC approach for the typically underserved in the U.S. health system (population with low-income, without security, immigrants, the elderly and racial and ethnic minorities): (1) *Welcoming environment:* The provision of physical space and an initial personal interaction that is "welcoming," familiar, and not intimidating (e.g. staff name tags, signs written in multiple languages, artwork within facilities that reflect the culture of underserved population, orientation and facility tour for incoming person); (2) *Respect for Patients' Values and expressed needs:* This component refers to obtaining information about patient's care preferences and priorities, informing and involving patients and family/caregivers in decision-making; tailoring care to the individual; promoting a mutually respectful, consistent patient-provider relationship; staff who are trained to accept patients in their circumstances; using a questionnaire as a tool for data collection about the patient's cultural, educational, and social background; (3) *Patient empowerment or "activation":* Educate and encourage the patient to expand their role in decision-making, health-related behaviours, and self-management by using set of different tools, such as health literacy workshops, group patient visits and seminars for community residents, inviting the patient to take active participation in the governance of the organization; (4) *Socio-cultural competence*: Understand and consider culture, economic and educational status, health literacy level, family patterns/situation, and traditions (including alternative/folk remedies); communicate in a language and at a level that the patient understands; (24/7 available interpreter; staff's recruitment based on the diversity and sensitivity of patients' background); (5) *Coordination and Integration of Care*: assess need for formal and informal services that will have an impact on health or treatment, provide team-based care and care management, advocate for the patient and family, make appropriate referrals and ensure smooth transitions between different providers and phases of care; (e.g. developed electronic information system; follow up of patient status from the first visit); (6) *Comfort and support*: emphasize physical comfort, privacy, emotional support, and involvement of family and friends (elimination of official 'visiting hours'; support to family members with accommodation). (7) *Access and navigation skills*: Provide what patient can consider a 'medical home', keep waiting times to a minimum, provide convenient service hours, promote access and patient flow; help the patient attain skills to navigate the health care system better; (e.g. provision of navigator for the health system; late night and weekend hours available; "open access" scheduling of seven days instead of one month; (8) *Community outreach*: Make demonstrable, proactive efforts to understand and reach out to the local community (establishing a partnership with local community, police, schools, religious organizations; developing screening programs and health promotion fairs) (Silow-Carroll et al., 2006, p. 4).

The study provided by Kelly et al. (2013) explored consumer health organizations (CHO) patient-centred policy on a macro level, related practice and organizational views on the potential value of pharmacy delivered PCC. Health organizations prefer to interpret PCC as a change from a paternalistic power-sharing approach to a partnership model that promotes patient participation and engagement in healthcare. Kelly et al. (2013) identified four dimensions of PCC from the consumer health organization perspective (*Figure 7*). The first is individualized care which means the absence of a 'one size fits all' approach; therefore, an organization needs to look for strategies to both identify and address the individual needs of consumers and carers (by exploring the patient journey, considering unique patient health concerns, personality). Factors underpinning individualized care are defined as follows: a partnership with patients through service delivery, the involvement of patients in the creation and implementation of programs and inter-organizational cooperation.

Figure 7. Key findings for individual elements of patient-centred care (Kelly et al., 2013, p. 452)

The second, holistic care domain for organizations means to consider the broader perspective of seeing the patient from the biomedical approach towards understanding the patient's wellbeing and psychosocial status while for patient it represents a proactive approach towards the understanding of patient social context (age, location, cultural believes), pivotal for creating the service around the patient. According to Kelly et al. (2013) argumentation, the health system is crucial for the provision of PCC because it can restrict comprehensive treatment through remuneration models driven by fee-for-service (e.g. fee for appointment or amount of medicines dispensed), generic government initiatives, lack of coordinated care and health professional education which can be seen as barriers to more widespread delivery of PCC. The third domain for Kelly et al. (2013) is respectful care, which requires the freedom to choose and the capacity to make informed decisions. The fourth category of empowerment in care covers a range from increasing the desire in patients for good health or reflecting on their understanding of chronic illness, to strategies that build patient capacity to engage further as a participant in their care (self-management) with potential constraints arising from the health care system. Nevertheless, they argue that a service provider perspective shows the disparity between policy and practice, which often declares to be more patient-centred it is in practice.

Greene et al. (2012) also established a universally applicable model for all care settings with three consistent dimensions that form an important part of PCC: (1) interpersonal, (2) clinical, and (3) structural (*Table 1)*.

Table 1. Dimensions and attributions of a patient-centred health care system (Greene et al., 2012)

Interpersonal dimension (relationship)	**Clinical dimension (provision of care)**	**Structural dimension (system features)**
Communication -Begins with listening -Creates a fabric of trust -Promotes clear, emphatic communication, tailored to patients' needs and abilities -Welcomes participation of family, friends, and caregivers	**Clinical decision support** -Ensures shared decision making based on best-available evidence coupled with patient preference -Supports self-management	**Built environment** -Provides calm, welcoming space -Accommodates patient, clinician and family needs -Emphasize easy 'way-finding' and navigation through the system
Knowing the patient -Uses knowledge of the patient as a whole and unique person for effective interactions -Finds common ground on the basis of patient preferences -Facilitate healing relationships	**Coordination and continuity** -Manages care transition and seamless flow of information-whether for a broken arm or life-altering illness - Coordinates with community resources	**Access to care** - Eases appointment-making process - Minimizes clinic wait times - Payment system accommodates patients' circumstances - Coordinated, consistent, efficient
Importance of teams - Ensures responsiveness by the entire care team to patient and family needs - Recognises that actions of both clinicians and staff can influence the perception of care	**Types of encounters** -Accommodates virtual visits (phone, e-mail) as well as in-office visits -Reimbursement structure supports a range of encounters that meet patients' varied needs	**Information technology** -Supports patient and clinician before, during, and after encounters -Track patients' preferences, values, and needs dynamically -Provides self-management tools and information

These three dimensions, with their actionable attributes, build a "culture of care" that is a very dynamic and living process (especially in large networks and organizations). The interpersonal dimension includes the quality of communication, understanding the patient, and the recognition that all team members affect the partnership of the staff with the patient. The attributes of the clinical dimension of (1) decision support, (2) coordination and continuity of care and (3) types of encounters are essential in the area of new management. As Greene and colleagues argue, patients need to be able to communicate actively with the medical professional at all times without ever leaving their home to consult with them and argue for this opportunity as cost and resource-saving for both parties. The structural dimension encompasses attributes related to the infrastructure of (1) facility environment but also (2) access to care and (3) information technology.

Trust and consistency are fundamental tenets of PCC that are reflected in all the attributes and all levels of care provision. A comprehensive and operative approach to achieving PCC should follow this model and actions and should build on consistency in care provision and on common trust between all the actors. No matter how a PCC model is designed, it plays an instrumental role for providers to minimise the cost of care and at the same time raise patient satisfaction in the high-quality care delivery process (Robinson, Callister, Berry, & Dearing, 2012 in Yancey, 2013).

3.6. DIMENSION OF PCC

The PCC concept is quite complex and multidimensional, thus there is a need to define PCC dimensions to enable measurement and quality improvement in practice. The PCC definition includes a variety of components that all can point in the same direction, but apply to different phenomena and various processes in the medical consultation process; based on what aspect of the definition people have in mind as they speak about patient-centredness, there may be various operationalisations that can allow for an analytical process (Bensing, 2000).

The Picker Institute, known as one of the leaders in conceptualization and operationalization of PCC, provides the most comprehensive and well-known PCC dimension differentiation arguing that all patients deserve high-quality healthcare and that patients’ views, and experiences are integral to improvement efforts. The Picker Institute raised the issue of what dimensions of patient care experience are most important to patients. Researchers sought answers to these questions through focus groups and telephone interviews with patients and their relatives from the United States. As a result of this survey, the Eight Picker Principles of PCC were defined as follows (1) Respect for Patients’ Values, Preferences and Expressed Needs, (2) Coordination and Integration of Care, (3) Information, Communication and Education, (4) Physical Comfort, (5) Emotional Support and Alleviation of Fear and Anxiety, (6) Involvement of Family and Friends, (7) Transition and Continuity and (8) Access to Care. A systematic literature review undertaken by the authors Cramm et al. (2015) did not reveal a new PCC dimension that could be added to Picker's model. The dynamics of the PCC phenomenon is reflected in the complexities behind the determination of PCC dimensions. The original PCC dimensions were given by Gerteis et al. (1993) under the sponsorship of the Picker Institute and, with a minor modification, adopted in the study by the Institute of Medicine (2001). For example, the coordination of care and the transition to care have been defined as separate dimensions by Gerteis and colleagues but is considered to be one dimension in the IOM study. The IOM report includes timeliness instead of access as a patient-centredness dimension (Docteur & Coulter, 2012). In the following lines, we discuss the main attributes of PCC domains by following the Picker's Institute model: Respect for Patients' Values, Preferences and Expressed Needs; Coordination and Integration of Care; Information, Communication, and Education; Physical Comfort; Emotional Support and Alleviation of Fear and Anxiety; Involvement of Family and Friends; Continuity and Transition; based on a comprehensive literature review on PCC dimension and the set of indicators provided by Berghout, van Exel, Leensvaart, & Cramm, 2015 and Cramm et al., 2015.

3.6.1. Respect for Patients' Values, Preferences and Expressed Needs

According to the Picker Institute, patients as individuals with their own medical condition and needs who are accepted and treated by medical professionals in an informed and decision-making manner are at the centre of this dimension. The Picker Institute distinguishes three attributes to this dimension as follows (1) Illness and medical treatment affect patient's quality of life; therefore, care should be respectfully provided in patient's individual atmosphere, (2) treating the patient with dignity, respect and sensitivity to his/her cultural values while (3) keeping patient informed and involved in the shared decision-making process regarding care process. Findings from the literature review that the dimension in clinical settings embodies the following three attributes: (1) providing care in a respectful atmosphere with dignity and respect (e.g. healthcare professionals treat patients with dignity and respect) while (2) focus on the quality of life issues/whole-person care (e.g. healthcare is focused on improving patients' quality of life; healthcare professionals take into account patient preferences) and (3) informed and shared decision making/patient participation and involvement (e.g. healthcare professionals involve patients in decisions regarding their care) towards achieving patient's personal goals and outcomes (e.g. patients are supported to set and achieve their own treatment goals) (Berghout et al., 2015; Cramm et al., 2015). From the mezzo and macro perspective, Docteur and Coulter (2012) define a patient-centred health care system as one where patients in each encounter with a given health care system are treated as unique persons with their individual needs, values and preferences. "A patient-centred health care system and the processes associated with service delivery are designed to anticipate and respond to patients' concerns, and to solicit meaningful patient input in all decisions about how health care is furnished" (Docteur & Coulter, 2012, p. 12).

3.6.2. Coordination and Integration of Care

Health care, as a complex system, often faces fragmentation and a lack of continuity in its provision at all levels of care. Besides, this could lead to an increased risk of adverse incidents and safety issues in patient care. The correlation between patient-centredness and health care safety is recognized and calls for a rigorous examination of any new practices through the patient safety lens (Frampton et al., 2008). The Picker institute recognized coordination and integration of care as necessary from patients' perspective to overcome feelings of vulnerability and powerlessness about the illness during the care process in the form of (1) clinical care; (2) ancillary and support services and (3) front-line patient care.

The literature review provided reveals that the Coordination and Integration of Care dimension encompass three main attributes (Berghout et al., 2015; Cramm et al., 2015). The first attribute reflects well-informed healthcare professionals, while patients need to tell their story only once during well-coordinated care between professionals (Berghout et al., 2015; Cramm et al., 2015). Thus, the integration of care emphasizes medical care, such as support for integrative therapies and complementary but also non-medical care, as provided by patient support services, e.g. self-help groups (Scholl et al., 2014). The second attribute to this dimension is that healthcare professionals work as a team in care delivery to patients (Berghout et al., 2015; Cramm et al., 2015). Teamwork and team building are of importance to the PCC at different levels of care, but also between different actors. School et al. (2014) argues for teamwork within or between units, departments, healthcare institutions, or providers and teambuilding through training and educational programs building interdisciplinary and multi-skilled teams. Patient-centred teams are characterized by their ability to communicate, by respect and trust among team members, mutually shared values, goals and visions, information sharing, constructive feedback, equal distribution of responsibility, accountability, and power and awareness of one's abilities and priorities (Scholl et al., 2014). The third attribute of this dimension embodies the role of the navigation representative in the system, so patients know who is managing their care and who provides the first point of contact with all the information related to their condition and treatment (Berghout et al., 2015; Cramm et al., 2015).

Although some macro or microsystems face fragmentation, there is still the possibility of overcoming a lack of continuity in the process of care. One of the leading roles in this process involves health professionals' functional collaboration and their respectful and effective interaction with patients and the community (WHO, 2005). Care is facilitated by registries, information technology, and other information exchange (OMA, 2010). An illustration of translating dimension Coordination and Integration of Care into a practical set of standards we found in Standards and Measures for Patient-centred Primary Care Homes 2010. In this document of The Oregon Health Fund Board (2010), Coordination and integration as one of the core attributes in PCC are defined in the patient's statement '*Help us navigate* *the health care system to get the care we need in a safe and timely way*'. Following are three standards which determine the dimension of Coordination and Integration: (1) *Data Management* that involves providers' following patient closely, letting him know when tests or check-ups are needed, ensuring that patient understands which tests, prevention services, and guidance are recommended to improve his health; (2) *Care Coordination* refers to situations when patient needs to go to other providers or places for care or services – the care provider helps in coordinating and planning care without delays and confusion; when patient needs to see a specialist or get a test, the health care provider helps him get what is needed at provider's clinic whenever possible, and stays involved when patients get care in other places; the provider ensures patient understands the reasons for being sent to a specialist or for a test, prepares patient for what to expect, and follows up with patient to make sure patient understands the results; and (3) *Care Planning* means helping patient and patient's family set goals and prepare care plan that meets patient's needs and is understandable as well as providing patient with the information on how to actively treat the illness.

3.6.3. Information, Communication, and Education

The main determinant and facilitator of PCC is high-quality communication (Slatore et al., 2012). Communication in medical encounters is influenced by the physician's and patient's beliefs about control in their relationship as well as by one another's behaviour (Street, Krupat, Bell, Kravitz, & Haidet, 2003). Lasswell (1948) in his theory of communication distinguished three basic elements (1) sender (who says), (2) message (what) and (3) recipient (to whom); two supporting elements (4) assets (in which channel) and (5) effects (with what effects). Two more elements 'how' and 'why' appear as important for patient-centric communication. The first element 'how' refers to the transmitter's attitude based on the content of the message, and the second element 'why' refers to the objectives that the transmitter wants to achieve with the message (Gredelj, 1986 in Manić, 2017). The Picker Institute recognizes that patients often face a lack of complete sharing of care information that can be overcome by focusing on the three main attributes that encompass this dimension: (1) information provided to the patient on his clinical status, the progress of care and further prognosis; (2) Information on processes of care and (3) Information and education to facilitate autonomy, self-care and health promotion. Information segment for this dimension applies to information about all aspects of care (e.g. clinical status, progress, prognosis, care procedures), the process of care (e.g. patients should have access to their medical records) as well as education to facilitate self-management and self-care (e.g. patients are in charge of their own care; healthcare professionals assist patients in their care) (Berghout et al., 2015; Cramm et al., 2015). By focusing on these three kinds of communication, care providers have a chance to reduce patients' fears about their care. Providing information to the patient is crucial for patients' education to become empowered (Jotterand, Amodio, & Elger, 2016). A segment of communication underlines an open communication between patient and healthcare professionals that occurs, but also skills and knowledge of caregiver (e.g. healthcare professionals with good communication skills) (Berghout et al., 2015; Cramm et al., 2015). Communication with patients is an important part of the PCC process, and the body of literature is devoted to communicating with the patient (Hobbs, 2009). According to Scholl et al. (2014), doctor-patient communication is one of the fostering PCC elements that presents a manner of communication between doctor and patient and encompasses a different set of verbal and non-verbal behaviour in many aspects using various communication skills. A basic set of communication skills should prepare the workforce to collaborate effectively with others – patients, providers, and communities. These skills include the ability to: negotiate, share decisions, collectively solve problems, establish goals, implement action, identify strengths and weaknesses, clarify roles and responsibilities and evaluate progress (WHO, 2005). However, Scholl et al. (2014) distinguish examples of general communication skills when a clinician is setting the stage, setting an agenda, prioritizing the patient's problems and (non) verbal communication, e.g. using open-ended questions, summarizing important information, asking the patient to repeat, making eye contact, nodding. In the literature there is a call for the inclusion of humanities in the medical curriculum with a focus on teaching students about the art of patient-doctor communication (Salmon & Young, 2011 in Weaver, Wilson, & Langendyk, 2014). In addition to doctor-patient communication as one segment of this dimension, we should pay attention to the communication and information sharing among medical professionals within the patient-centred team and units, departments, providers and healthcare institutions. Training and educational programs are important also for building the capacity of the team to be interdisciplinary and multi-skilled (School et al. 2014).

One inpatient care research paper indicates that patients gave preference to knowledge and feedback about what was going to happen to them; the specifics of the hospital environment; the importance of knowing their schedule and regular medical tasks, their health status (e.g. vital signs and test results), their plans for discharge and sequencing of their medications (Caligtan et al., 2012). An example of information provided for relatives is about eventual exiting accommodation in or near the hospital (Berghout et al., 2015; Cramm et al., 2015). Cultural and linguistic barriers that might exist between healthcare providers and patients are a major obstacle to successful communication, affecting health care delivery (Saha, Beach, & Cooper, 2008). To address these obstacles and strengthen communication between doctors and patients, diverse patient-centred communication strategies have been taught since the publication Culture, Illness and Care (1978) by Kleinman, Eisenberg, and Good. Kleinman et al. (1978, in Wilkerson, Fung, May, & Elliott, 2010) argue that a key segment in this dimension is Informed consent in which the patient is informed of (1) the nature of the procedure, (2) the risks and benefits of the procedure, (3) reasonable alternatives, (4) risks and benefits of alternatives, and (5) assessment of the patient's understanding of elements one through four. Consent tends to be an ethical and legal requirement to doctors received before the implementation of high-risk procedures and treatments. The Joint Commission requires documentation of all the elements of informed consent in a form, and progress notes or elsewhere in the record (Shah, Thornton, Turrin, & Hipskind, 2020). In the policies and hospital procedures, the informed consent process described has to be clearly defined and applied by medical doctors.

3.6.4. Physical Comfort

The provision of physical comfort appears to be one of the essential aspects that caregivers can provide in each circumstance with a high impact on patient experience comprising three attributes: (1) patient's pain management, (2) assistance with activities and patient's daily living needs and (3) hospital surroundings and the environment in which patients are under care (Berghout et al., 2015; Cramm et al., 2015; Picker Institute, 2013). According to them, the first segment is related to the healthcare professionals' duties during the health care process, namely having to pay attention to patients' pain management. The second is related to healthcare professionals' assistance with activities and patient's daily living needs while taking patient preferences for support with patient's daily living needs into account. The third, Physical Comfort dimension, relates to hospital surroundings and the environment in which patients are under care. Patients' areas in the hospital should be clean and comfortable, and hospital surroundings and environment should provide appropriate privacy accessibility for visits by family and friends (Berghout et al., 2015; Cramm et al., 2015).

3.6.5. Emotional Support and Alleviation of Fear and Anxiety

Along with physical pain associated with illness, it appears that fear and anxiety must be in the scope of caregivers' attention. The Picker Institute identifies three different domains in which anxiety appears: (1) clinical status, treatment and prognosis, (2) the impact of the illness on themselves and family and (3) the financial impact of illness. These domains deserve to be in the focus of the caregiver's additional attention. Similar findings from the literature review indicate how essential it is for health care professionals to pay attention to patient's anxiety about their situation; the impact of their illness on their loved ones and the role of their family in the patient's emotional support (Berghout et al., 2015; Cramm et al., 2015). Emotional support may be particularly important to certain types of patients (Rathert, Wyrwich, & Boren, 2013). For example, in the case of infertility care, in certain countries, such as Australia and New Zealand, psychiatrist support is widely recognized, and advice as part of best practice psychosocial support tends to be an important part of the procedure (Dancet et al., 2012). The empathy of doctors is valuable in practising the PCC Emotional Support dimension since the level of patient-centredness and empathy are closely linked (Wimmers & Stuber, 2010). In the medical education literature, doctor's empathy characteristics are described either as clinical empathy and PCC or patient-centred orientation (Halpern, 2003; Edward Krupat, Hiam, Fleming, & Freeman, 1999 in Wimmers & Stuber, 2010). Moreover, from a health system perspective, Docteur and Coulter (2012) describe a patient-centred health care system as a system that takes a holistic approach to patient needs by anticipating and responding to a variety of social, psychological and moral issues (e.g. fear and anxiety) rather than concentrating solely on medical competencies and a disease-centred approach.

3.6.6. Involvement of Family and Friends

The role of family and friends in patients' experience with health care (particularly about how illness of family member has an impact on them) has been recognized as an important determinant as well as the outcome of PCC (Docteur & Coulter, 2012). According to the IAPO (2007), a productive health professionals-patient relationship involves not just health professionals and patients, but their families, carers, patients' organizations, and the community which overall improves patient satisfaction, health outcomes, and health care system imperfections (in the developing or developed world). The keys to productive relationships are communication and partnerships; therefore, it requires that patients and health professionals have a set of skills that will foster their interaction and collaboration (WHO, 2005). The Picker institute defines four attributes for Involvement of family and friends in health care as follows (1) providing accommodation for relatives on whom the patient relies for support (social and emotional); (2) Respect for and recognition of the patient "advocate's" role in decision-making where healthcare professionals involve relatives in decisions regarding the patient's care (Berghout et al., 2015; Cramm et al., 2015); (3) Support for family members as caregivers meaning that healthcare professionals pay attention to family members while in their role as carer for the patient (Berghout et al., 2015; Cramm et al., 2015); (4) Healthcare professionals recognise and pay attention to the needs of family and friends of the patient (Berghout et al., 2015; Cramm et al., 2015). A spectrum of participation (or engagement) activities for patient and family in healthcare ranges from 'informing' to 'empowering' (Carman et al., 2013 in Baker, Judd, Fancott, & Maika, 2016) (*Figure 8*).

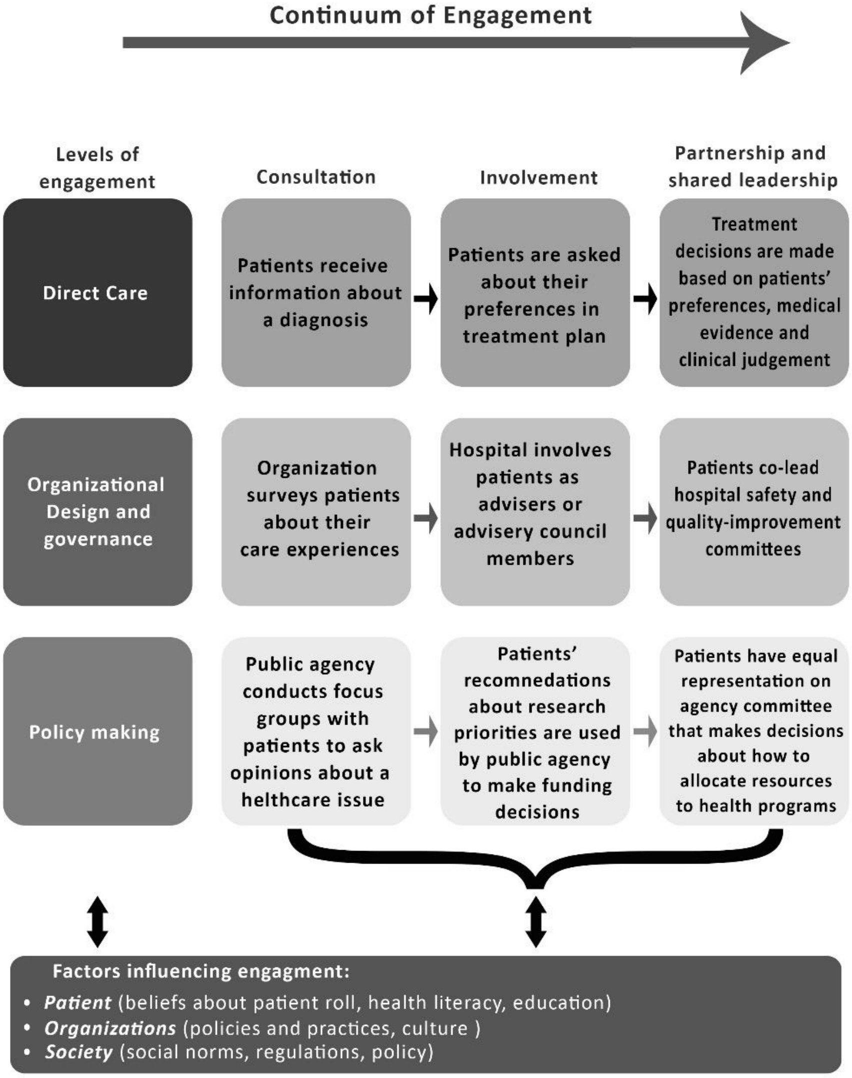

Figure 8. A multi-dimensional model for patient and family engagement in health and healthcare (Carman et al., 2013 in Baker et al., 2016)

Patient and family involvement in patient's care is considered to be multilevel: from direct care, organizational design and governance to policymaking. It may, however, be described as multidimensional because of the spectrum of empowerment, varying from consultation, and involvement, to partnership and shared leadership in terms of the degree of contribution rendered by patients and family members in a wide variety of activities and different levels of involvement.

3.6.7. Continuity and Transition

After discharge from inpatient care institution, patients (and their families) are entering a new phase in which they take more responsibility for care itself. Being uncertain whether or not the care is well taken, may induce a certain amount of anxiety as a patient's response. However, the role of hospital personnel continues to be crucial in the continuity of care process, which is characterized as the degree to which individual care is coordinated among doctors, among organizations, and over time (Papp, 2015).

The Picker Institute (2013) argues that this dimension encompasses many important attributes with a dominant role of medical professionals in (1) understandable and detailed information provided to the patient about medications (intake and side effects), physical limitations, dietary needs; (2) well planned and coordinated ongoing treatment and services after discharge and ensuring that patients and family leave the hospital understanding this information and (3) continuous information provision about access to clinical, social, physical and financial support. Literature review (Berghout et al., 2015; Cramm et al., 2015) underlines three main attributes that belong to the Continuity and Transition dimension (1) when a patient is transferred to another ward, relevant patient information is transferred as well; (2) patients who are transferred are well-informed about where they are going, what care they will receive and who will be their contact person and (3) patients get skilled advice about care and support at home after hospital discharge. In the case of a patient with a low level of health literacy, the importance of being clear with information and instruction is even more emphasized because a lack of understanding of the information can lead to ineffective treatment and rehabilitation (WHO, 2005). Enabling coordination between front-line patient care and ancillary and support services, planning transfers from inpatient to outpatient or vice-versa, and delivering follow-up appointments and services after discharge are extensive features (Scholl et al., 2014).

Macro-level coordination of care refers to the achievement of optimum quality in a particular treatment episode and to maintaining a successful long-term continuity of care based on effective collaboration among providers (Kelley & Hurst, 2006; Docteur & Coulter, 2012). Kelley and Hurst (2006) suggest that, at the national level, the performance of the health care system is assessed by clinical continuity within the context of the measures (for example, the percentage of drug consumption in chronic disease patients) and the patient's experience of care. Following the arguments of Kelley and Hurst, while coordination addresses the collaboration between providers and institutions, continuity relates to the degree of teamwork. It is essential to use the available and known data about the patient to maintain continuity of care (Scholl et al., 2014). Problems in the continuity of care found in practice refer to repeat or contra-indicated care which, as a result, leads to lower health outcomes and decreases patient satisfaction (Docteur & Coulter, 2012). To increase patient health outcomes and patient satisfaction, greater collaboration and coordination of health care systems (reimbursement, information, organisation and regulation) is needed (Docteur & Coulter, 2012).

We give an illustration from Standards and Measures for Patient-centred Primary Care Homes (The Oregon Health Fund Board, 2010). One of the core attributes this organization set is *Continuity* which is described as '*Be our partner over time in caring for us*' which implies that the patient will select his doctor who will know and remember crucial facts about health history, needs and values and who can direct the patient in making informed decisions about his health and health care. Within the Continuity core attribute, three standards are identified: (1) *Provider Continuity* relates to patient's right to choose a personal clinician and health care team who know and understand him and with whom the patient can talk when they need to; (2) *Information Continuity* is about ensuring that all health professionals caring for patient have access to up-to-date and accurate information about patient's health histories, personal health information is always protected and kept private and easy access for patient to their personal health information; (3) *Geographic Continuity* relates to providers involved in patient care whenever the latter goes within the health care system, and helps patient to coordinate his/her care across places and people.

3.6.8. Access to Care

Access identifies the ability of patient or population to utilize needed health services in terms of (1) characteristics of a delivery system of health care, such as availability, organization and procurement of care; (2) characteristics of the population such as demographics, income, care-seeking behaviour; and (3) whether or not the care sought adequately met the individual or group's basic medical needs while access to care is sought as a performance dimension addressing the degree to which an individual or a defined population can approach, enter, and make use of needed health services (Komarov et al., 1999).

In the core of Access to Care PCC, the dimension is that patients need to know they can access care when it is needed (Picker Institute, 2013) and that the hospital is accessible for all patients (Berghout et al., 2015; Cramm et al., 2015). According to the Picker Institute (2013), this dimension encompasses the following attributes: (1) access to the location of hospitals, clinics and physician offices; (2) availability of transportation; (3) ease of scheduling appointments; (4) availability of appointments when needed; (5) accessibility to specialists or specialty services when a referral is made and (6) clear instructions provided on when and how to get referrals. Hence, this dimension highlights the importance of time spent waiting for admission or time between admission and allocation to a bed in a ward (The Picker Institute). Scholl et al. (2014) distinguish two main attributes of Access to Care dimension: territorial location and timeliness (see Section 3.4.). Apart from the hospital accessibility for all patients, (such as conveniently located hospital for the patient), access to specialists or specialty service, easily scheduled appointment and acceptable waiting time, there is a need for a clear directions provision to and inside the hospital, with provision of clear instructions on when and how to get referrals, removing any kind of language barrier for access to care (Berghout et al., 2015; Cramm et al., 2015; Scholl et al., 2014). Healthcare services being provided within an appropriate interval is a quality of care that patients expect to receive (Mosadeghrad, 2013). Access can be physical, financial or psychological, and requires that health services are available *a priori* (Kelley & Hurst, 2006). Access to care relates to patients' concern about having access to doctors and nurses (healthcare services physically accessible to clients) and having affordable (financial access) and acceptable healthcare services (conceptual access). Affordability appears to be a key access element, especially when service costs are high, and the patient has no insurance program (Mosadeghrad, 2013). Available literature demonstrates a diversity of characteristics attributed to the domain Access to care, which can be divided into two categories, tangible and non-tangible. The tangible category includes all attributes that relate to physical access to care, such as access to specialists (availability of healthcare professionals) and access to the health centre (geographically, availability of transportation, availability for patients with mobility issues). The non-tangible category refers to timeliness, cultural (cultural differences), educational (support and navigation for illiterate patients; clear instructions provided on how and when to get a referral) and language directions (e.g. clear direction in several languages). Accessibility is considered to be one of the dimensions of quality of care (more in Chapter 4). Health services' availability is necessary but not sufficient *per sé* because if patients consider it useful, the health service is supposed to be accessible (Mosadeghrad, 2013).

In the literature, we find examples where access to care is defined as a core attribute in the Standards and Measures for Patient-centred Primary Care Homes 2010 (The Oregon Health Fund Board, 2010). In this document access to care is framed in the statement "*Be there when we need you*". Further, three standards are defined within access to care attribute: (1) *In-Person Access* – ensuring patient gets quickly and easily an appointment and that office visits are well-organized and run on time; (2) *Telephone and Electronic Access* –providers make sure that patient knows what to do if he needs or wants help when the office is closed, as well as to provide multiple ways for a patient to easily get care or advice outside of office visits; and (3) *Administrative Access* referring to responding to patient requests for help and paperwork in the most efficient way possible to meet patient's needs.

3.7. Summary

Attempts to describe PCC phenomena are clear. However, there is no standard widely accepted description of the commonly agreed set of dimensions used for the concept of operationalization and its measurement (Docteur & Coulter, 2012; Bertakis & Azari, 2011). Related phenomena are used quite interchangeably with the phenomena of our focus, as they share a similar set of attributes. We conclude that PCC and person-centred care are bordering phenomena as they contain most of the same defining attributes. These concepts are closely linked to the original meaning of having one human being (person, patient, family) in the centre of care and, by using the term ‘centred’, have a clear aim to demonstrate the individualized oriented part of the concept towards one entity (patient with his family). We recognize that the idea of PCC, with the network of ideas behind it, can still be interpreted as an element of patient empowerment. The patient is at the centre of the PCC phenomenon, but this does not mean that all the authority is given to the patient, because the doctor must listen to the patient and include them in discussion and decision-making about their health to deliver quality care (Streisfield, Chowdhury, Cherniak, & Shapiro, 2015). While concentrating on the specific dimension of disease care (e.g. fertility care, family care) and aspects of PCC, for example, patient-centred communication, patient-centred interviewing, the conceptual uncertainty that exists in literature and practice continues to be central to the definition, understanding and implementation of PCC processes in practice. In an effort to describe the PCC concept, it can be inferred that PCC is defined as a preferred approach to patient care that places the needs and values of the patient at the centre of care or health care systems in general. What all the definitions emphasize is the importance of the patient’s experience as one of the unique outcomes of care. Considering all the definitions, concept analysis, framework and models, we frame a set of various dimensions and attributes that represent the subjective nature of the model. Subjective nature lies in the practical experience of the PCC among actors in various realms. As difficult as it is to describe, it is much more difficult to measure the aspect of the PCC (see Chapter 4). Following Lusk and Fater (2013) argumentation that caring may have a different meaning for each actor in the PCC process while having autonomy in the PCC process, some patients can feel like an additional burden over health status. Also, due to the subjective nature of PCC, it appears to be difficult to make a comparison on the international level.

Chapter 4

PATIENT-CENTRED CARE ON POLICY LEVEL

INTRODUCTION

In the first place, the focus of Chapter 4 reflects the PCC phenomenon in the context of two dominant approaches, the New Public Management (NPM) and the New Public Service (NPS), in which there was an emerging PCC call. The chapter is divided into three segments. The first part of the Chapter provides a theoretical perspective on NPM and NPS movements within the PCC concept that has been developed in the previous decades (Section 4.1.). The second part is dedicated to an overview of competencies related to PCC (Section 4.2.). The final part of the Chapter (Section 4.3.) considers some general curriculum aspects before it narrows down to the context of medical education in Portugal and Sweden, exploring the teaching and learning of patient-centredness in undergraduate medical curricula.

4.1. THE PCC IN THE NEW PUBLIC MANAGEMENT (NPM) AND THE NEW PUBLIC SERVICE (NPS) MOVEMENT

INTRODUCTION

As in other institutional and organizational practices, health care has been influenced by ideas known as the New Public Management (NPM) and the New Public Service (NPS). It is therefore important to understand what the NPM and NPS are and how the principle of the NPM affects the practice of health care, especially the behaviour of health care professionals concerning patient-centeredness. The main principles of NPM and NPS are set out in this subsection (4.1.1); the quality management thereof (4.1.2); PCC in the International documents and standards (4.1.3.) are explored. Additionally, argumentation for PCC implementation (4.1.4), measures (4.1.5) and benefits for implementation discussed (4.1.6).

4.1.1. The New Public Management (NPM) and the New Public Service (NPS) importance for PCC development

There are some important terms and definitions that we need to acknowledge as essential to any further consideration, and these are health care and health care service. Health care is defined as activities aimed at health improvement and treatment of patients, performed by professionally trained personnel, authorized to do that according to the current legislation while in the U.S. the term denotes all activities aimed at improving and promoting health fully inclusive of medical care (Komarov et al., 1999). Further, services have been defined as the use of knowledge and skills for another's benefit (Farr & Cressey, 2015).

In *Concise dictionary of modern medicine* (Segen & Segen, 2006) health care service is defined, like a business entity that provides inpatient or outpatient testing or treatment of human disease or dysfunction; dispensing of drugs or medical devices for treating human disease or dysfunction and as a procedure performed on a person for diagnosing or treating a disease.

The approach known as a New Public Management (NPM) has affected the health care and education sector since 1980. This approach is guided with neoliberal principles of cost-efficiency and result-oriented actions and practised by using different sets of market-based techniques (Bergh, Friberg, Persson, & Dahlborg-Lyckhage, 2015; Simonetti, Comparcini, Flacco, Di Giovanni, & Cicolini, 2015). Public services including health care services underwent reforms within NPM, for example, British (Dalingwater, 2014) (see Section 2.3.), Swedish (Bergh et al., 2015) and French (Simonet, 2014). In the health care sector, similar to other public arenas, the application of NPM has nine features: (1) using market forces to serve public purposes; (2) demanding organizational performance; (3) fostering greater accountability and transparency from providers; (4) increasing patient financial responsibility; (5) looking for savings; (6) providing higher-quality services; (7) bringing resource allocation closer to the point of delivery; (8) using contracting-out; and (9) enlarging the coalition of players (Simonet, 2008, p. 619). The NPM refers to applying market-based techniques to public services within neoliberal ideology to improve cost-efficiency and strengthen process orientation towards result (Bergh et al., 2015).

Within the NPM paradigm, public and private organizations are market-oriented and in the permanent competition followed by tighter financial controls and decentralized responsibilities (Hood, 2000; Elzinga 2012 in Bergh et al., 2015). For thirty years, NPM has been exploring what seems to be an appropriate partnership between public administrators and citizens (customers/consumers) in the context of consumerism, supporting the concept of customer-service orientation centred on business experience (Denhardt & Denhardt, 2007). However, in practice, the NPM movement is not a standardized and cohesive set of practices, but rather a theme that has its own specificities across the various sectors, meaning that NPM varies across sectors, within sectors and in terms of specific management-professional outcomes (Dent, Chandler, & Barry, 2004). Dent et al. (2014) provide three argumentations that underpin their statement. First, they argue that there are some sectors namely health care, social services, and education, where the implementation of the NPM goes beyond the general NPM management principles of being cost-effective, accountable and market-friendly. Second, the NPM movement does not provide a universal toolkit or instrument for operating in practice, but rather a set of management tools that have been developed and modified over time (Dent et al., 2004). Third, NPM has redefined managerial and professional work and their organizational relationship, not in the way of de-professionalisation rather in a way that professional autonomy became compatible with the principles of new managerialism towards the improvement of consumer service (Dent et al., 2004).

In the literature, we encounter the tendency of talking about a New Public Service (NPS). For example, the authors Janet and Robert Denhardt in their book The New Public Service (2002, also 2007 edition) argue for the NPS as a direct response to the NPM acknowledging establishing a factor of theorists of the new public administration, civil society, citizenship, community, organizational humanism and postmodernism. In this book, they offer a set of several ideas opposed to the NPM, where the following seven principles appear as the most compelling, not mutually exclusive, rather mutually reinforcing. (1) The first is to *Serve citizens, not customers*. Unlike NPM customers with individual self-interests and public servants who respond to customers' demands, in NPS emphasis is on a dialogue about shared values and building a trustful and collaborative relationship between public functionaries and citizens. (2) The second is to *Seek the public interest*. The role of public administrators is in building a collective and shared notion of the public interest delivered from shared interest and shared responsibility rather than from individual choices like in NPM. (3) The third principle is to *Value citizenship over entrepreneurship*. The public interest is better advanced by public servants and citizens committed to making meaningful contributions to society than by entrepreneurial managers acting as if public money were their own. (4) The fourth NPS principle is to *Think strategically, act democratically*. In comparison to Osborne and Gaebler, Denhardt and Denhardt assert that there is a difference between "thinking strategically" and "entrepreneurial government"; Policies and programs meeting public needs can be most effectively and responsibly achieved through collective efforts and collaborative processes. (5) The fifth is to *Recognize that accountability is not simple*; Public servants should be attentive to more than the market; they should also attend to statutory and constitutional law, community values, political norms, professional standards, and citizen interests. (6) The sixth is to *Serve rather than steer* (it involves listening to the real needs of the people and the community, not just responding in the manner that a business would do to a customer). It is increasingly important for public servants to use shared, value-based leadership in helping citizens articulate and meet their shared interests rather than attempting to control or steer society in new directions. (7) The seventh, the final NPS principle is to *Value people, not just productivity*. The Denhardts argue that public organizations and the networks in which they participate are more likely to be successful in the long run if they are operated through processes of collaboration and shared leadership based on respect for all people.

We could distinguish three key differences between NPM and NPS that, each in their way, shape PCC phenomena as an idea, process and practice: Consumer and Citizen, Profession and Professionalism and Rational and Emotional Behaviour that we discuss further.

4.1.1.1. Consumer and Citizen

The first difference we identify is in terms that these movements use: Consumer and Citizen. One of the characteristics of NPM is to shift greater power towards consumers. In the core customer-service orientation, within competitive, marketlike arenas created by the government, a customer is considered as an individual, who can freely decide and choose based on personal self-interest, seeking to optimize own individual benefits over sharing common purposes (Denhardt & Denhardt, 2007). The Denhardts (p. 62) argue for five key factors important for shifting the power towards customers concerning private goods and services in the marketplace but adapted to public service: *access, choice, information, redress, and representation*. They consider those factors to be a sort of guidance on how an individual or collective interest of citizens can be enhanced. Factors are not solely a matter of individual rights, but a matter of political responsibility, where citizens should: (1) expect to be informed and engaged in the decision-making process (representation), (2) be active in defining and extending the alternatives open to them (choice), (3) have access to full information on their right to service, quality of service, objectives and goals, reasons behind some decisions and alternatives being debated (information), (4) be engaged in a decision on who will have what (access) and overall, (5) have right to communicate their grievances and complaints and to receive redress where appropriate (redress) (Denhardt & Denhardt, 2007). Reflecting ‘a new managerialism’ ideology of the health care prism, as Robinson (2005) argues in his study, a consumerist view recognizes the patient’s ability to make informed healthcare choices that balance cost, quality, convenience, and other service characteristics. We need to underline an existing difference in calling patients customers or consumers that Piper explains as a result of American hospitals becoming more business-like, indicating a change in hospitals and shift in the attitude of management to become more competitive in quality health care service in the market place (Piper, 1986). Hence, as we mentioned already, providers of health service set a priority on profit, fostering customers' satisfaction with the service provision. This argumentation is underpinned with the explanation of the customer as “[…] a construct derived from the classic model of economic man” (Denhardt & Denhardt 2007, p. 58) where customers can take their business elsewhere, but patients often do not (McCrory, personal communication, 2018). In contrast, patients have a set of barriers to care as they might be limited by insurance coverage or access to reliable and convenient transportation (McCrory, personal communication, 2018).

The most important objection to the customer orientation sought by NPS has to do with accountability. For government, citizens are not only customers; they are “owners” (Schachter, 1997 in Denhardt & Denhardt, 2007, p. 59) of individual freedom (Frederickson, 1982, in Denhardt & Denhardt, 2007, p. 164). The Denhardts argue that those who interact with the government are not simply customers but rather citizens. In contrast to expertise or managerial entrepreneurship in NPM, the NPS argues for citizen’s involvement in all aspects of the process (Denhardt & Denhardt, 2007). Therefore, we argue that patients who interact with doctors, (among other public servants in a health care service provision), are not simply customers of service but rather citizens who use health service provided directly by public servants (doctors) and it is expected that they are involved in all aspects of their care process. Private ownership practice in health care should not be exempted, although this type of organization most of the time accepts and operates under NPMs, and are business productivity-oriented in a competitive market. “Although there are many characteristics that distinguish the business from government, government’s responsibility to enhance citizenship and serve the public interest is one of the most important differences—and is a cornerstone of the New Public Service” (Denhardt & Denhardt, 2007, p. 81).

With growing time and productivity pressures impacting health practitioners, the bond between the doctor and the patient is frequently compromised. At the same time, with the increasing transition and implementation of management values to the healthcare sector (as Bury referred to the management domain, Chapter 3), the patient has become a customer in the healthcare environment.

4.1.1.2. Profession and Professionalism

The second distinction is the difference between profession and professionalism. The NPM management brings a shift in perception of the nature of profession and role of public professionals (Denhardt & Denhardt, 2007, p.13). Confidence in the professional work of employees has been replaced by control over professional practices, such as patient education, based on measurable metrics (Bergh et al., 2015). The Denhardts (2007), following Osborne and Gaebler's argumentation expressed in the book *Reinventing Government: How the Entrepreneurial Spirit Is Transforming the Public Sector* (1992), believe in the NPM’s correct and efficient implementation by introducing business-like incentives while removing the implementation function from bureaucracies whenever it is possible. Establishing public managers as ‘entrepreneurs’ is an essential element of the NPM (Denhardt & Denhardt, 2007). In line with the Denhardts’ understanding of the administrator’s role in policy development, we can distinguish two faces of the doctor’s role in the context of the NPM’s approach. Firstly, doctor as public health servant is supposed to take a more active role in the policy process - “the role of policy entrepreneur”, but on the other hand, the doctor has to respond to “customer” demands and wherever possible, create an arena for patients (“customers”) to choose.

In the NPS movement, the Denhardts see public administrators as citizens and participators rather than managers doing a cost-benefit analysis. Applied to the profession of doctors, doctors tend to have a greater role to play in participating in the democratic governance system, making policy decisions and implementing them (Reich, 1988 in Denhardt & Denhardt, 2007). Further, as an important principle of NPS, the Denhards identify responsibility to help in educating citizens about activities of citizenship, helping people to explore broader interests than their own and to understand the complexities of the governance process. “Participation in democratic governance builds moral character, an empathetic understanding of the needs of others, and the skills to engage in collective action” (Denhardt & Denhardt, 2007, p. 95). The role of doctors to educate the patient is also recognized as an integrated part of PCC in the domain of Information, Communication and Education (see Chapter 2). The doctors put into effect government’s program by explaining to the patients and educating people about health prevention and health promotion, helping them to explore broader interests than their own. There is also an important segment of patient empowerment to take responsibility towards their health but, as Denhardts (p. 100) argue, also government must be responsive to the needs and interests of citizens. “The New Public Service seeks to encourage more people to fulfil their responsibilities as citizens and, in turn, to make public administrators increasingly sensitive to their concerns; however, interests of customer (patient) might not be aligned with the interest of business or government (doctors, health providers) (Denhardt & Denhardt, 2007). The NPS principles foster involvement in the process, which again we found as the principle of PCC while in the NPS, citizens and administrators share responsibility and collaborate to implement programs (Denhardt & Denhardt, 2007). That reflects a process of shared responsibility in the decision-making process during care provision. Simultaneously with the profession of doctors, the role of doctors tends to be an empathetic understanding of the needs of others while at the same time fostering patient’s participation and responsibilities for self-care, directly underpinning the difference between rational and emotional behaviour in NPM and NPS (section 4.1.1.3).

Nowadays, professionalism in medicine has changed its meaning and significance and its relevance to personal development, demanding new roles and values for doctors. Professionalism concerns the social accountability of the medical profession and of the doctor who is still a communicator, educator, researcher, community health manager, and health team member and leader (Lindgren & Gordon, 2016).

4.1.1.3. Rational and Emotional Behaviour

The third difference between NPM and NPS lies in the behaviour of people. According to Denhardts (p. 163), NPM rejects the notion of human behaviour as a reaction to shared values, loyalty, citizenship and public interest. They argue that understanding human behaviour in NPM, the motive behind behaviour and human experience is not explained by psychological or irrational needs, emotional or social influences, organizational culture and community norms and values, but rather by economic rationality. Economic rationality suggests that people alter their self-interest to be more in line with organizational priorities by changing decision-making rules or incentives (Denhardt & Denhardt, 2007). Conversely, behaviour in NPS relates to individuals’ engagement with one another “as they engage with themselves, fully embracing all aspects of the human personality, not merely rational, but experiential, intuitive, and emotional” (Denhardt & Denhardt, 2007, pp. 41–42). Following the Denhardts’ argumentation, we believe that the resulting process of negotiation and consensus regarding the treatments comes from doctor-patient with full individual engagement in the information sharing process that results in doctor-patient co-creation of a trustful relationship. However, unlike NPM, in NPS, the emphasis is put on human behaviour such as human dignity, trust, belongingness, concern for others, service, and citizenship based on shared ideals and public interests. "[…] human behaviour not only is a matter of self-interest, but also involves values, beliefs, and a concern for others" (Denhardt & Denhardt, 2007, p. 190). It appears to be a cornerstone for establishing a doctor-patient relationship as well as cooperation, coordination and teamwork among health providers supported by the Denhardts' argumentation: "We cannot expect public servants to treat their fellow citizens with respect and dignity if they are not treated with respect and dignity. We cannot expect them to trust and empower others, to listen to their ideas, and to work cooperatively unless we are willing to do the same for them" (Denhardt & Denhardt, 2007, p. 164).

4.1.2. Quality management (NPM) and Quality service improvement (NPS)

Quality healthcare is defined as "consistently delighting the patient by providing efficacious, effective and efficient healthcare services according to the latest clinical guidelines and standards, which meet the patient's needs and satisfies provider" Mosadeghrad (2013, p. 214). Further, Mosadeghrad (2013) identifies *Eight quality Rights* in the definition of service quality: Right Care in the Right Way for the Right Individual in the Right Place at the Right Time by the Right Person and for the Right Price to achieve the Right Results. The author further explains each of the rights as follows: (1) *Right services* refers to appropriate, acceptable, necessary, accurate, safe, effective, comprehensive, patient-centred and excellent healthcare services; (2) *Right way* relates to providing services efficiently using appropriate procedures; (3) *Right place* means an accessible healthcare facility with available services; (4) *Right time* means that services are provided when they are wanted or needed; (5) *Right provider* refers to a competent, responsible, accountable, committed, supportive, kind, friendly and honest provider; (6) *Right individual* means the service is provided to the right patient; (7) *Right price* means the service is provided at a price that is reasonable to the provider and affordable for the customer and (8) *Right results* refers to the best possible clinical outcomes.

For NPM and NPS movements, it appears to be important to measure quality. Firstly, in the NPM, the assumption is that traditional bureaucracy is ineffective because it measures and controls just inputs but not results (Denhardt & Denhardt, 2007). According to Bento and Esteves (2016), a Quality Management System (QMS) in NPM emphasizes the importance of two segments: (1) QMS emphasizes clearly defining tasks that should be performed where every action is based on previously clearly defined documents, procedures, workflow, roles and responsibilities of actors and (2) QMS also addresses internal needs directly related to profitability in that there is an efficient use of all materials, human, technology and information as available resources. QMS ensures that all workers involved in the process enhance team communication and motivation, offers tools for tracking and enhancing service, and facilitates improvements based on non-assumptions in data analysis (Bento & Esteves, 2016). Secondly, since the theory of consumerism starts with an imbalance of power, the Denhardts question government's and organization's willingness to redress the imbalance of power between provider and consumers/ citizens because when there are no external controls, misuse of power is unavoidable (Denhardt & Denhardt 2007). Therefore, the audience appears to be an important factor in quality measurement within the NPM movement. Patient-centredness, (a term introduced to signify a dimension of health care quality in its own right), if incorporated properly into new health care design, will entail drastic, unexpected and disruptive changes in control and power, from the hands of those who care and into the hands of those who receive it (Berwick, 2009). There is evidence that the use of PCC models, with the care that is based on collaboration and shared decision, for an organization, reduce service demands and better management (Forsyth, Rawstron, & Hawkins, 2019). Thirdly, in NPM competition appears to be an important factor for quality improvement. For example, competition with other health and social care organizations appears to be an external incentive in inpatient care where 'perceived peer pressure' fosters development strategies for more PCC (Hower et al., 2019). Experience from the US healthcare market indicates that better patient experience is associated with better financial performance through increased market share while PCC has been linked with both cost savings and reduced demand for health services (Forsyth et al., 2019).

Service Quality Improvement in NPS appears to be developed on believing that, firstly, "efficiency is not enough" (Roy Adams 1992, p. 18 in Denhardt & Denhardt 2007, p. 165) in measuring quality and there should be more emphasis put on organizational humanism and responsible behaviour (Denhardt & Denhardt 2007). In practice, hospital governance across OECD countries shows a tendency of shifting from cost and production controls towards 'improving performance on clinical outcomes (Rotar et al., 2016), however, it does not explain the meaning of human action since "[…] observing human behaviour 'from the outside' tells us far less than understanding the meaning of human action" (Denhardt & Denhardt 2007, p. 40). The Denhardts believe that NPM measures (simple measures of efficiency or market-based standards) cannot be adequate either to measure or to foster responsible behaviour (Denhardt & Denhardt, 2007). Quality management is simply not about controlling processes and policy, but rather about the principles of health care employees, preparation and personal attitudes and, most significantly, how service quality is co-produced in service encounters (Farr & Cressey, 2015). Human behaviour is difficult to characterize as objective human action or to articulate in enduring legal arguments since it is defined by multiple influences (e.g. culture, time) and incorporates the non-rational components of human experience (intuitions, emotions, and feelings) (Denhardt & Denhardt, 2007). Secondly, the notion of organizational culture in NPS appears to be important in understanding the operation of the health care system, but the role of the organization changed over time. The Denhardts wrote about Robert Golembiewski (Men, Management, and Morality, 1967) who has been criticizing the traditional organization characterized by top-down authority, hierarchical control, and standard operating procedures, as being insensitive to the question of individual freedom and personal moral stance (Denhardt & Denhardt, 2007). According to the Denhardts, Golembiewski argued for increased individual freedom and enlarged the area of discretion rights, creating a problem-solving organization climate where members of organization confront problems instead of fighting about them bearing in mind that responsibilities in decision making and the problem-solving process should be located as close as possible to information sources. Golembiewski encourages organizations to create trust across the organization among individuals and groups, to complement or even substitute the authority of position or rank with the authority of knowledge and competence (Denhardt & Denhardt, 2007). Thirdly, the NPS 'emphasizes the importance of managing through people' and highlights that reasonable efforts to regulate human actions are likely to fail in the long term if insufficient attention is paid, at the same time, to the principles and desires of the individual members of an organization (Denhardt & Denhardt, 2007). Fourthly, the NPS recognizes the centrality of accountability in governance and the reality of administrative responsibilities as important for the quality measure. 'Accountable' refers not only to complying with the law and doing what elected officials ask you to do, but also using the skills of your profession and arguing for four primary types of accountability based on whether they are internal or external, and whether they assume high or low levels of individual autonomy (Denhardt & Denhardt 2007). Fifth, in the context of NPS, the Denhardts debate government's service quality improvement that lies in the complexity of government's interactions with citizens and the public who expect that services be delivered fairly and responsibly, but also to have the opportunity to influence the services they receive as well as the quality of those services. Despite difficulties to define public sector service quality itself in the context of NPS, the Denhardts argue for a list of eight comprehensive measures provided by Carlson and Schwarz (1995): (1) Convenience measures the degree to which government services are easily accessible and available to citizens; (2) Security measures the degree to which services are provided in a way that makes citizens feel safe and confident when using them; (3) Reliability assesses the degree to which government services are provided correctly and on time; (4) Personal attention measures the degree to which employees provide information to citizens and work with them to help meet their needs; (5) Problem-solving approach measures the degree to which employees provide information to citizens and work with them to help meet their needs; (6) Fairness measures the degree to which citizens believe that government services are provided in a way that is equitable to all; (7) Fiscal responsibility measures the degree to which citizens believe local government is providing services in a way that uses money responsibly; and (8) Citizen influence measures the degree to which citizens feel they can influence the quality of service they receive from the local government (Denhardt & Denhardt, 2007). Nevertheless, NPS does not abolish quality measures such as improved satisfaction, productivity and the organization's capacity for change. Hence, it includes a measure of citizens' participation in decision making that has a much greater effect on the performance of employees than quality measurement (Stashevsky & Elizur, 2000 in Denhardt & Denhardt, 2007). Farr and Cressey (2015) believe that the quality of the service extends through a systemic and relational process that is co-created by interactions between staff and service users.

4.1.3. Strategies and innovations for PCC

International organizations use a range of strategies to help PCC programs. With the epidemic of chronic diseases and the fact that chronic diseases are typically poorly handled, the time has come for a variety of steps to be taken to change what we do to provide even increased quality outcomes for patients and far better value for investment for healthcare services (Miles & Asbridge, 2013). Organizational strategies may refer to the patient (collecting and reporting patient feedback, implementing patient rights charters, and involving patients and caregivers as partners in enhancing care); health care personnel (staff development, leadership); an organisation (redesigning and co-designing service provision) further enforced across a variety of frameworks (ACSQHC, 2010; see Chapter 3). For example, no structures or incentive systems for organisations and providers exist on a national level in Germany to implement PCC except a few initiatives within healthcare professional education such as training programmes and shared decision making (Hower et al. 2019).

If a system or organization wishes to improve service quality, it may choose to pursue an innovation process. There are five phases in the process of innovation provided by Osterwalder et al. (2010) in the book Business Model Generation: Mobilize (setting the stage), Understand (immersion), Design (inquiry), Implement (execution), and Manage (evolution). Rogers (1995), by innovation, considers an idea, practice, or object that is perceived as new by an individual or other units of adoption. A similar definition given by WHO saying that the innovation refers to a set of health service interventions which could include a combination of the new technology, processes, operational procedures, management, information and logistics systems, healthcare financing approaches and organizational restructuring, and new services to unserved populations (WHO, 2009). In the same token, Omachonu and Einspruch's (2010, p.5) healthcare innovation is defined as "the introduction of a new concept, idea, service, process, or product aimed at improving treatment, diagnosis, education, outreach, prevention and research, and with the long-term goals of improving quality, safety, outcomes, efficiency, and costs". Omachonu and Einspruch (2010) identify *environmental dimensions* (ED) (organizational culture, organizational leadership, regulatory acceptance, physician acceptance, the complexity of innovation, and partnerships and collaboration) and *operational dimensions* (OD) of healthcare innovation (patient satisfaction, profitability, effectiveness, efficiency, patient safety, ageing population, productivity, cost containment, labour shortage, clinical outcomes, and quality). The process of innovation is profoundly complex, influenced by many determinants. Fleuren et al. (2004) give us an extended division of four major groups of the determinants that influence healthcare innovation. The first group consists of determinants based on the socio-political context, namely rules, legislation, and patient characteristics. In contrast, the second is based on the organization's characteristics, such as staff turnover or the decision-making process. The third group of determinants is based on characteristics of the person who is adopting and using innovations which are knowledge, skills, and perceived support from colleagues. Characteristics of the innovation (complexity or relative advantage) are seen as the fourth group of determinants. This classification gives us a whole picture of determinants based on broader classification at macro (socio-political context), mezzo (organizational), and micro (personal) level and innovations by itself as a technical issue.

Reviewing available literature, we could identify some important reflections on quality measurements and healthcare service quality improvement and its complexity. Firstly, the main problem in defining quality measurements and quality of service comes from the fuzziness of the concept of quality, as "in practice, quality usually means adherence to evidence-based guidelines, and quality measurement focuses overwhelmingly on care processes" (Porter, 2010, p. 2478). Hence, quality healthcare appears as a subjective, complex and multi-dimensional concept (Mosadeghrad, 2014). Secondly, unlike manufactured goods that allow sampling and testing for quality throughout the production process, healthcare service is an intangible product, meaning that it "cannot physically be touched, felt, viewed, counted or measured like manufactured goods" (Mosadeghrad, 2013, p. 204). Thirdly, when assessing human behaviour in a healthcare institution, it is important to pay attention to whether or not the actors know because human behaviour measurement can influence behaviour (Denhardt & Denhardt, 2007). Fourthly, understanding what healthcare quality encompasses depends on the actors' perspective. Patients, professionals, managers, policymakers, and payers demonstrate the different perceptions of the health care quality in the literature. Based on the importance they place on different health-services elements, stakeholders differ in their perception of health care quality, so that, for example, healthcare professionals perceive healthcare quality as service aspects that bring satisfaction to them (e.g. having the best possible outcomes and meeting clinical guideline requirements), while participants perceive quality as an interaction between patients and providers (Mosadeghrad, 2013). These are some of the factors that should be kept in mind considering PCC and quality of care.

4.1.4. PCC in the International documents and standards

In this segment of Chapter 4, we aim to look at the policy regulations and other relevant documents that deal with the PCC concept as they are essential to understand the PCC not just as an idea but as an interactive process and practice towards quality improvement. Although a clear definition among health professionals is still lacking (Chapter 2), the international health organization provides their understanding of what PCC phenomena are, which is furthermore operationalized in the documents of the national policy regulations and possible measures. We found a body of literature that deals with the PCC concept on policy levels in the form of legal documents, non-obligatory documents which are guidelines and research based on the PCC evidence practice that we further discussed. On the policy level, the main actor is a state that operates through the health-social-educational system. How policy is defined is pivotal since that policy is often created without considering the extent of its impact; what it will affect and how it will affect them (Wan, 2014).

To discover the position of the PCC concept in the international documents and its importance for health care, we made an overview of the policy-relevant documents and standards. WHO uses the term "*patient-centred care*" in its documents, but the term has not been defined in the WHO Health Promotion Glossary. Docteur and Coulter (2012) identify two sources from which the WHO determine the PCC concept in its interpretation. The first source is the USAID (1999) document (adopted by the WHO European Observatory on Health Systems and Policies) which define the PCC as a caring approach to patient perspective; respect for patients' values, preferences, and needs; coordination and integration of care; information, communication and education; physical comfort; emotional support and alleviation of fear and anxiety; the involvement of family and friends and transition and continuity. The second source, Docteur and Coulter (2012) found in the World Health Report (2000), states that 'responsiveness' is defined as one of the three goals of health systems, along with health development, and being fair embracing attributes of respect for human beings as persons (appreciation of human dignity, confidentiality and autonomy); and client orientation (prompt and timely service, adequate amenities, access to social support, freedom to choose providers).

In line with the argument put forward by Picker Institute at the end of the 1980s that all patients deserve high-quality healthcare, in 2001, the Institute of Medicine (IOM) defined six key attributes of high-quality care: safe, effective, efficient, timely, equitable and patient-centred. We should keep in mind that these six high-quality components are tightly interlinked in daily practice and should always be examined in a broader context. Patient-centredness is perceived to be a central element of high-quality healthcare, whereby PCC is established in its own right. PCC is interpreted as health care that establishes a partnership among practitioners, patients and their families (when appropriate) to ensure that decisions respect patients' wants, needs and the preferences and that patients have the education and support they need to make decisions and participate in their own care (IOM, 2001). In this report, we do not find defined which dimensions contribute to the definition of PCC, but it refers to those that were identified by Picker Institute. Docteur and Coulter (2012) noted that timeliness was viewed as a criterion for increasing the quality of health care since the dimension of access as a variable was not included in the patient-centred approach.

International Alliance of Patients' Organization (IAPO) is a global voice of patients who represent all patients over the World and across whole disease areas. Even though the priorities of patients and their families and carers differ from country to country and from disease area, IAPO argues for some common priorities. In 2006, IAPO announced its Declaration on Patient-centred Healthcare, which states the essence of patient-centred healthcare is the healthcare system designed and delivered to address the healthcare needs and preferences of patients so that healthcare is appropriate and cost-effective. Furthermore, the Declaration sets out five core principles of PCC: respect; choice and empowerment; patient involvement in health policy; access and support and information (IAPO, 2007). (1) The principle of respect refers to a fundamental right of patient and carers to PCC and respects their unique needs, preferences and values, autonomy and independence. (2) The choice and empowerment principle argues for patient’s right and responsibility to participate in the healthcare decision-making process, for patients’ organizations’ supporting role in empowering the patient and their families towards informed healthcare choices that fit in with patients’ needs and the best possible quality of life. (3) Patient involvement in health policy refers to shared healthcare policymaking between patient and patients’ organisations at all levels and all points of decision-making with the ‘patient at the centre’ design. (4) Access and support principle refers to assuring patient have access to safe, quality and appropriate services, treatments, preventive care and health promotion activities (regardless of their condition or socio-economic status). At the same time, healthcare must meet patient’s emotional needs and take into consideration non-health factors (education, employment and family-related issues) as they impact patient’s healthcare choices and self-care-management. (5) Information principle means that patients and carers have to be provided with accurate, relevant, comprehensive information in an appropriate format according to health literacy principles (concerning individual’s condition, language, age, understanding, abilities and culture) as it is crucial for their informed decision-making process.

In 2006, the Organization for Economic Cooperation and Development (OECD) published a framework for assessing health-care quality in member countries (Kelley and Hurst, 2006). The framework was developed based on a review of existing quality and performance assessment frameworks used by national authorities in OECD countries. Reflecting the finding that at least five of the national frameworks used incorporated the concept of patient-centredness or responsiveness, the OECD framework also incorporated “responsiveness” or “patient-centredness” as one of three (together with effectiveness and safety) dimensions of health-care quality subject to assessment. OECD defines patient-centredness as “the degree to which a system functions by placing the patient/user at the centre of its delivery of healthcare and is often assessed in terms of patients’ experiences with their health care” (IOM, 1990; OECD, 2004b in Kelley & Hurst, 2006, p. 10). The OECD is in the process of defining measurements of patient-centredness to include regular benchmarking exercises. As the first step in this direction, OECD contracted with the Norwegian Knowledge Centre for the Health Services to undertake a comprehensive review of existing national and cross-national surveys of patient experiences (Garratt, Solheim, & Danielsen, 2008). Based on the results of this study, the OECD is currently working to develop a model population-based patient experience survey and is seeking to promote the cross-national exchange of best practices about the use of such surveys (Docteur & Coulter, 2012).

Joint Commission, as an international organization, sets the standards and guidelines for health quality improvement. In the same token, the importance of implementation of PCC is recognized and defined through a set of standards and operationalized through guidelines. In the white paper "Health care at the crossroads: guiding principles for the development of the hospital of the future" (2010), the important part is dedicated to achieving PCC on the hospital level. The Joint Commission defined the following principles to guide the achievement of PCC in the Hospital: (1) Make adoption of PCC values a priority for improving patient safety and patient and staff satisfaction; (2) Incorporate PCC principles into the activities of hospital overseeing bodies and transparency initiatives; (3) Address barriers to patient and family engagement, such as low health literacy and personal and cultural preferences; (4) Eliminate disparities in the quality of care for minorities, the poor, the aged and the mentally ill; (5) Improve the quality of care for the chronically ill through the adoption of care models that encourage coordinated, multi-disciplinary care and (6) Use robust process improvement tools to improve quality and safety, and support achievement of PCC. When it comes to the operationalization of PCC, Joint Commission states that PCC on one side and the quality improvement and patient safety, on the other, are complementary principles in practice. Health care professionals should adopt PCC values as a priority for patient safety and health care satisfaction improvement while at the same time improvement of patient safety and quality contribute to PCC achievement. To improve the safety and quality of care, in 2008/2009, Joint Commission developed a new set of accreditation requirements for hospitals PCC (together with family-centred care), effective communication and cultural competence, with the emphasis on the role of patient-centric communication (The Joint Commission, 2010). Calling on WHO's observation that healthcare has become more scientific and increasingly depersonalized, a European Society for Person-Centred Healthcare (ESPCH) was created in 2014. Medicine does science well, but humanism poorly and the division of medicine's 'caring' and 'cure' roles diminishes its practice and does not enrich it (Miles & Asbridge, 2013).

Kitson et al. (2013) identify two different discourses regarding PCC from a health policy perspective. The first is organizational and system theory discourse, where quality and safety are pivotal for putting PCC on the agenda of health policy regulations. The second discourse embraced these health policy regulations emphasizing the difficulties in making PCC a reality due to the existing tension between what policymakers wish and what health professionals can practically do. Similarly, Kelley and Hurst's (2006) research indicates that participants who valued PCC knew they should do so, but failed to express what is required, claiming that national and organizational initiatives should strengthen their commitment to PCC by describing and evaluating the mechanisms of practice.

In the literature, we find organisations that set standards for quality and improvement as part of the organizational policy and agenda. For example, the Colorado Nurses Association in Washington DC in the US as a diverse coalition of more than 165 organizations from across the health care spectrum (patient and consumer groups; employers and public purchasers; representatives of physicians, nurses and other clinicians; health plans; hospitals), and has defined a framework to improve the quality and affordability of health care for all patients through a public-private partnership (PPP) described in six key recommendations. The six recommendations are: (1) Set national priorities and provide coordination for quality improvement; (2) Endorse and maintain nationally standardized measures; (3) Develop measures to fill gaps in priority areas; (4) Ensure that providers and other stakeholders have a role in developing policies on use of measures; (5) Collect, analyze, and make performance information available and actionable; (6) Support a sustainable infrastructure for quality improvement. Stand for Quality's recommendations are the result of a partnership among multi-stakeholder groups who share the belief that improvements in access, quality, and affordability are inter-linked (Colorado Nurses Association, 2009).

Furthermore, we encounter American, Canadian and Australian health policy documents that integrate PCC phenomena into consideration as an important element of high quality in health care as well as a goal itself that these countries aspire to achieve. In the same line, the patient's experience as an essential part of the PCC phenomena has been recognized in the National Health System (NHS) of the United Kingdom through numerous national policies. To deliver the PCC, these policies are requiring health professionals and healthcare organisation to behave in a way that improves and continuously measures patients' experiences with healthcare. The NHS National Quality Board (NQB) published the NHS Patient Experience Framework (2012) to outline the most critical elements of the patients' experience of NHS Services. The NHS Patient Experience Framework is based on the eight Picker's domain as, according to the NQB argumentation, it more closely reflects the UK healthcare system. Besides these eight Picker elements, some additional elements are included ensuring dignity, privacy and independence of service users, supporting decision making and supporting self-management.

Another example of a country that has introduced PCC into national policy is Australia. The Australian Commission on Safety and Quality in Health Care (ACSQHC, 2010) released a proposed National Safety and Quality Framework that identified 'patient-focused care' as one of three dimensions that contribute to a safe and high-quality health system in the Australian context. Australian Commission on Safety and Quality in Health Care has identified approaches and strategies to promote PCC as following:

‘Best buys’ for improving patient experience; Consultation styles and communication training; Patient feedback reporting; Patient and carer engagement in personal care; Patient and carer access to information and education; Implementing rights-based patient constitutions, charters or codes; User-centred design and redesign; Experience-based co-design; Patient and carer engagement at the governance level; Leadership and change management strategies; Staff and practice development; Values training; Staff satisfaction strategies; Accountability strategies and Improved complaints processes (ACSQHC, 2010, p. 3). The number of strategies for providing care that is respectful of, and responsive to, the preferences, needs and values of patients and consumers is encompassed in the proposed National Safety and Quality Framework, in which a set of the ACSQHC supports operationalisation in practice. According to this document, for example, not only the experience of the patients matters but providers’ as well because all caregivers influence patient’s experience and all together need to foster an atmosphere of patient-centredness. It reveals the importance of interprofessional cooperation and learning as an integral part of making a patient-centred environment.

The document "Patient-centredness in Sweden’s Health System” (2012) presents an assessment and provides the six steps for progress in the Swedish health system toward PCC. Argumentation for bringing this policy paper, according to authors, lies in the fact that Swedish patients are among the least engaged by their physicians and least involved in their health care decision-making process. Five dimensions as a framework for assessment are: (1) Empowering patients through information and education; (2) Respecting patients’ needs, preferences and values as individuals; (3) Coordinating care across service providers and ensuring continuity of care; (4) Taking a holistic approach to patients as people with medical and non-medical (social, emotional, and spiritual) needs and (5) Involving family and close friends in the health care experience, to the extent desired by the patient. Although efforts to assess and track patient-centredness in Swedish health care are evident (at an early stage), Docteur & Coulter, recommend progress in six steps for improving patient-centredness in Sweden’s health care: (1) Ensuring compliance with existing legal obligations to strengthen patients’ position; (2) Establish patients as full partners with their providers with a role in health and care decisions; (3) Engage and involve patients and their representatives in health policy and administrative decisions; (4) Sustain efforts to facilitate coordination and continuity of care; (5) Define a framework for assessment that reflects the priorities of Swedish patients and (6) Strengthen efforts to assess and track patient-centredness.

These examples demonstrate the fact that the patient’s experience in health care matters and a great deal is going on in the world of policy related to the patient experience. What is common for these policies is that patient experience is recognized as a central pillar, a set of guidelines for patient experience in different health care types is advisable and desirable together with the research that will foster development and measurement of the patient experience. Examples of good practice may serve as a model for others, but surely, it does not mean that all countries will be as successful as others because of the apparent difference in the health care system or political instability.

Groene (2011) states that patient-centredness becomes an integral part of policy regulation and, PCC has an important impact across all levels of care (as we see from the example of the countries above). It is quite important and, at the same time, challenging to build a patient-centred approach to care in low-resource contexts at all levels. In health care organizations and health systems where the resources (health care workforce, medication, equipment) are unavailable, the healthcare workforce and organization should focus on the patient's perspective empowering them to participate in the process of accepting a continuous behaviour (particularly for the patient with chronic disease) that promotes health and prevents complications (WHO, 2005).

"Citizen engagement is seen as an appropriate and necessary part of policy implementation in a democracy"(Denhardt & Denhardt, 2007, p. 114); therefore, NPS's principles may be considered as applicable in the document of international actors that shape health policy. The key international actor put the idea of the PCC at the core of its policy agenda.

4.1.5. Argumentation for PCC implementation

Assessing the literature, we identify studies that emphasize the importance of PCC phenomena and their implementations as well as those which criticize the phenomenon from a negative perspective. It is quite difficult to quantify all the heterogeneous consequences of PCC implication in practice because of various definitions that describe and impact implementation (Lusk & Fater, 2013; Scholl et al., 2014).

Groene (2011) provides a comprehensive and systematic argument for PCC importance. According to his study, from a quality improvement perspective, there are three arguments for a patient-centred approach: (1) improving patients' rights, (2) improving health gain, and (3) contributing to organizational learning. The first argument has to do with abandoning a paternalistic relationship between patients and the medical profession and in light of democratic principles, give the patient his right to access information, protect privacy and freedom to choose. The second argument addresses the implications of PCC on patient behaviour, recovery, and outcomes. As the third argument, Groen argues indeed for the use of contextually specific patient knowledge for organisational improvement. Bensing (2000) states that although patient-centred medicine is important, this concept does not have a firm root in empirical evidence; therefore, he criticizes PCC as being 'fuzzy' that as a unidimensional concept leading to difficulties in interpretation. The PCC is fuzzy because it has a different meaning and connotation for different people, clear to all but vague and very difficult to operate and measure and contain; it comprises the characteristic of other phenomena and processes in medical consultation, so according to Bensing (2000) the interpretation of the PCC will depend on what part of the concept someone has in mind when speaking about patient-centredness (see more in Chapter 3).

The advantages of PCC implication are recognized in the literature as widespread. Wahlqvist et al. (2010) argue for patient-centred communication as a helpful tool in building a working alliance with the patient and an important tool of mediating a doctor's professional competence to the patient-doctor relationship. Furthermore, patient-centred communication behaviours in clinical encounters are associated with respecting patients who are more highly respected and are more engaged in clinical encounters with their doctor (Flickinger et al., 2016). The quality of the relationship between doctors and patients is closely related to the quality of care and patient satisfaction (Wimmers & Stuber, 2010).

Castro et al. (2016) concept analysis based on the literature review reveals that a patient-centred approach can enhance a patient's adherence to treatment, improve his knowledge regarding illness and health behaviour, improve patient's health outcomes, and their satisfaction with the care. It is associated with quality improvement while decreasing health-related costs (see Chapter 3). A systematic review shows that PCC results in reduced morbidity rates, improved quality of life for patients, and their adherence to care plans (Mead & Bower, 2000; Bourbeau et al. in WHO, 2005). Study based on critical nurses' beliefs about what are the important outcomes of PCC reveals as following: increasing patients' satisfaction by 'punctual follow-up,' highlighting patient's preferences, and planning to provide care to avoid prolonged hospitalization and imposed added costs (Esmaeili et al., 2014b). Furthermore, a systematic review by Rathert et al. (2013) reveals results from the literature that significant relationships between specific elements of PCC and outcomes exist while some others deny any relationship; still, there exists strong evidence for positive influences of PCC on satisfaction and self-management. PCC is associated with decreased utilization of health care services and lower total annual charges. In other words, PCC is associated with more effective and efficient delivery of health services in that reduced annual medical care charges may be an important outcome of patient-centred medical visits (Bertakis & Azari, 2011).

The advantages of implementing a patient-centred approach have been studied across all levels and types of care. Aarts et al. (2012) investigated to what extent patients' experiences with fertility care is associated with their QoL, and levels of anxiety and depression. The data were collected among 427 non-pregnant women in 29 Dutch fertility clinics. Their experiences with fertility care were measured by a patient-centredness questionnaire (PCQ)-infertility while for the measurement of patients' QoL was applied FertiQoL and for distress (anxiety and depression) was applied PCC Hospital Anxiety and Depression Scale (HADS) showing that more PCC is associated with higher QoL and lower levels of anxiety and depression. Authors emphasize the importance of integrating QoL aspects into care delivery and paying attention to anxiety and depression symptoms towards patient-centredness and quality of care improvement; they argue for more tailored care and a holistic approach to care, including PCC, that could potentially reduce short-term effects of treatment on or feelings of isolation.

4.1.6. Patient-centredness implementation and measurement

Many PCC frameworks exist in the literature, but the problem in practice is a lack of practical guidelines for PCC implementation (Chapter 3 and 4).

Measuring and reporting health services is critical to achieving the essential reform objectives of quality, affordability and access for all (Colorado Nurses Association). Kelley and Hurst (2006) argue for three types of indicators that are used to measure quality: structure, process or outcome indicators of quality. *Structure indicators* (e.g. qualified doctors, hospitals appropriately equipped) are considered as inputs to health care, as indicators of the characteristic of health care and conditions of health care delivery, which is not enough and does not ensure that the process is appropriate or that outcomes are achieved or acceptable. *Process indicators* represent measures based on clinical evidence of the effectiveness of the process concerned or, in other words, it measures clinically desirable outcomes and delivery of (in)appropriate health care to the relevant population at risk (e.g. children vaccination, regular checking of blood pressure by a physician among patients at risk). Process measures are the closest approximation of the actual health care offered and the most clinically specific of the three types of indicators (Kelley & Hurst, 2006). *Outcome indicators* seek to represent measurements of health improvements in medical care (e.g. rates of hospital-acquired infections, rates of 1-year survival following acute myocardial infarction), considering other factors might influence those outcome indicators besides the quality of care, such as patient age, the severity of illness, socioeconomic status. Other factors that influence the outcomes should be appropriately accounted for by risk adjustment. The limitation that should be kept in mind when interpreting outcome indicators because the clinical data with the detail necessary for comprehensive risk adjustment, particularly at the international level, is often lacking (Kelley & Hurst, 2006; Mosadeghrad, 2014).

In the literature, we encounter ‘a step-wise roadmap’ for health-care quality improvement provided by Santana et al. (2018, p. 429). Following the Donabedian model for health-care improvement, the authors classify person-centred care domains into the categories of ‘Structure’, ’Process’ and ‘Outcome’ for health-care quality improvement, very similar to Kelley and Hurst’s categorization of indicators. This model of practical implementation appears to be a sort of guide to health care systems and organizations in the provision of person-centred care. Although the authors make a clear distinction between patient-centred and person-centred care, we found it relevant to consider a person-centred care model of practical implementation since one of the selection criteria for inclusion of articles in their research was an existing theoretical or conceptual patient/person-centred care framework. According to Santana et al. (2018), the framework emphasizes three domains: structural, process and outcome domains. Structural domains are pivotal for person-centred care since it relates to the healthcare system and context of care delivery (the necessary materials, health- care resources and organizational characteristics). Structural domains further influence process and outcomes domains and they are identified as the following seven domains: 1) the creation of a PCC culture across the continuum of care; 2) co-designing educational programs, 3) as well as health promotion and prevention programs with patients; 4) Supporting a workforce committed to PCC; 5) providing a supportive and accommodating environment, and 6) developing and integrating structures to support health information technology and 7) to measure and monitor PCC performance. Process domains relating to the interaction between health-care providers and patients emphasize 1) the importance of cultivating communication and 2) respectful and compassionate care; 3) engaging patients in managing their care, and 4) integration of care. Outcome domains reflect the result that emerges from the interaction among the health care system, health care providers and patients. Moreover, this domain demonstrates the values of a person-centred care model implementation identified as 1) access to care, and 2) Patient-Reported Outcomes. "The framework is organized like a roadmap, depicting the practical PCC implementation in the order that it should be implemented – starting from structural domains that are needed as prerequisites, to facilitate processes and influence outcomes needed to achieve PCC" (Santana et al., 2018, p. 431). Conceptually, PCC is a model in which health- care providers are encouraged to partner with patients to co-design and deliver *personalized* care that provides people with the high- quality care they need and improve health- care system efficiency and effectiveness (Santana et al., 2018, p. 430).

Making medical care more patient-centred is a key component of improving the quality of care (Institute of Medicine, 2001) while accurate measurement of the quality of PCC is essential for quality improvement (Tzelepis, Sanson-Fisher, Zucca, & Fradgley, 2015). However, variation in methods and tools in the process of measurements of patient-centredness is impacted by the variation in understanding of PCC and its dimensions (Scholl et al., 2014) (see Chapter 3). Argumentations for the most reliable instrument for measurement of PCC go in favour of patient-reported measurements. Patients' perspectives are essential for targeting the area for health care quality improvement by assessing the quality of PCC accurately (e.g. care that respected their needs, values, preferences) and the provision of reliable and valid information about care delivery (Tzelepis et al., 2015).

Epstein & Street (2011) posit that measurements still do not reflect if the PCC is happening because no single measurement adequately captures all the aspects of PCC across the clinical and global level. They give an example of a brief general measurement, such as the Consumer Assessment of Health Plans Survey (CAHPS) widely adopted in the United States. This instrument is used for comparing the overall quality of interpersonal care across health care settings, whereas three of the items correspond to domains of PCC. It is not sufficient to measure, therefore, if we want to have information about needs that should be changed towards PCC achievement; additional actionable feedback to individual clinicians or health systems should be provided by detailed surveys, patient assessments or observations.

In the literature there are international comparative studies about patients' experience on care based on the application of standardized questionnaires. In infertility care, for example, well known as a standardized questionnaire is The Patient-centredness Questionnaire-Infertility (PCQ-Infertility) made by a group of experts for the Radboud University, the Netherlands (van Empel, 2011). The questionnaire comprised three assessment levels: total scale, 46 single indicators (scale range 0-3) grouped into the Picker Institute's eight domains of PCC. Due to the specificity of care involving at least two patients, women must answer their PCC experience questionnaire together with their partners. This instrument allows benchmarking about patient-centredness in infertility care on the national and international level (Karajičić, 2014; van Empel, 2011; Vlaisavljević, Muršič, & Karajičić, 2016).

A comprehensive measure of PCC should capture different aspects of PCC, and encompass and align different perspectives of stakeholders at multilevel (patients, their families, clinicians, and health systems) (Epstein & Street, 2011). As some studies reveal, patient needs and circumstances are at the heart of clinical care, no matter the system-levels reforms implementation as financial and structural (Hudon, Fortin, Haggerty, Lambert, & Poitras, 2011; Vlaisavljević et al., 2016). Picker's eight dimensions are the core of measuring a patient's experience on health care and represent a model of partnership between providers and patients and families towards identification and satisfaction of needs and preferences. Besides measuring a patient's experience, a successful PCC approach requires attention to staff experience, 'as the staff's ability and inclination to effectively care for patients is unquestionably compromised if they do not feel cared for themselves" (Frampton et al., 2008, p. 4).

A comprehensive understanding of the dimension used to measure the quality of health care has been provided by Kelley and Hurst (2006, pp.12-13) as follows: 1) Acceptability, 2) Accessibility, 3) Appropriateness, 4) Capacity, 5) Competence or Capability, 6) Continuity, 7) Effectiveness or Improving health or Clinical focus, 8) Efficiency, 9) Equity, 10) Patient-centredness/Patient focus or Responsiveness, 11) Safety, 12) Sustainability and 13) Timeliness. According to Kelley and Hurst (2006), effectiveness, safety and responsiveness/patient-centredness are the core quality dimensions of healthcare that increase the likelihood of desired outcomes; still, in practice, not all dimensions are equally used to measure the quality of care, and it quite depends on the country and policy and decision-makers' consideration of which dimension is important. For example, the authors argue that the most commonly used dimensions are effectiveness and safety while the less commonly used dimensions, which do not imply their unimportance, are equity and efficiency. However, all these dimensions are related, and less commonly used dimensions may be subsumed by more commonly used ones. The authors give an example where the acceptability dimension is most often presented as part of patient-centredness while together, there are fundamental dimensions to effectiveness. The authors argue that patients' experiences with healthcare have a powerful effect on their future utilization of and response to healthcare based on the previous definition of acceptability as conformity to the realistic wishes, desires and expectations of healthcare users and their families (Donabedian, 2003 in Kelley & Hurst, 2006). Appropriateness, as a performance dimension most often presented as part of effectiveness, is the degree to which provided healthcare is relevant to the clinical needs, given the current best evidence (Kelley & Hurst, 2006). The term patient-centredness is synonymously used with the responsiveness that refers to how a system treats people to meet their legitimate non-health expectations (WHO, 2000). Additionally, patient-centredness is "the degree to which a system functions by placing the patient/user at the centre of its delivery of healthcare and is often assessed in terms of patient's experience of their health care" (Kelley & Hurst, 2006, p. 14). At the core of every patient experience is a clinical-patient relationship with caring, communication and understanding as core attributes. However, the emphasis is placed on the patient's report of his experience with specific aspects of care and goes beyond his general satisfaction or opinion to the care adequacy (Kelley & Hurst, 2006). Kelley and Hurst (2006) argue for two dimensions, most often presented as part of patient-centredness: *Continuity and Timeliness*. Continuity dimension refers to the extent of coordinated care across providers and institutions for specified users over time. Clinical continuity measures are used in various frameworks for national health system performance measures (e.g. the percentage of patients with depression who receive a continuous course of antidepressive medication through the acute phase of their illness), but the majority of measures refer to patient's experience of care. Based on previous research by Kelley and Hurst (2006), timeliness refers to the degree to which patients can obtain care promptly referring to timely access to care (people can get care when needed) and coordination of care (the system facilitates moving people across providers and through the stages of care). They state there are two aspects of timelines: clinical (e.g. length of time from admission for a heart attack to the administration of thrombolytic therapy) and patient-centredness (patients' perceptions of their ability to get an appointment for needed urgent care as quickly as they wanted). Access to Care dimension (see Section 3.5.8.) involves elements of health care system performance as cost/expenditure (measured by indicators of health insurance coverage and cost-sharing); utilization (measured by indicators of the use of services); and quality (indicators of responsive care as the degree to which there are communication or language barriers for patients to health care).

Competence or capability dimension (see Section 4.1.6.), in terms of its assessment, is assumed to be included in effectiveness, and assesses the degree to which health system personnel have the training and abilities to assess, treat and communicate with their clients. There are many potential aspects of competence in this context, including technical competence as well as cultural competence (Kelley & Hurst, 2006).

The Picker Institute designed a very practical organizational guide which is named *Patient-centred care Improvement Guide*. Defined in IX sections, the Guide is aimed to help organizations that want to be

PCC (but do not know how) or want to improve patient-centredness. The Guide offers a Self-Assessment Tool as a starting point to identify and prioritize the opportunities for introduction of the PCC approach within a given organization. Furthermore, the Guide explores PCC in the framework of 'organizational culture change, differentiating between a quick-fix mentality and the deep-rooted, long-term commitment necessary to truly change the culture of an organization" (Frampton et al., 2008, p. 7; see also p. 20). This Guide addresses: what the most commonly seen barriers to PCC implementation are, myths of PCC, infection control and privacy laws issues, providing some strategies and how to engage different stakeholders (patients and their families, medical and non-medical staff, leadership and management) towards successful implementation of PCC and giving examples (prompt and low cost) of good practices from high performing PCC US hospitals. The Guide emphasizes the importance of using technology in consistency with the PCC values and in addition to everyday human interaction, and presents guidance for individuals (Frampton et al., 2008).

4.1.7. Enablers and barriers in PCC implementation

Health care systems, organizations and individual caregivers are constantly challenged to organize care according to the tenets of PCC under constrained resources (Hower et al., 2019). Despite evidence of PCC effectiveness in contributing to other health care systems and organizational goals, systems and organizations fail to achieve PCC. The process of PCC implementation in practice is not linear. Different actors in health care (nurses, medical doctors, medical and nursing students, managers, patients) identify a varied set of hurdles. Overall, organizations hold PCC as an important value, but there are several reasons why this does not translate into successful implementation (Kelley & Hurst, 2006).

It might be helpful to identify factors that affect the quality of medical services and at the same time, possible enablers and barriers in the PCC process. In the process of production of cooperation between the patient and the physician in a supportive environment, individual (physician's age, personality, education, capabilities and experience), organizational (working conditions, resources and relationships with co-workers) and environmental factors (economic and social influences) play an important role. Furthermore, the physicians' subjective attributes, including the priority they give to medical care, would have a moderating influence on the delivery of care (Mosadeghrad, 2014) (*Figure 9*).

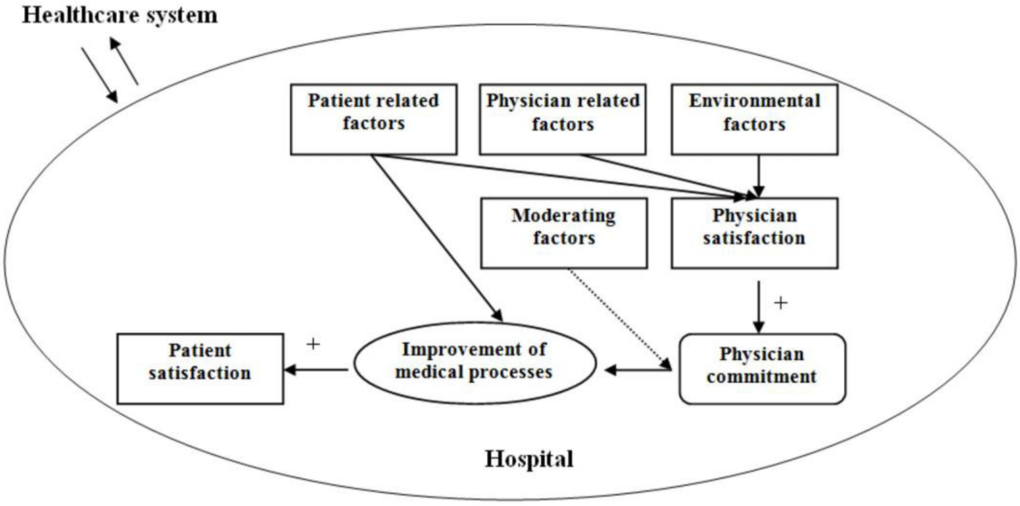

Figure 9. A model of factors affecting the quality of medical services (Mosadeghrad, 2014)

Enablers are recognized in the literature as elements that foster patient-centredness in health care (Scholl et al. .2014). According to Scholl et al. (2014), five dimensions have an important role in health care provision toward patient-centredness. Firstly, they identified a clinician-patient manner of communication that encompasses a different set of verbal and non-verbal behaviour in many aspects using various communication skills. As examples from the literature that attribute to this dimension, they distinguish examples of general communication skills, e.g. when clinician is setting the stage, setting an agenda, prioritizing the patient’s problems and (non) verbal communication, e.g. using open-ended questions, summarizing important information, asking the patient to repeat, making eye contact, nodding. Secondly, an important PCC enabler is the integration of medical and non-medical care whose attributes Scholl et al. (2014, e107828) describe as "supporting integrative therapies and complementary medicine, showing sensitivity to non-medical and dimensions of care, and by offering patient support services (e.g. self-help groups)". Thirdly, a teamwork and teambuilding dimension with relevance on different levels of care but also among different actors. Hence, they identify teamwork and teambuilding dimension as existing "within or between units, departments, healthcare institutions, or providers, […] it can involve building interdisciplinary and multi-skilled teams through training and educational programs. Patient-centred teams are characterized by their ability to communicate, respect and trust among team members, mutually shared values, goals and visions, information sharing, constructive feedback, equal distribution of responsibility, accountability, and power and awareness of one’s own abilities and priorities". Fourthly, a dimension that is recognized as an important enabler in practice is Access to care with territorial location and timeliness as key dimension attributes. Scholl et al. (2014) argue that patient-centredness in light of territorial access to care means being “conveniently located for the patient” in terms of decentralized health services and available transportation. Timeliness means that appropriate care can be accessed in time when it is needed (including access to the secondary and tertiary level of care and clearly provided instruction regarding referral procedure). Finally, the dimension of Coordination and continuity of care is an important enabler in the process of PCC. The core of this dimension is the usage of available patient's data and evidence to plan and provide care. They are enabling coordination between ''front-line patient care with ancillary and support services, […] preparing transitions from inpatient to outpatient or vice-versa and providing follow-up appointment and services after discharge" and present comprehensive attributes according to School and colleague's analysis (Zill, Scholl, Härter, & Dirmaier, 2015, pp. 3–6).

Hower et al. (2019) argue that the organizational level, positioned between individual and system, is the level of care where 'specific activities for implementing PCC need to be carried out to fulfil patient needs', and as previous research suggests, implementation success in health care depends on determinants at three levels: 1) *the individual level* (characteristics of individuals as: coping strategies, physical and emotional well-being, skills and capabilities and attitudes towards PCC), 2) *the organizational level* (a) strategies (e.g. organizational incentives and rewards, learning, management of innovations and changes, leadership behaviour and engagement, conflict management, process orientation, resource orientation, employee retention and satisfaction, add-on services), (b) structures (staffing and workload, technical infrastructure, rooms and buildings), (c) processes (continuity of care, timeliness of care, flexibility of care, internal communication and networking) and (d) culture (culture and climate) and 3) *the healthcare system level* (regulations and patients' rights or climate of politics). Similarly, Mosadeghrad (2014) divides into three categories factors that influence the quality of provided medical services: (a) *provider (physician)* and (b) *the receiver of medical services (patient)* and (c) *the environment in which medical services are provided*. Factors that relate to the patient are the patient's socio-demographic variables, patient cooperation, and illness. Involving the patient in organization or system changes appears to be an "added value for unblocking the barriers" (Baker et al., 2016). Putting patients in positions of real power and influence, and using their wisdom and experience to identify issues and to inform and redesign care to improve processes and systems, provides the most important force for driving change and has the greatest potential for achieving a long-term transformation of the healthcare system (Reinertsen et al., 2008 in Baker et al., 2016). Factors relating to the physician are identified as physician socio-demographic characteristics, physician motivation and satisfaction and competency. Environmental factors refer to the health care system, resources and facilities, collaboration and partnership development. When considering enablers and barriers of PCC in the healthcare organization environment, attention should be on 1) internal environment (the working environment in which a healthcare service is provided, e.g. healthcare organization, the resources and facilities required for providing services) and 2) external environment (the environment surrounding healthcare organizations that affects their performance and quality of services) (Mosadeghrad, 2014).

It is not easy to identify the disadvantages of PCC, but rather a barrier in the process of implementation. A wide range of innovative patient-centred services can be available for the patient but, as is the case in Australia (Kelly et al., 2013), there is evidence of underutilization by patients and referral from health professionals appears limited so that it can refer to personal limitation based on the Esmaeili et al. (2014a) classification. They identify the following three groups of PCC barriers from the nurses' perspective: (a) lack of common understanding of teamwork (a lack of team coordination and common understanding of patient centrality in care), (b) individual barriers (lack of motivation and holistic view, interest, limiting beliefs), and (c) organizational barriers (lack of specific, defined guidelines). This study shows that barriers exist on an individual to team and organizational level. From a quality improvement perspective, Groene (2011) argue that the problem of implementation is in lack of clarity addressed to all stakeholders regarding what the PCC approach means and providers' beliefs that adding a patient survey to existing performance measures is sufficient for PCC realization in practice.

The interaction between a physician and the patient might be affected by the patient's socio-demographic factors, patient's attitude and behaviour, and the ability of patients to provide information and cooperate with clinicians that might also affect the attitudes of caregivers and clinical outcomes (Mosadeghrad, 2014). Hence, studies reported time pressure imposition and tiredness as the main barriers of PCC (Bombeke et al., 2010). Kreindler (2015) observed that the evidence on PCC achievement at the organizational level is lacking in comparison with the PCC at the clinical level (e.g. PCC clinical consultation).

Significant barrier to efficiency and quality improvement is health care systems' complexity, highly departmentalized and bureaucratic structure (Mosadeghrad, 2014), health care system's fragmentation regarding the care delivery process and the poor transfer of information (OECD, 2010). Tabrizi et al. (2018) call on policy and decision-makers to build their reforms on the operational reality and conditions of every country because most of the NPM programs in different countries are suffering from 'non-implementation syndrome'. Therefore, Tabrizi et al. (2018) argue that for reform in any sector, including health care, it is vital to carefully identify managerial barriers and challenges. Thus, two basic types of collaborative efforts are identified: a) *systems change* refer to efforts altering the existing network structure, creating new linkages, and decreasing service fragmentation and b) *service change* refers to efforts focusing on improving access, and providing more holistic service (Selden et al., 2006 in Herranz, 2010). If managers and policymakers wish to improve health care and the quality of medical services provision, they must invest in the five capitals: (1) *Physical* (non-human resources needed for high quality service delivery), (2) *Human* (skills, experience and knowledge gained by an employee to perform the job well and retention of qualified physicians), (3) *Social* (one's responsibility and accountability to society and human beings; doctor's accountability goes with information transparency, continuous professional development and training and providing guidance on standards and ethics; responsibility for patient care is shared and based on teamwork, collaboration, cooperation and communication), (4) *Cultural* (awareness of and sensitivity to patient's culture that improve communication and attain the patient's trust) and (5) *Leadership* (the leader's ability to direct an organization forward in a positive direction, transforming organizational values and cultures to meet the needs of the patients and employees) (Mosadeghrad, 2014).

Although students' experience and perception towards PCC is poorly researched, in the literature, we found that they have reported time pressure imposition and tiredness as the main barriers of PCC being developed as an approach to patient care (Bombeke et al., 2010). Hudon et al. (2011) identify the shortcomings of the approach that is used to measure PCC. (1) PCC as an approach to care has a positive connotation with the meaning of doing the right thing so carers should behave based on ethical principles no matter the health outcomes. (2) Some behavioural measures used to measure PCC in line with patient health outcomes might lead to confusing results (medical workers have great communication skills, or they are empathic, but the health status of the patient does not improve). (3) Statement and belief that the patient knows best is confusing as sometimes he/she might think to go for one treatment while the doctor does not agree on that. (4) Patients and doctors have different perceptions and assessments of care provided, and they depend on personal reflection.

At all levels of care is an increasingly recognized need for the patient-centred healthcare system and the need for greater patient and family engagement in decision-making, but still healthcare organizations fail in developing and adopting patient engagement strategies (Baker et al., 2016). A set of barriers regarding PCC clinical practice implementation are caused by the variations in understanding of PCC dimensions, according to Scholl et al. (2014). Thus, conceptual tensions between objective processes and subjective experiences could highlight reasons why patient-centred values are 'neither an abstract ideal nor a code word for cost reduction' (Porter, 2010, p. 2477) and fail to translate into improved practice(Lord & Gale, 2014).

4.1.8. Medical professionals in the context of NPM and NPS

The NPM movement brought a shift in perceiving and understanding of the changed role of public administrators and the nature of the profession (Denhardt & Denhardt 2007). Medical doctors are positioned in between system and patient appearing as the conduct between patient and system and in those circumstances, doctors but also other medical professionals in the context of the NPM reforms are exposed to the adoption of various principles. For example, medical professionals of Finland during the

‘90s were exposed to the adoption of managerial accounting techniques[1] (known as cost accounting or management accounting) which affected the set of practices and competencies in medical expertise, unlike the UK medical professionals who resisted adopting these techniques in the medical practice (Kurunmäki, 2004). However, there is strong pressure on doctors, but also on health care professionals and managers to behave towards greater efficiency, in terms of activities and the use of resources, while focusing on personalizing care, differentiating benefits and satisfaction of beneficiaries of public services, which is seen a bit paradoxical considering mechanisms of achievement (Sebai & Yatim, 2018). Connell et al. (2009) also highlight a paradox where the work environment under NPM principles is characterized by increasing complexities, conflicts and contradictions which appears to be contrary to principles of decentralizing or ‘de-bureaucratizing’ the system. “In practice, the drive to improve efficiency and coordination and control costs has resulted in increased bureaucratic surveillance, centralized control and managerial accountability through measured performance targets and indicators” (Connell et al., 2009, p. 430). One of the possible solutions from practice is that nurse practitioners and physician assistants do a kind of protocol-driven work when they are well-equipped and allowed to do so, which opens more time and space for the doctor to do the medical part for which only he is authorized (Gounder, 2013). Correia (2013) provides a study about the existing interplay between managerialism and medical professionalism in hospital organizations in Portugal from the doctors' perspective or, in other words, how managerial structures, work organization and technological involvement affect doctors' use of their professionalism and their perceptions regarding the managerial world. Results show that Internal differences within the medical profession regarding managerial expectation exists in terms of either context or professionals' behaviour meaning the medical profession (physicians and surgeons) differ in their response regarding managerial expectation- some are committed to their patients, while others behave to respond to financially-driven interests (Correia, 2013). Unlike NPM, the emphasis within NPS principles is on staff responses to work pressures and how management extends to the control of emotional responses, the qualities of empathy, emotion, and activity in a professional manner (Denhardt & Denhardt, 2007).

4.2. HEALTH PROFESSIONALS’ COMPETENCIES RELATED TO PCC

Competencies are the skills, abilities, knowledge, behaviours, and attitudes that are instrumental in the delivery of desired results and, consequently, of job performance (WHO, 2005). Similarly, the Greenwood Dictionary of Education (2003) defines competency as an identifiable behaviour that is essential to the adequate performance of a given task and competencies are the basis for competency-

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[1] Managerial accounting techniques deal with the identification, measurement, analysis, and interpretation of accounting information so that it can be used to help managers to make necessary decisions to efficiently manage a company’s operations (Corporate Finance Institute (CFI)).

based education and competency-based teacher education. According to MeSH, the term *clinical competencies* (introduced in 1975) describe “the capability to perform acceptably those duties directly related to patient care” while terms *professional competence* (introduced in 1979) describe “the capability to perform the duties of one's profession generally, or to perform a particular professional task, with the skill of acceptable quality”. Further, *professional competencies* definition comprises the elements of clinical competencies, while still emphasizing its universality character (no matter on profession) and the importance of a newly introduced element of acceptable skills that are required for certain professions or tasks. *Ability* is considered as the capacity to perform a task, as in talk of "high ability" or "low ability"; as a degree of skill at task performance (Collins & O'Brien, 2003).

In the light of the NPM and NPS trend and a new approach to the patient, the growing need for some new competencies to complement existing ones (clinical competencies) is already evident and recognized in numerous international documents. Professional competencies in health care are quite present in the literature and might relate to a different type of care, e.g. chronic care or different health care professionals (e.g. doctor, nurse). For example, in the book "Health Professions Education: A Bridge to Quality" (2003), the Institute of Medicine defines the core competencies for health care professionals over the World, no matter what the type of health care they provide is. IOM deliver a classification of five core competencies: (1) Working as part of interprofessional teams defines that a health professional works towards continuous and reliable care by cooperation, collaboration, communication, and integration of care in teams; (2) Delivering patient-centered care aligns to competence of health professionals to identify, respect, and care about patients' differences, values, preferences, and expressed needs; to listen and clearly inform as well as to communicate with, and educate patients; to share decision making and management; and continuously advocate disease prevention, wellness, and promotion of healthy lifestyles, including a focus on population health; (3) Practicing evidence-based medicine describes the skill of health professionals to integrate best research with clinical expertise and patient values for optimum care and participate in learning and research activities to the extent feasible; (4) Focusing on quality improvement competence shows us the skill of medical workers to Identify errors and hazards in care; to understand and implement basic safety design principles (standardization and simplification); continually understand and measure quality of care (structure, process, and outcomes in relation to patient and community needs); to design and test interventions to change processes and systems of care; and (5) Utilize information technology to communicate, manage knowledge, mitigate error, and support decision making and often defined for certain groups of health care professionals, and different levels of health care.

Defining PCC competencies appears to be as difficult as defining PCC phenomena (Chapter 2). As the PCC phenomena itself is quite broad in scope, PCC competencies also embrace different skills, abilities, knowledge, behaviours and attitudes from the various areas as we already mentioned earlier in Chapter 2. IOM's example from above shows PCC competencies as one of those universal core competencies for health care professionals regardless of the profession or type of care they provide. However, IOM argues for the importance of those five competencies (inclusively, patient-centred competence) for health professionals' education and central to the education of all health professions for the future. Likewise, Patient-centred Education and Research Institute (Daly, 2015) define five core competences: *Professional Knowledge* (Core I), *Patient Services* (Core II), *Evidence-Based Delivery (*Core III*)*, *Interpersonal Communication and Collaboration Skills* (Core IV) and *System-Based Practice* (Core V) where PCC is perceived within the core competence Patient Services (Core II). *Professional Knowledge* (Core I) demonstrates an understanding of a patient navigator scope of practice and those of healthcare team members while meeting ethical and professional obligations as follows: 1) Apply knowledge of the differences in roles between members of the healthcare team and act within professional boundaries; 2) Build trust by being accessible, accurate, supportive, and acting within scope of practice; 3) Use organization, time management, problem solving, and critical thinking to assist patients efficiently and effectively; 4) Promote navigation role, responsibilities and value to patients, providers, and the larger community; 5) Respond to patient needs within scope of practice and over personal self-interests; 6) Know and support patient rights; 7) Demonstrate a sensitivity and responsiveness to a diverse patient population including but not limited to gender, age, culture, race, religion, abilities, and sexual orientation; 8) Exhibit the emotional intelligence needed to positively impact desired healthcare outcomes; 9) Adhere to ethical principles of healthcare and demonstrate accountability to patients, other members of the healthcare team, and the profession; 10) Effectively engage in professional growth through lifelong learning activities; 11) Incorporate feedback on performance to improve daily work; 12) Demonstrate healthy coping mechanisms, employ self-care strategies, and achieve a work-life balance; 13) Exhibit the ability to cope with a constantly evolving patient-care environment; 14) Perform all duties accurately and efficiently (Daly, 2015). *Patient Services* (Core II) is about facilitating PCC that is compassionate, appropriate, and effective for the treatment of disease and illness and for the promotion of health and it includes the following: 1) Help patients access medical care and navigate the healthcare system by assessing barriers to care and engaging patients and caregivers in creating potential solutions to financial and social challenges and Identify appropriate and credible resources responsive to patient needs (practical, social, physical, emotional, spiritual) and communicate them in a way that patients and caregivers understand; 2) Exhibit skill in obtaining and recording accurate information from patients and educate them and caregivers on the process of managing their personal medical records including schedules, reports, treatment plans, bills, and prescriptions; 3) Educate patients and caregivers about issues addressed by their healthcare providers using evidence-based information and ensuring that clinical questions are referred to the appropriate provider; 4) Explain the use of diagnostic testing and medications to the patient and caregivers; 5) Empower patients to communicate their preferences and treatment priorities to their healthcare team and participate in decision-making; 6) Demonstrate compassionate and respectful behaviours when interacting with patients and caregivers; 7) Empower patients to participate in wellness by providing self-management assistance and health promotion resources and referrals; 8) Follow-up with patients to support adherence to agreed-upon treatment plans; 9) Understand complex or culturally sensitive relationships (Daly, 2015). *Evidence-Based Delivery* (Core III) is competence that improves the practice of healthcare delivery through continuous self-evaluation and improvement while strengthening and advancing the profession through the following: 1) Contribute to patient navigator program development through continuous assessment, implementation, and evaluation; 2) Assess and evaluate patient navigation outcome measures across the healthcare continuum, such as decreasing barriers to care and population health disparities, while improving patient encounters, resource provision, and collaborative relationships; 3) Assess and assist in creating quality improvement measures to strengthen the role of patient navigator to improve patient outcomes, 4) Use information technology to better attain patient goals; 5) Maintain and use patient records to report timely patient interactions, barrier resolution, and other evaluation metrics to administrators and funding agencies; 6) Demonstrate basic knowledge of medical terminology, disease and illness, and medical treatment; 7) Utilize supportive care options, including risks and benefits of clinical trials and integrative therapies; and 8) Exhibit an ability to access and utilize evidence-based information (Daly, 2015). *Interpersonal Communication and Collaboration Skills* (Core IV) demonstrates interpersonal communications skills that result in effective and collaborative exchange of information with patients, their caregivers, and health professionals through the following: 1) Employ active listening and remain solutions-oriented in interactions with patients, families and members of the health care team; 2) Encourage active communication between patients/families and health care providers to optimize patient outcomes; 3) Demonstrate empathy, integrity, honesty and compassion in all communications; 4) Demonstrate effectively exchange of information with patients, caregivers, and other members of the healthcare team, including communicating effectively across a variety of socioeconomic and cultural backgrounds; 5) Appropriately document information regarding the delivery of patient care for medical, legal, and quality of care purposes; 6) Create and maintain positive interpersonal interactions; 7) Apply insight and understanding about human emotions and responses to create and maintain positive interpersonal interactions; 8) Know and support National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Health and Health Care (Daly, 2015). *System-Based Practice* (Core V) is about exhibiting awareness and responsiveness to the larger context and system of healthcare as well as being able to effectively use other resources to optimize the continuum of care and it refers particularly to the following: 1) Support a smooth transition of patients across the care continuum, including screening, diagnosis, active treatment, survivorship and/or end-of-life care; 2) Advocate for quality patient care and optimal patient care systems; 3) Organize and prioritize resources to optimize access to care across the care continuum for the most vulnerable patients; 4) Develop collaborative relationship with other healthcare team members in order to reduce patient care barriers; 5) Assist patient capacity to self-advocate and to optimize interactions with the treatment team and other healthcare professionals; and 6) Communicate effectively with navigator colleagues, health professionals and health-related agencies to promote patient navigation services and leverage community resources to improve patient outcomes (Daly, 2015).

In the book "Professional Nursing Concepts: Competencies for Quality Leadership" (2016), Finkelman and Kenner (referring to IOM framework) list five patient-centred competencies (in nursing) that encompass multiple factors and activates, as follows: (1) patient advocacy, (2) self-management of care, health literacy, patient and family education, (3) nurse-patient communication and interaction, (4) core coordination (the plan of care, critical thinking, clinical reasoning and judgment, delegation) and (5) culture, diversity and disparities. WHO (2005), based on the IOM (2003) document, recognize the following components as part of PCC competencies: (1) identifying, caring about and respecting patients' preferences, values, differences and expressed needs, (2) coordinating continuous and timely care, (3) relieving pain and suffering, (4) listening and communicating, (5) providing education and information, (6) sharing decision-making and management, (7) preventing disease, disabilities, and impairments and (8) promoting wellness and healthy lifestyle. Interpretation of the PCC competencies provided by WHO, from our point of view, is developed within Picker's framework where each PCC competence relies upon the PCC dimension.

The basic patient-centred competencies that are required for all health professionals, according to Coulter et al. (2008) argumentation, are defined as the ability to (1) understand the patient's perspective, express empathy and provide appropriate support, (2) guide patients to appropriate sources of information on health and healthcare, (3) educate patients on how to protect their health and prevent occurrence or recurrence of disease, (4) elicit and take account of patients' preferences (5) communicate information on risk and probability, (6) share treatment decisions, (7) provide support for self-care and self-management, (8) work in a multidisciplinary team and (9) manage time effectively.

In the literature, we encounter more documents that refer to PCC competencies for the nursing profession and practice or health professionals in general but less particularly about PCC competencies for doctors. The PCC is quite broad in scope and encompasses a set of different components and elements of other competencies (e.g. interprofessional, cultural, communication) (see Chapter 3); therefore, PCC requires medical professionals to have a multitude of skills, attitudes and behaviours. In our conducted review on PCC competence, we encounter similarities and differences one how WHO (2005), Coulter et al. (2008) and Patient-centred Education and Research (in Daly, 2015) define PCC competencies. The eight Picker PCC dimensions served as a model for systematizing findings from sources mentioned above to reveal what kind of professional competencies each of the PCC dimensions includes (*Table 2*).

Table 2. Scoping review of professional competencies related to PCC using Picker's eight PCC dimensions model

PICKER'S DIMENSION	**COMPETENCE**
(1) Information, Communication, and Education	- listening and communicating (WHO, 2005) - providing education and information (WHO, 2005)
	- preventing disease, disabilities, and impairments (WHO, 2005) - promoting wellness and healthy lifestyle (WHO, 2005) - educating patients on how to protect their health and prevent occurrence or recurrence of disease (Coulter et al., 2008) - empowering patients to participate in wellness by providing self-management assistance and health promotion resources and referrals (PCERI, 2015)
	- guiding patients to appropriate sources of information on health and healthcare (Coulter et al., 2008) - educating patients and caregivers about issues addressed by their healthcare providers using evidence-based information (PCERI, 2015)
	- empowering patients to communicate their preferences and treatment priorities to their healthcare team and participate in decision-making (PCERI, 2015) - explaining the use of diagnostic testing and medications to the patient and caregivers (PCERI, 2015) - communicating information on risk and probability (Coulter et al., 2008) - sharing decision-making and management (WHO, 2005) - sharing treatment decisions (Coulter et al., 2008)
	- exhibiting skill in obtaining and recording accurate information from patients and educating them and caregivers on the process of managing their personal medical records including schedules, reports, treatment plans, bills, and prescriptions (PCERI, 2015) *
(2) Patient's Preferences	- identifying, caring about and respecting patients' preferences, values, differences and expressed needs (WHO, 2005) - eliciting and taking account of patients' preferences (Coutler et al., 2008) - understanding the patient's perspective, expressing empathy and providing appropriate support (Coutler, et al., 2008) - identifying appropriate and credible resources responsive to patient needs (practical, social, physical, emotional, spiritual) and communicating them in a way that patients and caregivers understand (PCERI, 2015) * - Understanding complex or culturally sensitive relationships (PCERI, 2015)
(3) Continuity and Transition	- coordinating continuous and timely care (WHO, 2005) - providing support for self-care and self-management (Coulter et al., 2008) - following up with patients to support adherence to agreed-upon treatment plans (PCERI, 2015)
(4) Coordination of Care	- working in a multidisciplinary team (Coulter et al., 2008) - managing time effectively (Coulter et al., 2008) - ensuring that clinical questions are referred to the appropriate provider (PCERI, 2015)
(5) Access to Care	- helping patients access medical care and navigate the healthcare system by assessing barriers to care and engaging patients and caregivers in creating potential solutions to financial and social challenges (PCERI, 2015) *
(6) Emotional Support	- demonstrating compassionate and respectful behaviours when interacting with patients and caregivers (PCERI, 2015)
(7) Physical Comfort	-relieving pain and suffering (WHO, 2005)
(8) Family and Friends Involvement	*Note: Competencies related to Family and friends' involvement dimensions are recognized within other dimensions (1), (2) and (5) noted above with **

Most of the identified PCC competencies relate to the dimension of Information, Education and Communication (n=15) and Respect for Patient's preferences (n=5), then to Coordination of Care (n=3) and Continuity and Transition (n=3). For the dimension of Family and Friend's involvement related competencies, we did not find competence explicitly stated. As we consider family and friends as caregivers, we can define competencies relevant to the role of Family and Friend in other fields as: educating caregivers on the process of managing patient's personal medical records (schedules, reports, treatment plans, bills, and prescriptions); assuring patient's caregivers understand appropriate and credible resources as responsive to patient needs (practical, social, physical, emotional, spiritual) and engaging caregivers in creating potential solutions to financial and social challenges that will help a patient to access medical care and navigate the healthcare system.

Interpersonal competencies. For the patient and their relatives, the technical job is important but might not be sufficient for those who lack medical knowledge. Patient-centredness is considered a standard for quality interpersonal care (IOM, 2001). For example, when accessing healthcare quality, patients and their relatives argue the interpersonal relationships as an important factor (Mosadeghrad, 2013). Interpersonal competency involves healthcare providers' active listening, trust, respect, confidentiality, courtesy, responsiveness and effective communication with patients; being caring, polite, and friendly; respectful, empathetic, sensitive and kind (Mosadeghrad, 2013). Understanding complex or culturally sensitive relationships (PCERI, 2015) and demonstrating compassionate and respectful behaviours when interacting with patients and caregivers (PCERI, 2015) could be examples of interpersonal competencies (*Table 2*).

Communication Competencies. Listening, communicating, providing education, and information is an essential part of PCC competence (*Table 2*). The Greenwood Dictionary of Education defines communication as the exchange of ideas (information, feelings, theories, beliefs, and entertainment), including hearing or receiving information, speaking or sending information, and use of language (written, oral, and symbolic). In the same dictionary, communicative competence is defined as the ability to convey meaning effectively using linguistic means, and it entails knowledge: knowledge of the lexicon and structure of a language (meaning is communicated as intended) and, sociocultural knowledge that governs language use (meaning is communicated appropriately, e.g. tone of voice, forms of address, paralinguistics) (Collins & O'Brien, 2003). Good PCC requires careful listening and a demonstration of interest in the needs of the patient (Halpern, 2003; Teherani, Hauer, & O'Sullivan, 2008 in Wimmers & Stuber, 2010). Similarly, some authors believe in a set of essential skills necessary for PCC clinical approach, which are the ability to elicit the patient's personal story, to explore health beliefs and preferences, and to negotiate a management plan that is respectful of those preferences (Wilkerson et al., 2010). Health professionals need to have education on the three core communication skills of listening, exploring and checking and have practised with a professional interpreter (Seeleman, Selleger, Essink-Bot, & Bonke, 2011). In the modernist approach, narrative studies explore the way people tell stories to take advantage of the interviewing process in the doctor-patient relationship because it gives an option to the doctor not only to reflect on these stories but also respond to and further challenge them. In the post-modern and more radical view, a clinical interaction is one in which two parties bring their contexts and preferences, to create what is a unique and developing conversation.

Communication styles appear as an especially welcome topic for scholars interested in doctor-patient communication (Vries, Bakker-Pieper, & Oostenveld, 2010). A review of previously conducted studies on doctor-patient communication suggests that especially a supportive (friendly and caring) communication style is associated with higher satisfaction among patients, while a dominant style is associated with less satisfaction among patients and less favourable outcomes, such as malpractice claims (Schmid Mast et al., 2007; Vries et al., 2010). The study by Vries et al. (2010) seems to indicate that satisfaction is more often associated with a friendly communication style that relates to a strong sense of service, wanting to help people feel better and making health care work better, while a dominant communication style may be associated with performance, but only in certain cases. The same study shows that a good doctor is expected to be: altruistic, always willing to put the needs of his patients first, to be a good communicator, to listen to his patients sincerely, to be empathetic and to offer diagnosis and treatment information in a manner that his patients understand and, above all, to be strongly motivated by a strong sense of professionalism (Buller & Buller, 1987; Schmid Mast et al., 2007 in Vries et al., 2010). Nevertheless, the skills that help the patient to understand better what is happening to them include not just the basic skill of the doctor to listen and to empathize, but also the ability to question. Question style of doctor appears as crucial since questions asked in an appropriate moment with respect and caring manner about the eventual outcome for the patient can be used with great effect in contexts where the doctor is trying to help the patient look at a problem from a different point of view and encourage behaviour change (Launer, 2002). “In the end, the two most useful physician qualities may be curiosity and patience—curiosity to ask questions such as ‘Tell me about yourself’, and patience to wait for the answer” (Platt, 2001, p. 1083). The question style of doctors is important, as equally as the manner of the doctor while waiting for the answer.

Cultural competencies. The cultural aspect tends to be an essential part of defining medical professionalism, and patient-centred competencies because, despite significant progress in medical technology, doctors around the world are facing difficulties in responding to changes in health care delivery and retaining traditional professionalism standards, while still acknowledging the legitimate rights of patients (Park, Shon, Kwon, Yoon, & Kwon, 2017). Some studies demonstrate how language differences have a substantial influence on safe and effective health care in patients with minimal English proficiency (LEP) that are at higher risk of adverse effects than English-speaking patients, suggesting that injustice in the relationship between doctors and nurses may not be appropriate in these situations (Esmaeili et al., 2014a).

Expressing empathy. Perceiving empathy as professional PCC competence is possible to explain with argumentation that emotionally challenging situations arise in almost all health-related scenarios (Baessler et al., 2019). The Greenwood Dictionary of Education (2003) defines empathy as the ability to share another person's way of thinking or feeling, as the power of projecting one's personality into (and so comprehending) the object of contemplation. Empathy means 'with-in-suffering' (*em*-in/within; *pathos*-suffering) and it is the action of understanding, being aware of, sensitive to, or vicariously experiencing the feelings, thoughts, and experiences of another in the past or present without having those feelings, thoughts, and experiences communicated in an objective manner (Collins & O'Brien, 2003). Empathy is hearing and understanding concerns of patients, sympathy is the ability to feel patients' emotions, and compassion is behaviour that responds to the patient's relationship needs, based on an understanding of the patient's context and perspective (Lown, Rosen, & Marttila, 2011 in Rathert, Vogus, & McClelland, 2016). Adapted from the book "Business Model for a New Generation" (2010, p.131), we interpret an empathy map that can serve as a guide for medical professionals to exercise empathy while interacting with the patient and patient's family. An empathy map is a tool that helps in going beyond a customer's demographic characteristics and developing a better understanding of environment, behaviour, concerns, and aspirations and in building a more appropriate customer relationship among other advantages (guides the design of better Value Propositions, convenient ways to reach customers, better understanding what a customer is truly willing to pay for). By asking and answering the following six questions, we believe medical doctors could increase the level of empathy in an adapted version: (1) what does the patient see in his/her environment? (e.g. what does it look like, who surrounds patient, who are patient's friends, what problems does patient encounter); (2) what does the patient hear? (e.g. how does the environment influence the patient, what do patient's friends and family say, who influences patient); (3) what does the patient really think and feel (e.g. figure out what goes on in patient's mind, what is really important to the patient who might not speak publicly, trying to imagine patient's emotions, what moves patient?); (4) what does the patient say and do? (e.g. imagine what the patient might say, or how might patient behave in public, what is patient's attitude, paying particular attention to potential conflicts between what a patient might say and what patient may truly think or feel); (5) what is the patient's pain? (e.g. what obstacles patient encounters and what he wants or needs to achieve); and (6) what does the patient gain? (e.g. what does patient truly want or need to achieve, think of some strategies patient might use to achieve goals). The study results indicate that patient's satisfaction and compliance increase when patient perceives doctor as empathetic through the mediating factors of information exchange, perceived expertise, interpersonal trust, and partnership (Kim et al., 2004 in Wimmers & Stuber, 2010). There is an example of an organization, Ontario Medical Association (OMA, 2010), that puts this expertise high on its agenda, arguing that doctors should be leaders in encouraging and promoting compassion and empathy for patients, and in promoting patient-centred and positive behaviours in a doctor-patient interaction.

Interprofessional collaborative practise competencies. The delivery of health care, especially for hospitalized patients, is complex and it requires considerable effort that is very well coordinated by many health professionals. It includes a style of leadership that involves working with others as full partners in a context of mutual respect and collaboration (IOM, 2011). Doctors, nurses and other health professionals each provide individualized health care services. Besides, we must not forget hospital administrators who develop strategic plans, build, manage, and continually improve facilities and systems of care. Healthcare professionals play an integral role in delivering PCC (Avgar, Givan Kolins, & Liu, 2011; Bernabeo & Holmboe, 2013). Working in a multidisciplinary team (Coulter et al., 2008), coordinating continuous and timely care (IOM 2003) and managing time effectively (Coulter et al., 2008) could be examples of competencies related to interprofessional collaborative practice. D'Amour and Oandasan (2005) in Interprofessional Education Collaborative Expert Panel (2011) delineated the concept of interprofessional as the process of continuous interaction and knowledge sharing between professionals, organized to solve or explore a variety of education and care issues all while seeking to optimize the patient's participation. In the same token, all health professionals must display the capacity to adapt to the continually evolving dynamics of the health care system and to hold each other accountable for quality improvement and decreasing number of adverse events and medication errors (Institute of Medicine, 2011). Hence, health-related professionals have to break the hierarchy (IOM, 2001) and share power towards respecting and empowering the patient in the care process (Denhardt & Denhardt, 2007).

Leadership competencies. Under the NPS approach to management and organisation, the role of people-based management tends to be important; however, it suggests that reasonable attempts to control human behaviour are likely to fail in the long run if, at the same time, little attention is paid to carefully balancing the human values and interests of individual members of the organization (Denhardt & Denhardt 2007). For the Denhardts (2007), leadership does not seem to be an exclusive role reserved for highly positioned servants of society, but rather a function that extends through groups, organisations and individuals. Leadership is not just about doing things right, but rather doing the right things within leadership associated with human values of freedom, equality, and justice. Hence, leadership is about being attentive to 'leading with soul' rather than performing just a 'servant' role towards helping people to individually and collectively grow by employing new leadership skills that include important elements of empathy, consideration, facilitation, negotiation, and brokering (Denhardt & Denhardt 2007, p. 141, 145).

When the position of public servants shifts and moves beyond the task of service delivery, the NPS needs the development of skills in other fields (skills of facilitating, brokering, negotiating, and conflict resolution) that are very distinct from those connected with the NPM (management controlling or economic analysis) (Denhardt & Denhardt 2007, p. 84). For example, Luke (1998, in Denhardt & Denhardt 2007, pp. 151–152) describes three specific skill sets required for 'catalytic leadership': (1) thinking and acting strategically—framing and reframing issues, (framing strategy-outcome- specific action identifying stakeholders essential to success, and drawing out the interconnections essential to effective leadership in the complex public policy universe); (2) Facilitating productive workgroup (engaging in skilful interventions that move a group forward, helping the group cope with conflict, and forging multiple agreements, consensus building); and (3) Leading from personal passion and inner values.

Dubinsky et al. (2015), in identifying the following seven key domains of activity for the seven competencies required for successful leadership in an academic hospital, outline the competencies necessary for any physician leader of the perioperative services portfolio: (1) network development and relationship building, (2) strategic planning and thinking, (3) leadership, mentorship, and coaching, (4) communication, (5) team-building/conflict resolution/awareness of the regulatory and legal environment, (6) financial planning and acumen in the domains of clinical activity/research/education and (7) conceptualizing and implementing innovative programs.

Through hospital governance, medical doctors become increasingly involved in management at the departmental or hospital level; furthermore, when doctor managers take over formal decision-making responsibilities in the hospital strategic management decision-making process, this could result in a better-implemented quality management system (Rotar et al., 2016). The same research suggests that in Portugal, medical doctors are increasingly involved in hospital governance on both departmental (middle management) and strategic hospital level. It is in line with the Denhardt's (2007) point about leadership that is evolving in a way where more people choose to engage in decisions that impact them and co-create the notion of mutual leadership that reflects on the goals, values and ideals that the organisation and the community seek to achieve. Byrkjeflot and Jespersen (2014) argue for three conceptualizations of management in clinical settings: 1) the clinical manager who combines professional self-governance with a general management logic, 2) the commercialized manager who combines professional self-governance with an enterprise logic, and 3) the neo-bureaucratic manager who combines self-governance with a neo-bureaucratic logic. We believe that the style of management may reflect the leadership of an organization depending on what the clinical manager prefers to emphasize - general management, business or neo-bureaucratic values.

Learning and Maintaining competence. WHO (2005) advises that competencies should be retained continuously and should be strengthened throughout a lifetime. Medical doctors' and nurses' chambers obligate health professionals to have continuous education during a career which is one of the main predispositions to keep their professional license and allow them to work. Hence, WHO (2005) argue the competencies can serve as a starting point for the reform of higher education and of health training institutions.

Summary

It appears that the medical profession is due for a change that requires more professionalism. WHO's comprehensive definition involves knowledge about what is expected as a result, what kind of abilities and a skilled health professional has to possess, and finally, health professionals' attitude and behaviour towards achieving a good job performance. The PCC related competencies followed the trend advocating PCC by international entities through international documents, guidelines, accreditation requirements and examples of good practices (national health policy regulations). The importance of PCC core competencies lies in recognizing the necessity to shift current thinking about providing care for patients with ongoing health problems and, in turn, to reform the training and preparation of the health care workforce from early medical education (WHO, 2005). Within NPM and NPS approaches, doctors appear to have a new role as a catalyst between patient and system, requiring permanent self-improvement and development of new competencies (e.g. leadership and new management skills) through greater knowledge and action latitude. Moreover, PCC competence is recognized to be a part of a set of medical professional competencies (e.g. IOM, WHO) and several examples exist in the literature that identifies the skills, abilities, knowledge, behaviours and attitudes pivotal for PCC competencies. At about the same time, we must keep in mind that the clear development of core competencies for PCC needs a unifying concept in the first place; hence, we still cannot clearly state what patient-centred competencies are, but rather what the PCC related competencies are. Leaders who recognise the need for improvement in education and training may use this basic set of competencies as a starting point for reforms. The competencies could serve as the foundation for health care training for the 21st century. They can be implemented in a variety of established training contexts, including pre-service education, continuing education, or in-service experiences (WHO, 2005). How the health care workforce is prepared from early medical education, with special regard to Portuguese and Swedish medical curriculums, is discussed further in Section 4.3.

4.3. PCC IN MEDICAL SCHOOLS' CURRICULUMS

INTRODUCTION

Further, in this section, we are moving through a more in-depth study of medical curricula. First, for contextualization, we carry out a random analysis of the documents available on the Medical Faculties websites (Section 4.3.1.). The next step is the study of the medical curriculums in Portugal and Sweden (Section 4.3.2.). We search for courses that teach students about PCC-related competencies and analyze the extent to which curricula prepare medical students in Portugal and Sweden to hold PCC related competencies in eight dimensions of Picker as a model of our curriculum content analysis (Section 4.3.3.).

4.3.1. The PCC in the international and national curriculums of Portugal and Sweden

In the Dictionary of Education (Rowntree, 1981) , curriculum refers to the entire structure of ideas and activities developed by an educational institution to meet the learning needs of students and to achieve desired educational aims, noting that the term can refer either to the teaching content, but also to the teaching, learning and students' attainment assessment methods. In the literature, we also encounter the term 'hidden curriculum' that relates to all the beliefs and values and understandings that are unconsciously passed on to the student in an educational institution through what the institution implicitly demands of the student (e.g. respect for extrinsic motivation, the regularity of work) (Rowntree, 1981). Research on the hidden curriculum is not a subject of our investigation *per sé*; however, it should not be neglected in the interpretation of the results (Chapter 8.2.).

George Couros (personal communication, 2017) argues that "the curriculum tells you 'what', not 'how'. The 'how' is the artistry in education." The global medical profession has shifted from a disease-oriented to a patient-centred practice that we already spoke about earlier (Chapter 2). Consequently, medical education is adapting to this paradigm. Relying on several research studies, WHO (2013) advocates for a broader education plan to be part of the public health initiative and consistent with national health goals and priorities. In the same token, an education plan has to be an integrative part of the comprehensive Human resources for health (HRH) plan and the courses related to the implementation of PCC (e.g. communication skills) should be introduced in medical curriculums. Some countries have adapted their curricula to address changes in the medical profession as it moves towards patient care, while others have concentrated on developing fields of academic curricula, such as the social and behavioural sciences (Schmid Mast et al., 2007). The World Federation for Medical Education (WFME) (2015) supports medical education improvement while emphasizing clinical education and the importance of PCC curricula. In our random research on medical doctor education curricula in the international context, we found several university courses that cover the PCC topic (four in Europe and five courses in the USA). Most of these courses are offered on campus, and only one is found to be taught in line with unspecified learning outcomes. The course named 'patient-centred care' was hardly encountered in the curricula of medical doctors. Most often, the PCC concept and competencies are taught within other courses. For example, PCC is recognized as an important part of the following courses: Integrated Care (University of Oslo, Norway), Health quality improvement and patient safety (University of California, San Francisco; University of Vienna, Austria) as well as patient-doctor communication and society (University of Wisconsin School of Medicine and Public Health, Madison, USA). The faculty of the Penn State College of Medicine (USA) had established the course '*Foundations of Patient-centred care'* which spans the first 19 months of medical school and includes three main components: Communication/Clinical Interviewing; Physical Examination; and Integration Application and Advancement teaching sessions. Our research was limited by the fact that some curricula are not available online or they were not available in English but the local language. However, our study highlights two essential facets of PCC education. First, because a specific course that teaches students about the concept is not a common part of the official medical curriculum, medical students usually learn about the PCC concept through other courses. Second, the idea of the PCC is taught more in the US curricula of medical schools than in the European context.

Statement on the Bologna Process and Medical Education (2005) argues that medical education as a part of higher education should be fully involved in the Bologna process in that medical schools choose to have long 6 years/360 ECTS credits, a more integrated program, or to establish the first cycle as the first part of the medical program without planning for special use or employability of the Bachelor. In Portugal and Sweden, both European Union countries, medical schools continued to have the long-integrated program competency-based: 6 years/360 ECTS credits in Portugal and 5 ½ years /360 ECTS credits in Sweden. Competency-based education (CBE) is a term used to describe educational programs or assessment tests that are focused on specific skill outcomes, emphasizing acquisition and demonstration of knowledge, skills, and behaviours important for carrying out particular activities, tasks, or jobs (Collins & O'Brien, 2003). Related competencies, within a competence model of education, are translated into learning objectives as statements that describe ways that students demonstrate mastery of the competency in an educational setting (Brown, Patrick, Tate, & Wright, 1994). CBE model implementation requires a considerable amount of time and willingness from students, faculty, administration, employers, and community partners to support and participate actively (Gervais, 2016).

Since 2000, there has been a tendency in most EU countries to raise the number of medical graduates as a result of policy initiatives to change the supply of health staff by raising the number of students enrolled to become medical professionals (OECD, 2016). In Portugal, the number of medical graduates increased by two-and-a-half times between 2000 and 2014, rising from about 600 to more than 1.500 (OECD, 2016). The same study shows in the EU in 2014 the number of new medical graduates per

100.000 inhabitants on average was about 12. Portugal is more than the EU average with almost 15, and Sweden slightly under with 11 new medical graduates per 100.000 inhabitants (OECD, 2016). Portuguese data show that related to a population of approximately 10 million, new entrants in Medical education had a tendency to increase within three years from 1.500 in 2016 to 1.581 in 2018, and the number of female students is prevalent at around 1:3 ratio (in 2018 number of female students was 2265 and male 684). Number of medical doctors per 100.000 inhabitants in Portugal was 521,8 (Eurostat, 2019a). Gender distribution of medical students in Portugal remains similar to the gender distribution of physician, meaning that per cent of female physicians is higher than males, at around 55% and 45%, respectively (data for 2017) (Eurostat, 2019b). In Sweden, approximately 1.570 medical students are accepted yearly, related to a population of approximately 9 million (Lindgren et al., 2011). A slight increase in the number of medical students is evident in Sweden from 804 in 2000 to 1216 in 2015 (Statista, 2021). The gender distribution of around 46% male and 54% female medical students (data for 2015) shows balanced picture (Eurostat, 2019b). Medical doctors per 100.000 inhabitants in Sweden in 2017 is 429 (Eurostat, 2020).

The integrated master's degree in medicine of NOVA Medical School in Portugal, with a total of 360 credits and 12 curricular semesters of work, incorporates two complementary training cycles: a) The first cycle of study distributed in the first six semesters of the curriculum, for a total of 5040 hours of student work aims to obtain 180 ECTS, and b) The second cycle of study aims to obtain the remaining 180 ECTS, equally distributed over six curricular semesters, for a total of 5040 hours of student work (NOVA Medical School, 2018). NOVA Medical school strives for curriculum innovation referring to the diversity and multiculturalism of clinic teaching emphasising the best ratio in Portuguese clinic teaching of Medicine as one teacher per 3 students (NOVA Medical School, 2018). Practical training must be completed, and in Portugal, the probatory period is between 6 to 12 months. Swedish medical school is 5½ years long and can be studied in seven different cities, from Lund in the south to Umeå in the very north. Clinical rotations generally start around the 3rd year, so that Swedish medical students can practice as junior doctors after finishing the 9th semester. After 11 semesters, students graduate and do an 18-24-month long internship at different wards before taking the licensing exam. After a minimum of 7 years since beginning medical school, Swedish medical students get to call themselves medical doctors.

At Linköping University in Sweden, the medical program consists of 11 semesters and The National Board of Health and Welfare issues a medical license after completing a general internship. In the framework of the National Objectives of the Degree of Master of Science in Medicine, Linköping University sets the evaluation ability and professional attitudes as the objective of medical education. After completing medical University, medical students are able (1) to exhibit self-awareness and the ability to empathize; (2) exhibit a holistic view of the patient based on a scientific and humanistic perspective while paying special attention to human rights; (3) exhibit an ethical and professional approach established in health and medical care; and (4) exhibit an ability to identify own need of additional knowledge and to continuously develop own competence. The syllabus is divided into three phases: Phase I - Health and biological function (1-2 term), Phase II- Health and Disease (3-5term) and Phase III - Patient and prevention (6-11 term). In phase I, the first part of the first term consists of the course Health, Ethics, and Learning (HEL I), and during Term 1, 'the Strand' in the patient communication is introduced. Patient contact and communication are practised during the first four terms as part of the theme 'Patient contact, holistic view, and the communication skills', also called 'the Strand' (in Swedish: 'Strimman') which is further developed during Phase III.

While the Swedish medical curriculum appears as more uniform, in Portugal medical curricula vary across Universities. In the case of the University of Minho in Portugal, we find the medical course named *The Vertical Domains* (DV) that runs from 1st to 5th grade, promoting the study of the humanities as a source of education and culture for the physician with a fundamental objective for acquiring values, knowledge, sensitivities, attitudes and behaviours necessary in doctor's relationship with patients and society. None of the other Portuguese universities has a similar course in their medical program that, at first glance, might look like the Swedish medical course *The Professional Development* (PD), but still, these courses also vary in their learning objectives.

We chose to review medical curricula to reveal how medical universities teach medical students to gain knowledge about PCC and related competencies for a better perspective and understanding of the role of PCC trends in health education policies. In the following Section 4.3.2. we look at details of available medical programs and course content from eight medical faculties in Portugal and seven medical faculties in Sweden.

4.3.2. The comparison and contrast of curriculums used at Departments of Medicine in Portuguese and Swedish universities regarding learning about PCC phenomena

The aim is to compare the curricula of Portuguese and Swedish medical faculties in terms of the existence of courses dealing with the PCC, meaning to what degree the PCC phenomenon, as defined by the eight dimensions of the Picker Institute, is covered in Portuguese and Swedish medical curricula. Our analysis approach is based on eight substantial PCC domains and components defined by the Picker Institute. In this segment of our study, we aim to review and compare curricula of medical departments of universities in terms of 1) existing courses dealing particularly with PCC phenomena 2) courses on PCC phenomena in the light of eight dimensions of the Picker Institute and 3) courses to provide theoretical knowledge and/or practical skills related to PCC for the medical student.

We identify a collection of inclusion criteria for our study to conduct a comprehensive analysis of medical curricula and to make a distinction. We search for curriculum units/courses that satisfy one of the following criteria: (1) course named as 'patient-centred care' or similar that deals particularly with the

PCC phenomena; (2) courses relevant to the PCC phenomena based on a theoretical review in our research presented in Chapter 2 and Chapter 3, and (3) courses that explicitly set at least one of the eight PCC dimensions of PCC or associated dimensions' attributes as learning objectives and/or skills in their program.

Our research strategy and selection of courses was based on website research. The websites of all medical faculties in two countries, Portugal and Sweden, were located and analysed. All medical faculties have a medical program of integrated studies available online. Most of the course syllabuses were fully available for our access. The faculties had to meet the following requirements to be considered for the study: 1) a website in English, Swedish or Portuguese, a complete curriculum on the website for the academic year 2019/20 (as a tolerance criterion, syllabi from some of the previous academic years were allowed) and 2) a syllabus of all courses available on the website (as a tolerance criterion, a lack of up to five syllabi was allowed). Lists of faculties of medical education in Portugal and Sweden are extracted from the *"World Directory of Medical Schools", 2020*[2]. The listing of a medical school in the world directory of medical schools is presented in *Table 3*.

Table 3. List of Medical Schools in Portugal and Sweden and ID in the research

Country	**City**	**Medical School Name**	**ID in the research**
Portugal	Lisboa	Universidade de Lisboa Faculdade de Medicina	P_FMLU
		Universidade Nova de Lisboa Faculdade de Ciênicas Médicas	P_NOVA
	Porto	Universidade do Porto Faculdade de Medicina	P_Porto
		Instituto de Ciênicas Biomédicas Abel Salazar	n/a
	Braga	Universidade do Minho Faculdade de Medicina	P_Minho
	Coimbra	Universidade de Coimbra Faculdade de Medicina	P_Coimbra
	Covilha	Universidade da Beira Interioir Faculdade de Ciênicas da Saúde	P_Beira
	Faro	Universidade do Algarve Departamento de Ciênicas Biomédicas e Medicina	P_Algarve
Sweden	Stockholm	Karolinska Institute Faculty of Medicine	S_Karolinska
	Linköping	Linköping University Faculty of Medicine and Health Science	S_LiU
	Lund	Lund University Faculty of Medicine	S_Lund
	Goteborg	Sahlgrenska Academy, University of Gothenburg	S_Goteborg
	Umea	Umea University Faculty of Medicine	S_Umea
	Uppsala	Uppsala University Faculty of Medicine	S_Uppsala
	Orebro	Örebro University School of Medical Sciences	S_Orebro

Source: *European Higher Education Area (EHEA)*

For each course, the following data was obtained: course name, year of studying, learning option (compulsory or optional), learning objective, and description of the program. Data extraction was

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[2] The full title is:" *The **World Directory of Medical Schools, incorporating The Avicenna Directory of Medical Schools and The International Medical Education Directory**"*, developed through a partnership between the World Federation for Medical Education (WFME) and the Foundation for Advancement of International Medical Education and Research (FAIMER).

performed independently. Courses that only had listed basic information such as the course name, academic year, but not learning objectives and course program were: P_Beira (n=5), P_FMLU (n=1) and P_Porto (n=4) in Portugal and S_Uppsala (n=3) in Sweden.

We used descriptive research design to identify and describe the curriculums of these universities, particularly focusing on those courses where students get acquainted with the PCC phenomenon. The first step was to review the curricula of medical programs across all medical institutions in both countries and to explore whether there are specific courses on PCC phenomenon education in both countries. The second step was to review courses and to identify what theoretical knowledge and/or practical skills in the field of PCC are set as objectives or learning outcomes of courses. At the same time, it helped to identify the dimensions associated with it. Course learning objectives and program content were mapped following eight dimensions of PCC provided by the Picker Institute. The third step was to identify the similarities and differences among universities' curricula of medical departments of Portugal and Sweden (see Chapter 6).

As a result, after analyzing the curricula of all medical institutions in both countries, we did not find courses that discussed the PCC phenomena comprehensively or any courses named in that way. Our further analysis identifies the number of 101 courses dealing with some of the PCC dimensions in medical curricula across Portugal. Of this number, 60 courses are compulsory, while 41 are optional in the education of future medical doctors: Algarve 1/0, Beira 10/0, Coimbra 6/2, Minho 13/2, FMLU 16/11, NOVA 8/11, Porto 6/15. In Sweden, a total of 73 courses dealing with PCC are identified, while 71 courses are compulsory, and only two are optional, respectively: Gothenburg 6/0, Karolinska 11/0, LiU 6/0, Lund 13/0, Orebro 11/0 Umea 12/0 and Uppsala 12/2 (*Table 4*).

Table 4. Number of compulsory and optional courses per country and medical faculties

Portugal (n=101)	**Compulsory**	**Optional**	**Sweden (n=73)**	**Compulsory**	**Optional**
Algarve	1	0	Gothenburg	6	0
Beira	10	0	Karolinska	11	0
Coimbra	6	2	LiU	6	0
Minho	13	2	Lund	13	0
FMUL	16	11	Orebro	11	0
NOVA	8	11	Umea	12	0
Porto	6	15	Uppsala	12	2
Total	**60**	**41**	Total	**71**	**2**

In the first three years of medical education in both countries, about 2/3 of the compulsory courses are taught (1st, 2nd and 3rd). Concerning optional courses in Portugal, most are distributed in the 2nd, 3rd and 4th years of studying (in some cases, students can select optional courses during the 2nd and 5th years of study) (*Table 5*). In Sweden, except for only two courses at the University of Uppsala, all courses teaching students about PCC-related topics are part of compulsory medical education.

After identifying courses in both countries that deal with the PCC, we reviewed each course program, to identify those courses that set as objective or learning outcome PCC related theoretical knowledge and/or practical skills. Once we identified these courses in Portugal (*Table 5*) and Sweden (*Table 6*), we did a content analysis to identify course learning objectives/programs that relate to some of the eight PCC dimensions and their attributes (see Section 3.4.-3.6.).

Table 5. Overview of courses per medical faculty and year of study in Portugal

PORTUGAL /Year of studying	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**
P_Algarve						
Compulsory	Bioethics (P_Algarve/1)					
P_Beira						
Compulsory						
	Initiation to Medicine (P_Beira/1) The Art of Medicine (P_Beira/2)	Psychological Bases of Medicine (P_Beira/3) Anthropology and Sociology (P_Beira/4) General and Family Medicine I (P_Beira/5) Deontology and Medical Law (P_Beira/6)		General and Family Medicine II (P_Beira/7)	General and Family Medicine III (P_Beira/8) Medical Ethics and Bioethics (P_Beira/9) Health Leadership and Management (P_Beira/10)	
P_Coimbra						
Compulsory						
	Introduction to Medical Practice I (P_Coimbra/1) Introduction to Medical Practice II (P_Coimbra/2)		Ethics, Deontology and Professional Exercise (P_Coimbra/3) Medical Psychology (P_Coimbra/4)		General and Family Medicine (P_Coimbra/5) Humanitarian Medicine (P_Coimbra/6)	
Optional						
	Introduction to Social Medicine and Global Health (P_Coimbra/7)			Health Economics and Management (P_Coimbra/8)		
P_Minho						
Compulsory						
	The Vertical Domains I (P_Minho/1) Health Centre Internship (P_Minho/2) Introduction to the Medical Course (P_Minho/3)	Vertical Domains II (P_Minho/4) Family, Society, and Health I (P_Minho/5)	Vertical Domains III (P_Minho/6) Family, Society and Health II (P_Minho/7) Introduction to Community Health (P_Minho/8)	Vertical Domain IV (P_Minho/9) Residence (S) in Health Center (s) I (P_Minho/10)	Vertical Domains V (P_Minho/11) Residence (S) in Health Center (s) II (P_Minho/12)	Residence (S) in Health Center (s) Final Internship (P_Minho/14)
Optional						

			Community Health, Social and Human Sciences (P_Minho/13)		Optional Residences (P_Minho/15)	
P_FMLU						
Compulsory						
	Introduction to Medicine (P_FMLU/1) Preventive Medicine (P_FMLU/2) Community Health Practice I (P_FMLU/3) Ethics and Social Sciences (P_FMLU 4) Basic support of life (P_FMLU/5) Preventive medicine (P_FMLU/6)	Community Health Practice II (P_FMLU/7) Psychology (P_FMLU/8)	Hospital Internship (P_FMLU/9) Clinic Introduction (P_FMLU/10) Public Health (P_FMLU/11) Introduction to Aging Diseases (P_FMLU/12)	Pediatria (P_FMLU/13)	Pediatria (P_FMLU/14) General and Family Medicine (P_FMLU/15) Medical Ethics and Deontology (P_FMLU16)	
Optional						
		Medical Anthropology (P_FMLU/17)				
		Health Psychology (P_FMLU/18)				
		Antropologia Digital (P_FMLU/19) Health Communication (P_FMLU/20) Health Economics (P_FMLU/21) Medical Humanities (P_FMLU/22)				
			Relational Ethics (P_FMLU/23) Grief in Medicine (P_FMLU/24)	Medical Law (P_FMLU/25)		
				Health Policies and Management (P_FMLU/26) Palliative Care (P_FMLU/27)		
P_NOVA						
Compulsory						
	Introduction to Medicine (P_NOVA/1) History of Medicine (P_NOVA/2)		Medicine and Society (P_NOVA/3) Public Health, Epidemiology and Biostatistics (P_NOVA/4)	The Elderly Sick (P_NOVA/5) Medical Psychology and Behavioural Medicine (P_NOVA/6)	General and Family Medicine (P_NOVA/7)	General and Family medicine (P_NOVA/8)
Optional						

	Family, Health, and Disease: Repetition in Families (P_NOVA/9)		Value-Based Health Care (P_NOVA/12)	Ethics and Health Care (P_NOVA/15) Narrative Medicine (P_NOVA/16)	Pain (P_NOVA/18)	Chronic Disease Management in Hospital and Transitional Care (P_NOVA/19)
		Ethics and Biomedicine (P_NOVA/10) Sign Language (P_NOVA/11)		Psychosocial Assessment and Psychotherapies in Medicine (P_NOVA/17)		
			Medicine 4.0 (P_NOVA/13) Telehealth and Information Technologies in Public Health (P_NOVA/14)			
P_Porto						
Compulsory						
	Humanities in Medicine A (P_Porto/1) Population Health (P_Porto/2)			General and Family Medicine (P_Porto/3) Bioethics and Deontology (P_Porto/4)		Medicine (clinical practice) (P_Porto/7) General and Family Medicine (clinical practice) P_Porto/8)
Optional						
		Preventive medicine (P_Porto/9) Medical Psychology I (P_Porto/10) Medical Psychology II (P_Porto/11)			Hospital administration (P_Porto/5) Critical Event Management and Teamwork (P_Porto/6)	
		Health Team Communication (P_Porto/12) Early Contact with Users / Patients and their Families I (P_Porto/13) Early Contact with Users / Patients and their Families II (P_Porto/14) Medical Anthropology and Humanization in Medicine (P_Porto/15) Health Communication & Strategic Marketing (P_Porto/16) Primary Health Care Contract (P_Porto/17)		Interview- Dealing with Emotions and Reporting Bad News (P_Porto/19) Telemedicine and E-Health (P_Porto/20) Health Promotion Techniques (P_Porto/21)		
		Social and Human Formation (P_Porto/18)				

Table 6. Overview of courses per medical faculty and year of study in Sweden

SWEDEN/ Year of studying	1st	2nd	3rd	4th	5th	6th
S_ Gothenburg						
Compulsory	Introduction to medical education and early professional contact A (S_ Gothenburg /1) Preparatory Vocational Training B (S_ Gothenburg/2)	Early Professional Contact C (S_ Gothenburg/3) Early Professional Contact D (S_ Gothenburg/4)	Medical Consultation (S_ Gothenburg/5)		Community Medicine (S_ Gothenburg/6)	
S_Karolinska						
Compulsory	Professional development 1 (S_Karolinska/1) Professional development 2 (S_Karolinska/2) Medical Foundation Course (S_Karolinska/3)	Professional Development 3 (S_Karolinska/4) Professional Development 4 (S_Karolinska/5)	Development 5 (S_Karolinska/6) Clinical Medicine 1 (S_Karolinska/7) Clinical Medicine 2 (S_Karolinska/8)	Clinical Medicine 3 (S_Karolinska/9) Clinical Medicine 4 (S_Karolinska/10)		The Individual and Society (S_Karolinska/11)
S_LiU						
Compulsory	The Professional Physician and Biological Function (S_LiU/1)	Health and Disease 1 (S_LiU/2) Health and Disease 2 (S_LiU/3)	Health and Disease 3 (S_LiU/4) Clinical Medicine 1 (S_LiU/5) Clinical Medicine 2 (S_LiU/6)			
S_Lund						
Compulsory	Professional development 1 (S_Lund/1) Professional development 2 (S_Lund/2) Basic Course (S_Lund/3)	Professional development 3 (S_Lund/4) Professional development 4 (S_Lund/5)	Professional development 5 (S_Lund/6) Clinical Preparatory Course (S_Lund/7) Clinical Medicine 1 (S_Lund/8)	Clinical Medicine 2 (S_Lund/9) Clinical Medicine 3 (S_Lund/10)	Clinical Medicine 4 (S_Lund/11)	Clinical Medicine 5 (S_Lund/12) The Individual and the Community (S_Lund/13)
S_Orebro						

Compulsory	Medical theme course 1 (S_Orebro/1) Medical theme course 2 (S_Orebro/2) Medical theme course 3 (S_Orebro/3)	Medical theme course 4 (S_Orebro/4) Medical theme course 5 (S_Orebro/5)	Medical theme course 6 (S_Orebro/6) Medical theme course 7 (S_Orebro/7) Medical theme course 8 (S_Orebro/8)	Medical theme course 9 (S_Orebro/9) Independent work (S_Orebro/10)		The Individual and Society (S_Orebro/11)
S_Umea						
Compulsory	Introductory Course (S_Umea/1) Structure and Function of Body Systems (S_Umea/2) Structure and Function of the Cell (S_Umea/3)	Structure and Function of Organ Systems (S_Umea/4) Offence and defence (S_Umea/5) Pathology, Symptoms, and Diagnostics (S_Umea/6) Clinical Propedeutics (S_Umea/7)	Clinical Course 1 (S_Umea/8)	Clinical Science 2 (S_Umea/9) Clinical Science 3 (S_Umea/10)	Clinical Science 4 (S_Umea/11)	Clinical Science 5 (S_Umea/12)
S_Uppsala						
Compulsory	Medical Introductory course (S_Uppsala/1) Professional Development 1 (S_Uppsala/2) Professional Development 2 (S_Uppsala/3)	Professional Development 3 (S_Uppsala/4) Porfessional Development 4 (S_Uppsala/5)	Professional Development 5 (S_Uppsala/6) Leadership education I: Health care management and organization (S_Uppsala/7) Clinical Physiology within Clinical Medicine 2 (S_Uppsala/8)	Calling Skills within Clinical medicine (S_Uppsala/9)	Interprofessional teamwork (S_Uppsala/10)	General medicine (S_Uppsala/11) Leadership education II: Health care management and organization (S_Uppsala/12)
Optional						Clinical Practice - The Doctor's Role (S_Uppsala/13) Medicine in culture and society (S_Uppsala/14)

The first stage of our analysis of medical curricula in Portugal and Sweden reveals evidence of no course referred to as 'patient-centred care' and lack of a course that explicitly discusses the phenomenon of PCC systematically and completely, as discussed earlier in Chapter 3. The number of courses that specifically define PCC phenomena as learning objectives or part of a teaching program is poor relative to findings for other dimensions. Our findings indicate that General and Family Medicine is a course in which most students get acquainted with the phenomenon of PCC in compulsory education and gain skills required for the practice of personal care in family medicine. Medical students in both countries learn about PCC phenomena as an approach within the biopsychosocial model and the patient-centred consultation process with a particular emphasis on the patient-focused interview. Students learn to foster and strengthen the acquisition of basic patient-focused interviewing skills and the integration of conversation skills with medical knowledge/skills in the PCC. The distinction is that in Sweden, these courses are part of compulsory education, while in Portugal, many courses are still part of optional education. Interestingly, there is a Portuguese course on gaining communication skills in difficult situations within a PCC model and optionally to learn exclusively about patient-centred innovation in the medical industry. Nonetheless, in both countries, we identify courses that include the theoretical knowledge about and practical skills in practising PCC, among other courses' learning objectives. A large percentage of medical program courses in both countries are those that deal with some of the aspects of the PCC, often as part of compulsory education, mostly taught during the first three years of study. A significant number of Portuguese courses (around 40 %) still belong to optional curricula taught mostly in the 2nd, 3rd and 4th years of study, unlike Sweden, where most of the courses that taught students some of the dimensions of PCC are integrated into the compulsory curriculum. The eight dimensions of PCC served as a theme for us to discover related categories. It resulted in a comparison between Portugal and Sweden of similarities and differences among universities' curricula of medical departments summarized in Chapter 6.

4.4. SUMMARY

In this Chapter, we highlight the importance of the NPM and NPS movement for PCC development. Following Denhardts' argumentation for existing substantial differences between NPM and NPS, we believe that health care service and PCC as an integral part of health care service falls between NPM and NPS movement. Considering differences between movements and different levels of care, we argue that PCC by dimensions and their attributes belongs more to the NPS movement on a micro-level of care. This level of care concerns direct contact of the patient with medical and non -medical staff in which we find several principles of NPS. Due to the nature of health care, we can conclude that doctors work in a system where NPS principles are underpinned with principles derived from NPM, which are productivity and efficiency. Positioned between a patient on one side, and health organisation and health system, on the other, leadership competencies as an integral part of the NPM movement become a requirement for a new generation of medical doctors. There is a trend of running a hospital as a business under NPM principles. Shifting from input and process to outcome and output in NPM appears to be insufficient for measuring quality; therefore, there is a need to measure behaviour and humanization of an organization as NPS principles expose. In light of the NPM/NPS movement, our study results show that a new generation of medical doctors in Portugal and Sweden are learning new skills in NPM/NPS and implementation, recognizing and accepting the complexity of the challenges they face, and treating their (future) patients, and patient's family and colleagues with respect and dignity. In light of educational policy, in this chapter, we explored some of the PCC phenomena aspects in medical curricula of Portugal and Sweden. It started with a general discussion of what a curriculum is and then moved on to curricula and course analysis mapping for each country's courses that deal with any of eight Picker dimensions of PCC and models related to the manner of medical education (compulsory or optional). Results of comparative in-depth curriculum analysis are presented in Chapter 6.

Chapter 5

RESEARCH METHODOLOGY

INTRODUCTION

This study aims to explore medical students' attitudes about PCC and self-perceived efficacy in the ability to practice patient-centric behaviour within a bigger framework of ongoing theoretical discussion about the PCC phenomena and NPM/NPS principles driven by health and education policy and practice. Relevant theoretical perspectives and discussion, as well as the contextualisation of the study, were provided in the previous three chapters. In this chapter, we focus on the research methodology starting from the brief research problem description (Section 5.1.), followed by methodology procedures and methods (Section 5.2.- 5.5.) and data analysis explanation (Section 5.6.).

5.1. THE PROBLEM INVESTIGATED

Academics and practitioners have recognised patient-centredness for already a couple of decades, but still, limited literature is available on this topic in comparison with some other phenomena. In a report, Health Professions Education: A Bridge to Quality (2003), it is stated that all health professionals should be educated to deliver PCC as members of an interdisciplinary team, emphasizing evidence-based practise, quality improvement approaches, and informatics. As the system is a dynamic entity, we need to take into account all the actors. After a review of available literature, we could distinguish three aspects from which PCC is approached in the literature. Most of the time, as we see in the literature review in Chapter 3, the research is done from (1) patients', (2) providers' (patient's family, organizations and medical workers) but far less from (3) medical students' (as future medical workforce) perspective. Jayadevappa & Chhatre (2011) recognize that the major challenge lies in strengthening the PCC attributes on the micro-level through macro-level policy measures, and incentives on the mezzo level (organization and system level) to adopt PCC related activities. The doctor-patient relationship, as an essential part of medical care, was recognized during the 80s in the work of Engel (1980) and Balint (1984). Despite this, at the beginning of the 21st century, Haidet et al. (2002) posit that education of future medical professionals in medical schools neglects the need for education in improving their communication skills, humanistic attitudes, and professional values.

Statistical data underpin the importance of research on this topic, since in many EU countries from 2000 onwards the average number of doctor consultations per person has increased (even when some cases exclude the visits to private practitioners) (OECD, 2016). The estimated number of consultations per doctor should be carefully considered as it is in the Swedish case where the number of consultations is the lowest in the EU; However, the duration of consultations with doctors tends to be longer than 15 minutes compared to other countries such as the UK, the Netherlands and Germany (Commonwealth Fund, 2015 in OECD, 2016).

Patients' perspective. As we mentioned above, the cornerstone of PCC is the patient's experience; therefore, we researched the body of studies that deal with PCC from this perspective. Patient perception and the barriers to practising patient-centred communication (Ting, Yong, Yin, & Mi, 2016) is a particularly interesting study as it was done in China and it expresses patients' moderate enthusiasm for PCC in China with strong preferences concerning physician respect for patient perspective, but less concern for power-sharing. Tsimtsiou et al. (2014) conducted a study in Greece intending to investigate patients' attitudes toward PCC, by identifying the impact of socio-demographic factors, health condition, social support and religious beliefs. The result confirms that age, years of education, health status, social support and religious beliefs are determinants of patient-centred attitudes. These characteristics reveal what should be considered when we are assessing PCC phenomena in a given setting. In the literature, we find studies that include not just the patient's experience but the experience of their family members. For example, the study "What really matters? A multi-view perspective of one patient's hospital experience" Edwards et al. (2014) reveal that healthcare providers are not always aware of what matters to a patient and family member during the patient's hospital experience in terms of their needs.

Provider's perspective. A patient-centred approach to succeed must also address the experience of staff, as the ability and inclination of staff to treat patients effectively are undoubtedly compromised if they do not feel cared for themselves (Frampton et al., 2008). Furthermore, the study by Locatelli et al. (2015) is looking at provider perspectives on and experiences with the engagement of patients and families in implementing PCC and revealed provider's perspective about patient and family involvement as beneficial for planning and implementing PCC innovations. Verheij (2011) argues that medical care, by definition, is patient-centred because health care professionals are educated to listen and take their patients seriously while caring for them. The physician remains the most powerful element in any kind of health service system as long as patients do not boycott the profession. So far, this is an unlikely possibility (Anderson, 1979). There is a call for further research on how care professionals can best improve the patient-centredness of patient's care by increasing doctors' knowledge of their patients' preferences, and structural benchmarking based on patient-centredness (van Empel et al., 2011). Hence, Kitson (2002) in a way opens the question of our expectation from a health professional to deliver PCC politely and respectfully when a health professional maybe is not able even to recognize the importance of relationships and perhaps not be able to behave expectedly. Literature review research still suggests significant shortcomings and perhaps insufficient attention, focusing on the role of future medical forces in implementing strategies to improve patient-centredness. Abovementioned Kitson's reflection also leads us to question the same for the group of the future medical force. The importance of the medical workforce in a new century is recognized in WHO's publication (2005) "Preparing a health care workforce for the 21st century: the challenge of chronic conditions" which called for the transformation of the future workforce training to better meet the needs of the patients particularly those with chronic conditions. WHO identify five basic competencies for all members of the workforce caring for patients with a chronic health problem. Their abilities and skills refer to the following competencies: (1) patient-centred care, (2) partnering, (3) quality improvement, (4) information and communication technology, and (5) public health perspective. From our point of view, professional competencies are going beyond clinical competencies and encompass a set of soft skills and PCC competencies in health care (see Chapter 4).

To produce a capable, skilful and proactive medical force, who will work towards PCC, once when entering the health care system, it requires us to put more attention on medical students' education and their PCC related competencies. In light of this statement, our research is looking for the answer from the perspective of medical students (often neglected but priceless actors) about PCC phenomena and their self-reported PCC competencies because they will enter the health care system and be agents of possible change by carrying PCC related activities. However, the lack of articulation of what PCC involves is a well-recognized problem within the medical profession (Nelson & Gordon, 2006; Pelzang, 2010). An indication that respondents may not be able to articulate the important principles of PCC still does not mean that the nurses are not aware of what PCC is (Pelzang, Wood, & Black, 2010).

Having a chance to discover what their attitudes are and how they perceive their PCC competencies, we will be able to understand how they will contribute to PCC operationalization on micro and mezzo levels. Given the commitment of the medical profession to the values of empathy and caring, to prepare students adequately for PCC practice in the future, it seems important to approach the attitudes of the medical students deliberately. De Monchy et al. (1988) argues for fostering a positive attitude towards patient-centredness in medical students' education and PCC as implemented part of curricula from the early years of training. Nevertheless, to educate students about the PCC concept is not sufficient *per sé* and will not ensure that students will adopt patient-centredness to care; therefore, students must learn about their self-efficacy to deliver PCC care in the clinical settings based on the argumentation of Young et al. (2012) and family-centred approach to care (FCC).

Studies assessing the attitudes about PCC among medical professional students are quite limited. One study assesses nursing student preparedness for PCC in terms of the knowledge, comfort, and cultural competence toward the Latino population and results show that the dosage of training matters (Mayo, Sherrill, Truong, & Nichols, 2014). As an example, in physical therapy students, Ross and Haidet (2011) show that educational programs and the value of providing didactic educational experiences in a curriculum may be effective in developing patient-centredness. They argue for health professional education towards PCC, which has to present this subject to the students in a didactic format as a method.

In the light of Bandura’s social cognitive theory, self-efficacy beliefs have also received increasing attention in educational research. Bandura (1997, p. 2) states that self-efficacy beliefs are "beliefs in one's capability to organize and execute the courses of action required to manage prospective situations". Patient-centredness depends upon a person’s self-awareness and the ability to create part connections between values and actions (Gaufberg et al., 2014). We believe that if we measure someone's self-efficacy beliefs, we will be able to get an idea of his actions concerning practising patient-centredness. Some authors still argue that attitudes and actions exist in a kind of equilibrium (Duggan et al., 2006). Although drawing a direct line between attitudes and behaviour is difficult, it is still an important aspect for making future predictions following the "knows-knows how-shows how-does" framework for clinical assessment (Miller, 1990). The possession of a variety of attributes, such as theoretical knowledge and practical skills, does not ensure good work (Sandberg, 2000); still, we believe that medical students are an endless source of information about PCC as an idea, process, and practice coming from their experience in practice.

In a reasoned mode of action, behavioural attitudes are a good predictor of intent; however, more controversial is the effect of attitudes on behaviour when people are either not sufficiently motivated to engage in careful deliberation or are incapable of doing so (Ajzen, 1996). Fewer studies in recent times have explored the dynamics between self-reported competence and attitude and none of them related to PCC phenomena. Kaduszkiewicz et al. (2008) show the link between self-reported competencies and attitudes among physicians towards patients with dementia in ambulatory care. It reveals that self-reported competence was strongly associated with the general attitude in this case. Another study shows us an existing link in the study that measures the self-reported evaluation of competencies and attitudes by physicians-in-training before and after a single day of legislative advocacy experience (Huntoon et al., 2012). Zachariae et al. (2015) developed the self-efficacy in a patient-centredness questionnaire as a new measure of medical student and doctors' confidence in exhibiting patient-centred behaviours arguing that the self-efficacy in exhibiting all core aspects of PCC behaviours and attitudes for use in medical education and doctor-patient communication research have not been available.

Apart from measuring self-efficacy and attitudes to PCC, we need to bear in mind that not all PCC dimensions are equally valuable and important for medical professionals. For example, Berghout et al. (2015) study the importance of PCC elements among health professionals, and the results reveal that the patient preferences, information and education, and coordination of care dimensions were most important for PCC. However, the result appeared to differ more among health professionals and departments. Medical professionals' point of view, from our perspective, seems to reflect their personal beliefs and attitudes about PCC phenomena as well as their experience from the practice. Internal systems of values shape a person's attitude. There is no study to our knowledge that reveals data about the importance of PCC domains in the group of medical students. It is of importance to know what future medical force consider as the most important PCC dimension and whether is possible to correlate their belief, attitudes and self-perceived competencies in practicing PCC.

Although students' experience and perception towards PCC are poorly researched, their importance should not be neglected. In line with the doctor-patient negotiation model, we are looking for the answer on how future medical doctors/medical professionals understand what PCC phenomenon is; what they see as the main advantages/disadvantages for applying PCC principles; what they recognize as potential barriers for PCC performance in health care and what could be a direction for improvement. We believe this study is the first to assess attitudes and self-reported competencies in PCC in these two contextually different countries, Sweden and Portugal, in the group of medical students in their final years of education.

5.1.1. Scope of the study

Seeing PCC as complex social phenomena which go beyond personal meaning, we investigate the connection between the actualization of PCC phenomena and their operationalization in practice through different models. Moreover, we identified actors and a set of factors that, in different ways and intensities, contribute to the existence of these phenomena in practice. In the research process, we used literature from different fields such as medicine, education, sociology, business, and management. In the literature, PCC is attributed to individual characteristics (patient, health professional, family members) and contextual characteristics (organisational and system structure from micro to mezzo and macro level, interprofessional relation), and research findings demonstrate that perspective of the future medical force, particularly medical doctors, on PCC phenomena should not be neglected. We have indicated numerous theoretical publications and empirical findings that confirm that beliefs and attitudes together with self-perceived competencies in PCC, affect practice in a clinical setting. We point out the importance of not only the personal characteristics of medical workers, communication with patients and their family members, and interprofessional collaboration but also an organizational culture that has to build and carry PCC culture among employees. The idea of having medical students as the focus of our research was determined after many questions raised during profound research on PCC phenomena. Based on the scoping review, we define it as the subject of our research to discover medical students' perspectives on PCC in two different contexts, Portugal and Sweden. In addition to the comparative analysis and discussion of medical curricula from Portugal and Sweden, we have chosen to examine the perspective of Portuguese medical students expecting them to provide variable and valuable information on PCC in terms of theoretical means and practical implications for health and education policy improvement.

The scope of this troubling topic is determined, on the one hand, by the findings of the importance of attitudes towards PCC among medical students as future medical professionals and, on the other hand, by insufficient research on this subject in general, particularly in the Portuguese and Swedish case. Our research departed from the question of what PCC phenomena are and how to distinguish them from other similar phenomena. Further, what is recognized in the literature as the main dimensions? What are the main attributes of each of these dimensions? Could we find some models of PCC in practice? How do medical students understand the concept of PCC based on their clinical experience during the rotation period? How do medical students perceive PCC in practice? How do they learn about PCC during studies and clinical practice? Do they see all the dimensions as equally important for PCC? Finally, there is the question of whether medical students perceive themselves as competent to practice PCC? Answers to these questions should give us direction towards scoping and grasping relevant knowledge about PCC. Only after this can we assess the attitudes of the future medical force and self-reported competencies to practice PCC.

5.1.2. Definitions of terms

Patient-centred care (PCC) represents a phenomenon that embodies a scientific and practical way of practising PCC for different perspectives of actors and research disciplines. PCC phenomenon is widely conceived and embodies the key theoretical concepts (e.g. patient empowerment, patient participation) and approaches that are concretized through various activities and behaviours of all actors depending on the type of care.

Attitude is defined as a person's tendency to feel about and act towards certain people (or situation, objects, ideas) in a particular manner (Rowntree, 1981). The development of 'positive' attitudes in pupils (e.g. towards a school subject or themselves) is sometimes spoken of as part of their effective education. In the Greenwood Dictionary of Education (2003), attitudes are defined as existing abstractions in a person's mind that cannot be quantified. These beliefs represent a disposition toward people, behaviours, or things. Actions that are based on these beliefs can be observed, while values shape the attitudes of an individual towards actions, people, and things. Attitudes also direct the aspirations and ambitions of a person (Collins & O'Brien, 2003).

Ability, as in talk of "high ability" or "low ability" is a capacity to perform a task, or degree of skill at task performance (Collins & O'Brien, 2003).

Belief relates to acceptance of the truth, reality, or validity of something (e.g. a phenomenon, a person's veracity), particularly in the absence of substantiation; an association of some characteristic or attribute, usually evaluative in nature, with an attitude object (APA).

The behaviour is defined as the response made by the person to a stimulus that may be internal (e.g. a thought) or external (e.g. someone else's question). The response may be external and observable- a body movement or a spoken comment; or it may be internal and unobservable thinking, experiencing, and emotion (Rowntree, 1981).

Patient-centred behaviours are those characteristics of an encounter that can be objectively observed, including both verbal behaviours (e.g. asking questions in a way that shows interest in what the patient says) and non-verbal behaviours (e.g. sitting down when possible to assume a less dominating position) (Duggan et al., 2006).

Patient-centredness is the degree to which a system functions by placing the patient/user at the centre of its delivery of healthcare and is often assessed in terms of patient's experience of their health care (Kelley & Hurst, 2006).

Self-efficacy refers to an individual's belief in the capacity to execute behaviours necessary for producing specific performance (Bandura, 1977) and confidence in the ability to exert control over one's own motivation, behaviour, and social environment (Carey & Forsyth, 2009).

Skills are physical, mental or social ability that is learned through the practice, repetition and reflection and in which it is probably always possible for the individual to improve (Rowntree, 1981).

In the second part of this monograph, related to defining basic terms, we stick to the definition of the PCC defined by Picker Institute in that it is going to be used in our research focused on the clinical level. PCC is health care that establishes a partnership among practitioners, patients and their families (when appropriate) to ensure that decisions respect patients' wants, needs and preferences and that patients have the education and support they need to make decisions and participate in their own care (IOM, 2001).

5.2. RESEARCH QUESTION (S)

The main aim of the study research is to identify characteristics of the PCC as an idea, process and practice. Precisely, this study seeks to find the answer to the following questions:

- To what extent do PCC phenomena exist in the curricula of medical students in Portugal and Sweden; are there any differences between countries and what are they?
- Is there a difference between medical students from Portugal and Sweden in their belief in the PCC as an idea, process and practice, and in their self-perceived ability to practice PCC?
- What do medical students in Portugal see as the advantage of learning about and applying PCC and what do they recognise as barriers to PCC in practice?

5.3. STUDY DESIGN

5.3.1 Research paradigm and approach

A research paradigm refers to the way the researcher chooses to view research data (de Vos, Delport, Fouché, & Strydom, 2011). However, choosing an approach is influenced by a researcher's expertise, beliefs and previous experiences (Creswell, 2013). Since the focus was on medical students' beliefs about PCC as an idea, process and practice, and self-perceived ability in practising PCC in a specific teaching and learning programme and its context, research is conducted within an interpretive paradigm (Merriam & Tisdell, 2015; Rehman & Alharthi, 2016). Firstly, interpretivists believe in socially constructed multiple realities rather than in the existence of singular 'truths' (Bunniss & Kelly, 2010; Rehman & Alharthi, 2016). Secondly, the interpretive paradigm requires an effort of understanding individuals' interpretations about the social phenomena they interact with (Rehman & Alharthi, 2016), how a specific phenomenon is experienced by those who are personally involved in or influenced by it (Bunniss & Kelly, 2010). This study applies both qualitative and quantitative methods in a specific context, which has influenced the researchers' choice of procedures, the samples, and the interpretation of the results. It appears both paradigms aim to understand phenomena and to generate knowledge through empirically gathered information. While quantitative methods are usually attributed to the positivist paradigm of collecting numeric data (Rehman & Alharthi, 2016), qualitative methods are tightly linked to an interpretivist approach of narrative and observational data (de Vos et al., 2011). However, analysis of quantitative data in qualitative interpretive research is possible and contributes to the triangulation of research results (analysing data from multiple perspectives) and to producing more relevant results from a policy standpoint (Babones, 2016). In the methodological literature, there is no agreement among authors regarding the presumed use of terms for the approach in the research study in which the researcher combines or 'mixes' quantitative and qualitative research approach, method, technique, concepts or language in one research study (Johnson & Onwuegbuzie, 2004). Terms such as integration, synthesis, a combination of quantitative and qualitative methods, multimethod, multi methodology, and lately, the terms 'mixed-methods' have been identified (Tashakkori & Teddlie, 2003). The logic of the research approach includes three methods: inductive (revealing new forms), deductive (testing a theory or hypothesis) and abductive methods (finding the best set of explanations for research results). The reasoning for combining different methods is 1) corroborating data through triangulation, 2) developing more complex analysis to obtain richer data, and 3) mapping new ways of thinking based on paradoxes arising from two different data sources (Johnson et al., 2007). The complexity of multiple methods of the research is reflected in the form of integration in some phase of the research process in which different types of data are combined and integrated and from the researchers is expected to explain the way of integrating data into a mixed-method study (Johnson et al., 2007). Accordingly, in this study, the first form of integration is achieved by comparing quantitative data on medical student assessments of beliefs about the PCC and self-perceived competencies on the ability to practice PCC (Chapter 7) and data obtained from the qualitative study (Chapter 6 and 8). The second form of integration occurred through the formulation of conclusions and practical policy implications (Chapter 9).

5.3.2. Research design

A research design reflects the logical flow that connects the study's research question and empirical data to the conclusions (Yin, 2013). In this comparative study, the multimethod design was selected, encompassing four research strategies. *Figure 10* provides an overview of the procedures followed in this study.

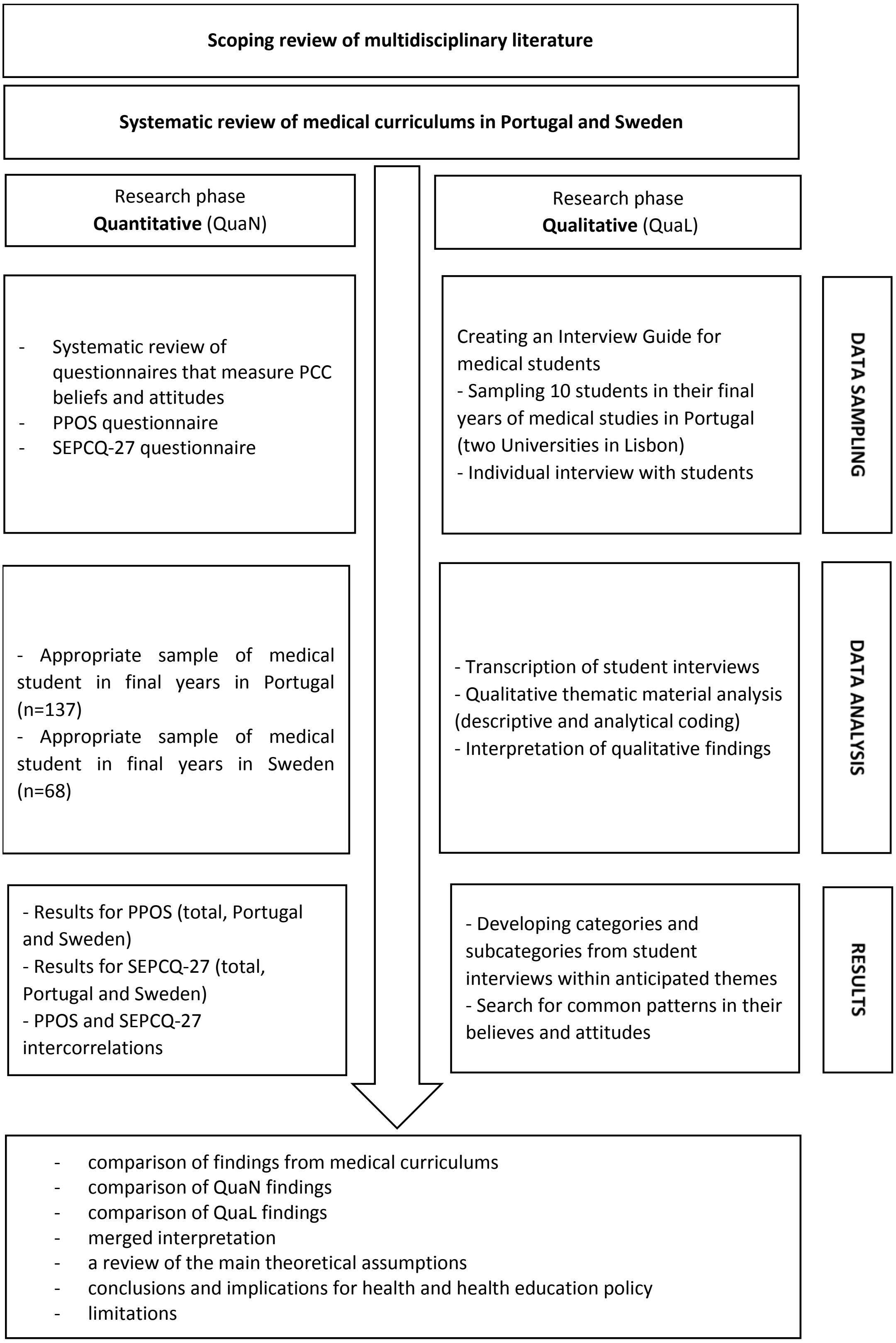

Figure 10. Study research map

First, we used a scoping review analysis to understand an ongoing discussion about the PCC as an idea, process and practice (Chapter 2,3, 4). Second, a systematic review of medical curriculums in Portugal and Sweden with content analysis was conducted to examine learning objectives and competencies (Section 4.3.). Third, a qualitative approach was applied to assess medical students' attitudes about PCC and self-perceived efficacy in PCC competency (Chapter 7). Fourth, since the questions on surveys do not necessarily provide rich data in qualitative terms, to elaborate on the PCC topic, we decided to interview medical students in more depth (Weaver et al., 2014). Analysis of the data Portuguese medical students provided in the interviews was used to examine different beliefs on PCC as an idea, a process helping to identify and understand the key elements for possible further intervention strategies for improvement (Chapter 8).

5.3.3 Trustworthiness of the study

Providing study research validity is perceived as part of a positivist paradigm in which an interpretative perspective does not easily fit (Kelle & Heather, 1995). Nevertheless, the findings of the qualitative research study are considered valid if the study meets the trustworthiness issue and, according to Guba (1981), trustworthiness embraces four elements; *credibility, transferability, dependability, and confirmability*. *Credibility* is a way of creating internal validity, and it relates to the research that is believable from the participants' perspective (Guba, 1981). There are no widely accepted methods of determining the credibility of qualitative study results (Suikkala & Leino-Kilpi, 2005). Credibility in our research is achieved by data saturation in qualitative data collection following Fusch and Ness's (2015) argumentation for reaching saturation when there is enough information available for the study to be replicated, when the capacity to obtain new information has been reached, and when further coding is not feasible. *Transferability* is about determining the external validity of the research by ensuring that the research conducted can be transferred to other contexts or settings (Guba, 1981). In the methodology section (see Section 5.5.) we provide a very detailed description of the process about how the study was conducted and what the study results are (Sections 6,7 and 8) so that the research can serve as a reference and the information could be transferable to other contexts and settings. *Dependability* in research is about creating the study's reliability by being replicated or repeated (Guba, 1981). Contextual factors possibly affect the reliability of measuring attitude. Therefore direct questions in the form of the attitude statements should be applied (Launiala, 2009). Our choice to use standardized questionnaires for measuring attitudes and self-perceived efficacy support the reliability of our study. The interview guide as a tool was validated through the first interviews to ensure we got the data that provided answers to study research questions. Lastly, c*onfirmability* is about objectivity and determines whether the study findings can be confirmed or corroborated by other studies (Guba, 1981). For replication in future studies and establishing confirmability of our study, we systematically explained and documented every step of the research process. The researcher gathered and evaluated data from audio-recorded interviews, transcribed verbatim and sought to retain a critical position during these periods; moreover, the findings of the qualitative study were verified by the two-fold coding of the data at various points in time (Suikkala & Leino-Kilpi, 2005).

5.4. SAMPLING

Based on the research design, we set sampling criteria for the qualitative and quantitative parts of the study research. Although we initially planned to include medical students from both countries of Portugal and Sweden in a qualitative study (interviewing), we did not fully succeed. The difficulties in the process of sampling are explained further in Section 5.5.5.

5.4.1. Sampling for the quantitative research

Medical students in their final years of studies took part in the quantitative part of the research. Medical students (n = 209) were recruited from two countries: Portugal and Sweden. Participants were medical students in their final years (4th, 5th and 6th year) from the medical faculties in Lisbon, Portugal (the University of Lisbon and NOVA University of Lisbon) and one in Linkoping, Sweden (Linköping University). There are two reasons why we include groups of medical students of the final years of medical faculties in our research about PCC. First, they possibly possess non-clinical knowledge obtained through (hidden) curriculum during medical studies. The second, maybe more important, is the fact they had already practiced and had contact with patients during clinical practice in the clinical settings. Apart from targeting the students in their final years of studying, we did not set any other excluding criteria.

5.4.1.1. Socio-demographic indicators

In a quantitative study that was conducted in Portugal and Sweden, three Medical Faculties from three different Universities from two geographic areas of Lisbon and Linkoping took part in our research. Students were recruited from two faculties in the Lisbon area: Faculdade de Medicina da Universidade de Lisboa (FMUL) and NOVA Medical School/ Faculdade de Ciências Médicas (NMS|FCM) and one from Sweden, Medicinska fakulteten (The Faculty of Medicine and Health Sciences) Linköping University (LiU).

Structure of participants and country distribution. In total, 209 medical students participated in our study, while only 205 submitted completed questionnaires (*Table 7*). A higher number of respondents, 67% of total sample (n=138) were students from two Portuguese medical faculties, precisely, FMUL 85,5% (n=118) and NMS|FCM 14.5% (n=20) of Portuguese research sample. In the same token, these faculties provided the highest and the lowest number of responses in total research, respectively. The percentage of Linköping University students 33% (n=67) falls between the two Portuguese Universities.

Table 7. Socio-demographic characteristics of students for total and sample groups in quantitative research

Socio-demographic characteristics	n (%)*		
	Total n=205 (100)	Portugal n=138 (67)	Sweden n=67 (33)
Gender			
Female	135 (64.6)	100 (72.4)	34 (50.7)
Male	70 (35.4)	38 (27.6)	33 (49.3)
Age (mean 24.3)			
Under 24 years	140 (68.3)	117 (84.8)	23 (34.3)
Over 24 years	65 (31.7)	21 (15.2)	44 (65.7)
Previous work experience			
Yes	67 (32.7)	24 (17.4)	43 (64.2)
No	138 (67.3)	114 (82.6)	24 (35.8)
Mother's level of education			
PhD	17 (8.3)	12 (8.8)	5 (7.5)
Master/Specialization	72 (35.1)	47 (34.0)	25 (37.3)
Bachelor	62 (30.3)	41 (29.7)	21 (31.3)
High/Secondary school	45 (21.9)	30 (21.7)	15 (22.3)
None or Primary school	9 (4.4)	8 (5.8)	1 (1.5)
Father's level of education			
PhD	17 (8.3)	11 (8.0)	6 (8.9)
Master/Specialization	63 (30.7)	38 (27.5)	25 (37.3)
Bachelor	42 (20.5)	31 (22.5)	11 (16.4)
High/Secondary school	67 (32.7)	48 (34.8)	19 (28.4)
None or Primary school	16 (7.8)	10 (7.2)	6 (8.9)
*Because of rounding, not all percentages total 100			

Gender and Age. Observing a gender distribution in the total sample, most participants 64.6% are female (n=135) while 35.4% were male students (n=70). A similar picture is in Portugal, where most of the participants were female 72.4% (n=100) while male 27.6% (n=37). The Swedish sample was gender homogenized with almost equal response among female 50.7% (n=34) and male 49.3%(n=33) students. The mean age of students was 24.49 years (SD 4.413) in the range from 20 to 59 years. After the exclusion of a 59-year-old student, since he was an extreme sample, we calculated a new age mean score of 24.3 years. For the systematization of our findings, we use the mean age to distinguish two groups of students. One group of students we classify as 'younger' (those under 24.3) and others as 'older' (above 24.3). The number belonging to the 'younger' group of medical students was higher compared to the group of 'older' medical students, especially among females. Around 75% (n=105) of students that belong to the group of 'younger' students are females while the 'older' group of students appears as more gender homogenized with an almost equal number of male and female students. In Sweden, it is noticeable that both male and female students belong more to the group of 'older' students, unlike the Portuguese case.

Previous work experience. 32,7% (n=67) students declare they had had previous working experience before they started with studies in medicine while 67,3% (n=138) reported none. The majority of medical students in Portugal 82,6%, (n=114) say that they did not have any working experience before starting to study medicine and only 17,4% (n=24) students had. In contrast, their Swedish colleagues reported that almost 2/3 of the sample had had some kind of working experience (64,2 %, n=43) and only 35,8 % (n= 24) had not had (*Figure 11*).

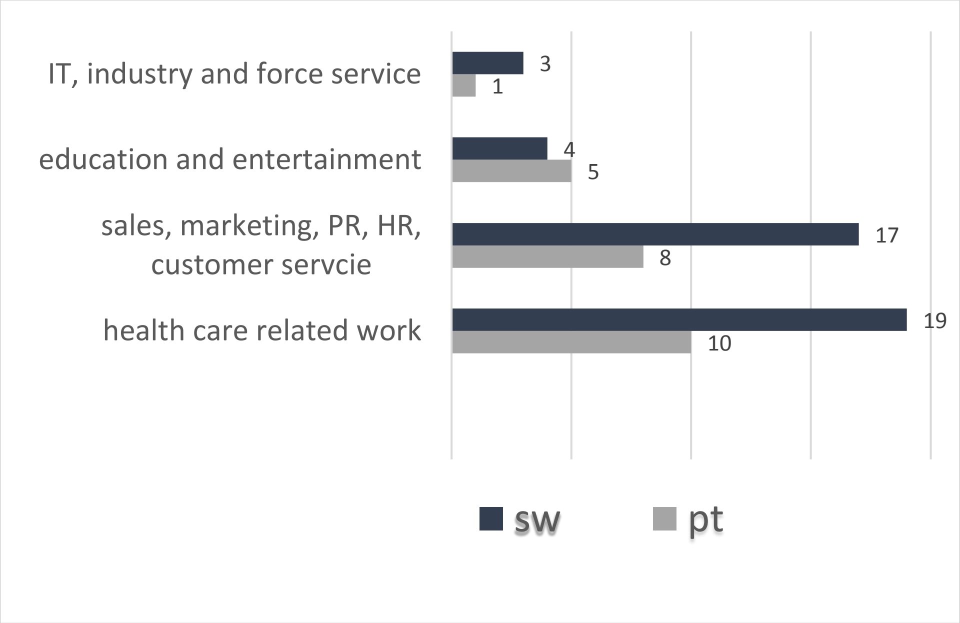

Figure 11. Number of Portuguese and Swedish students distributed on previous work experience area

Out of the sample who reported earlier working experience, 32 students were women, and 35 were men. Only 14 students in this group were under the mean score found for the total sample. Most of the students 79,1 % were in the age group of 24 (n=7) and above (n=46). Most medical students report earlier working experience in healthcare-related fields such are nursing, elderly care, health care industry and medical research. Students were working as personal assistants, pharmacists, physiotherapists, or as a volunteer in a hospital or psycho-rehabilitation centre. The number of 29 students in both countries said that they had had experience in a healthcare-related field which requires direct contact with customers, while a smaller number of students reported earlier experience in the IT and industry sectors.

Parent's education. Medical students tend to have parents with a high level of education. Most students report that the highest level of education of their mother is a master/specialization degree (35.1%), bachelor (30.3%) and high/secondary school (21.9%). Most of the students reported the highest level of education of their father is a high/secondary school (32.7%), master/specialization degree (30.7%), bachelor (20.5%). A PhD education level constitutes in total 8.3% of mothers and fathers while only primary or no education comprises 4.4 % mothers and 7.8% of fathers. Those cases were not considered in the analysis because they would bias us in finding some significant differences.

5.4.2. Sampling for the qualitative research

The qualitative part of our research encompasses 10 (ten) anonymous interviews conducted with students in Portugal. The inclusion criteria for this interview study were the same as for quantitative - participants were medical students in their final years (4th, 5th and 6th year) from the medical faculties in Lisbon, Portugal (the University of Lisbon and NOVA University of Lisbon) and could speak English. Characteristics of medical students who participated in qualitative data collection (interview) are shown in *Table 8*.

Table 8. Characteristics of medical students who participated in qualitative data collection (interviews)

	Gender (F/M)	Age (in years)	University *,**	School Year
Student 1	Female	≥ 24	FMUL	6
Student 2	Male	≥ 24	FMUL	6
Student 3	Female	< 24	FMUL	6
Student 4	Female	< 24	NMS|FCM	5
Student 5	Male	< 24	FMUL	6
Student 6	Female	< 24	FMUL	6
Student 7	Male	< 24	FMUL	4
Student 8	Female	≥ 24	NMS|FCM	5
Student 9	Female	≥ 24	NMS|FCM	6
Student 10	Female	≥ 24	NMS|FCM	5

*Faculdade de Medicina da Universidade de Lisboa (FMUL)
** NOVA Medical School/ Faculdade de Ciências Médicas (NMS|FCM)

Similar to quantitative data collection, the percentage of female students were higher in qualitative research. Participation in our qualitative research took students from NMS|FCM (n=4) and FMLU (n=6) where 70% were female and 30% male. Most of the participants (60%) were in the 6th and the 5th (30%) year of medical studies.

5.5 METHODS TO GENERATE DATA

5.5.1. Methods, Techniques, and Instruments of Research

Our comparative research study is based on an interdisciplinary approach and a cross-sectional design. Bearing in mind the nature of the topic, we used multiple methods (quantitative and qualitative). We applied the analytical-descriptive method with two techniques of research: data collection by questionnaires and in-depth interviews.

A scoping review appears as a suitable method to map the key concepts rapidly and involves underpinning a research area and the main sources and types of evidence available (Mays et al., 2001). We chose scoping review method as appropriate for identifying relevant literature expected to achieve in-depth and broad results about the PCC phenomenon as an idea, process, and practice (Arksey & O'Malley, 2005). However, a scoping review served to identify research gaps in the existing literature where no (sufficient) research has been conducted, to summarise and disseminate research findings and identify the relevance of full systematic review in specific areas of inquiry (Arksey & O'Malley, 2005).

The quantitative part has the aim of measuring the belief and attitudes of medical profession students toward PCC and their self-perceived competencies in the provision of PCC. In the literature there are many instruments that measure PCC and PCC domains that we have already mentioned in Chapter 3. This literature review aimed to identify instruments or components of tools that aim to measure the beliefs and attitudes of medical profession students toward PCC. The review focused on the following research questions: (1) Which instruments are used to measure students' attitudes and beliefs toward the PCC? and (2) What were the methodological characteristics of previous empirical studies on the topic?

This systematic review focused on two groups of medical professional students- medical and nursing students. It specifically looked to evaluate empirical research on medical profession students' attitudes and beliefs toward PCC. A systematic literature search was conducted using PubMed and CINAHL electronic databases for the period 1996–2016. Because of the need to review empirical research connected to healthcare and health care education, we chose to search for literature available in the medical literature corpus from 1996 onwards. The search was performed using the following keywords: patient-centred care, beliefs, attitudes, medical students and nursing students. The inclusion criteria were peer-reviewed articles and empirical studies, published in English between January 1996 and March 2016, and focused on medical or nursing students. Exclusion criteria were duplicate texts; non-empirical studies (editorials, letters, conceptual papers); studies connected to other (non)medical specialties such as students of pharmacology, and material published in a language other than English. In total, 239 studies were identified through the initial search. After reviewing abstracts and a further review of 112 full-text articles, a total of 16 studies were identified that met the inclusion criteria as it is presented in the Prisma Flow Diagram (*Figure 12*). The intent was not to assemble a complete body of instruments that are used to measure beliefs and attitudes on PCC but rather to derive a sample of questionnaires and studies reflecting the medical professional students' and health professionals' beliefs and attitudes regarding PCC.

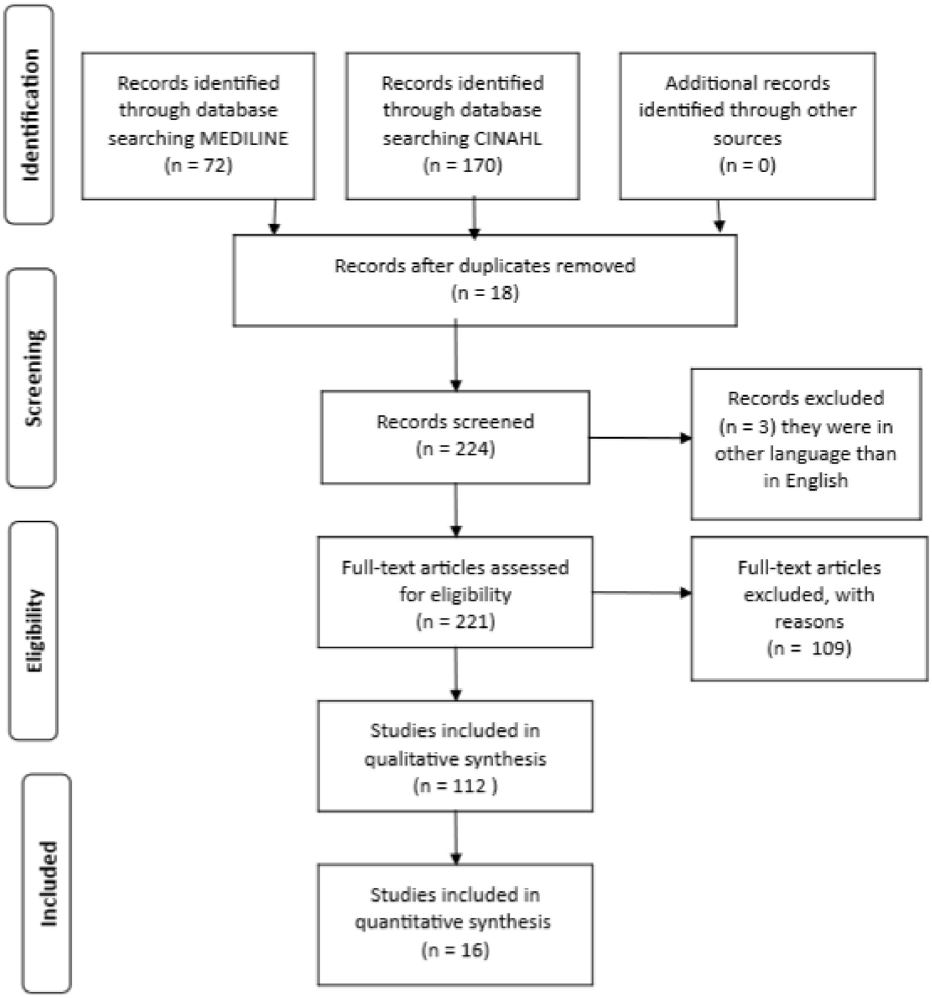

Figure 12. Prisma Flow Chart: Number of references identified through the stages of the systematic review (Moher, Liberati, Tetzlaff, & Altman, 2009)

The retrieval and analysis process started firstly by reading the titles of the articles and identification of those that corresponded to search terms and our research questions. The abstracts were studied based on inclusion criteria regarding PCC, medical profession student, attitudes, beliefs and results. Those abstracts considered relevant to the research questions were retained, and the full-text papers retrieved for further review. After proper examination of the full texts, a list of included and excluded studies were compiled. Though only 16 relevant documents (out of the 242 references identified) were found, all were accepted and were subjected to further analysis. The analysis of the methodological characteristics of the empirical studies included the name of the authors, year, the instrument(s) used, purpose, study design, sample and the key findings (*Table 9*). The content of the articles was analyzed in light of our research. The main findings obtained and presented in *Table 9* from these 16 articles serve to discuss the results of our research (Chapter 8). This systematic review resulted in a Patient–Practitioner Orientation Scale (PPOS) as the most frequently used instrument to measure PCC beliefs and attitudes in different cultures and contexts, designed either as cross-sectional or longitudinal. For example, our systematic review reveals 9 out of 16 studies with PPOS as the main instrument to measure beliefs and attitudes, as follows: two studies in Europe (Portugal, Greece), three in the USA, one in Latin America (Brazil), one in Africa (South Africa) and two in Asia (Singapore, Nepal). In some studies, PPOS was supplemented with socio-demographic characteristics like in the case of Greece (age, gender, place of origin, socio-economic status of the family, relationship with religion and military or citizen status), or in the case of research from Nepal, semi-structured interviews and focus groups and the author's participant observations were included. Concerning study design, some studies are designed as cross-sectional and some as longitudinal. A cross-sectional design was applied in the study from Brazil where medical students at the beginning of the 1st, 5th, 7th, 9th, 10th and 12th semesters of their medical course were surveyed. We found in Singapore an example of a longitudinal cohort study surveying pre-clinical medical students entering 3rd year and over the academic year.

Table 9. Summary of the results of a systematic review

No	Authors	Country	Study Instrument	Content of study instrument	Aim to Measure	Study Design	Key Findings
1	El-Zubeir, M. et al. (2009)	United Arab Emirates	Readiness for Interprofessional Learning Scale (RIPLS) (modified version)	29 items 4 subscales: ‘‘teamwork and collaboration’’, “Uniqueness of discipline” ‘‘professional role’’ ‘‘patient-centredness.” five-point Likert scale	attitudes and readiness for interprofessional education	Beginning of clinical exposure: Medical senior 5th and 6th year (n=90) Nursing students 2nd and 3rd year (n=88)	Both groups of students were positive about the benefits of undergraduate health care students learning together, the potential for IPL to improve relationships after qualification, and to clarify the nature of patient problems Nursing students were significantly more positive than medical students on most statements within factor 1 (teamwork and collaboration)
2	Grilo M. A., et al. (2014)	Portugal	Patient–Practitioner Orientation Scale (PPOS) In European Portuguese	18 items, Six-point Likert scale 2 Subscales: Sharing and Caring	individual preferences of nursing students and nurses toward the dimension of caring a sharing in health professional-patient relationship	Students of nursing school- 1st, 2nd, and 4th year (n=524) Nurses (n=108) Total sample (n= 632)	A more nurse-centred orientation in interaction with the patient in a professional group No gender difference in student group Male nurses showed lower mean scores in total PPOS score and sharing subscale.
3	Lee, K.H. et al., (2008)	Singapore	Patient–Practitioner Orientation Scale (PPOS) In English	18 items, Six-point Likert scale 2 Subscales: Sharing and Caring	to evaluate patient-centred attitudes in a cohort of Asian medical students and changes in their attitudes in the course of one academic year, on completion of their junior clinical clerkships	Longitudinal cohort study Pre-clinical medical students entering 3rd year 1st survey April 2006 (n= 226) 2nd survey February 2007, (n=219)	Overall scores and those in the Caring domain did not fall over the course of the academic year in the East Asian context.
4	Freitas Ribeiro, M.M, et al. (2007)	Brazil	Patient–Practitioner Orientation Scale (PPOS) In Brazilian Portuguese	18 items, 2 Subscales: Sharing and Caring Six-point Likert scale	Medical students’ attitudes toward the doctor-patient relationship	Cross-sectional 1st, 5th, 7th, 9th, 10th and 12th semesters of medical course (beginning of the semester) Medical students (n=738)	Female students had a significantly higher mean overall PPOS scores than did male students (across all semesters) The small increase in patient-centred attitudes among male students The lack of change among female students

							The negative impact of training at large medical centres
5	Bombeke, K., et al. (2010)	Belgium	comparative analysis of prior theory and the qualitative data collected in the focus groups using the sensitizing concepts provided by the Attitude–Social Influence–Self-Efficacy (ASE) model	Focus groups in three medical schools on the subject of learning and teaching about patient-centredness. This socio-psychological model closely resembles the *Theory of Planned Behaviour*(TPB)	gives an insight into a wide range of factors influencing medical students' patient-centredness revealed by themselves, their teachers and supervisors	focus groups (n=11) consisted of: Medical students before (4th, 6th, 7th year were in the middle of clinical rotations) and after clerkships (8th and 9th year) (General practice trainees total n=44) Doctors who taught medical students or supervised their clerkships (n=23) 4th-year medical students completed a 12-item survey during an SP examination, including demographics (gender, ethnicity, primary childhood language) and patient-centredness.	Attitude towards patient-centredness is an important inner motive More conditions need to be fulfilled to exhibit patient-centred behaviour Barriers to developing a patient-centred approach to patient care (imposed by time pressures and tiredness)
6	Hauer, E. et al. (2010)	USA	Communication skills checklist completed by standardized patients Patient-centredness questionnaire	7-items, 6 point-scale 12-item electronic survey (three demographic items and childhood language. Nine items on patient-centredness were derived from a survey by Beach et al., patient-centredness proposed by Mead and Bower (biopsychosocial perspective, patient as a person, doctor as a person,	To determine whether there is a relationship between: 1.students' demographic characteristics and scores on the communication portion of an SP examination 2.students' patient-centred attitudes and communication scores	4th-year medical students (n= 329, response rate 94%) at the three sites took the clinical performance examination (CPX) using standardized patient (SP)	Responses generally indicated high patient-centredness Students' attitudes toward patients were associated with scores on a communication examination Student attitudes regarding patient-centredness can explain modest differences in communication scores based on ethnicity Student ethnicity and medical school were significantly associated with communication scores; gender and primary childhood language were not

				sharing power ⁄responsibility, therapeutic alliance)	3. whether patient-centred attitudes explain some of the relationships between student demographics and communication scores		Two attitudinal factors were identified: patient perspective and impersonal attitude The impersonal factor was associated with communication scores.
7	Trotter, D.R., et al., (2010)	USA	Patient-Practitioner Orientation Scale (PPOS)	18 items, 2 Subscales: Sharing and Caring Six-point Likert scale	Measuring medical students' patient-centred beliefs at the start and end of a similarly innovative third-year curricular experience, as well as shortly before they graduated from medical school.	The retrospective study assessed three times: T1—At the beginning of Continuity Clinic Experience (in the 3rd) T2—At the end of Continuity Clinic Experience (in the 3rd), T3—Shortly before graduating medical school (in the 4th) Medical students (n= 47)	A similar curriculum can halt the progressive decline in patient-centred beliefs among 3rd-year medical students Time-limited curricular interventions for third-year medical students may not be enough to completely halt the erosion of patient-centred beliefs or to sustain the benefits of such interventions. Medical educators have some freedom in how they implement curricular innovations that promote patient-centred beliefs.
8	Haidet, P., et all. (2002)	USA	Patient-Practitioner Orientation Scale (PPOS)	18 items, 2 Subscales: Sharing and Caring Six-point Likert scale	To describe and quantify the attitudes of medical students towards PCC To examine: (a) the differences in these attitudes between students in the early and later years of medical school; (b) factors associated with patient-centred attitudes.	Cross-sectional Medical students of 1st. 3rd and 4th years of medical school (n= 673)	Students in later years of medical school have attitudes that are more doctor-centred or paternalistic compared to students in earlier years 3rd-year students demonstrated a progressive trend toward doctor-centred attitudes as successive cohorts completed the PPOS during this initial clinical year A strong association between student ethnicity and patient-centred attitudes Female students are less patient-centric in later school years The scores among males were most patient-centred during the third year

9	Tsimtsiou, Z., et al. (2007)	Greece	Patient-Practitioner Orientation Scale (PPOS)	18 items, 2 Subscales: Sharing and Caring Six-point Likert scale Socio-demographic characteristics: age, gender, place of origin, socio-economic status of the family, relationship with religion and military or citizen status	To assess the possible change in attitudes towards the patient-centredness of a student cohort as they progressed through the clinical curriculum The impact that socio-demographic factors have on students' attitudes and changes in attitudes over time	The prospective longitudinal study assessed at two times: T1 - at the 2nd semester of the 4th year (before any major exposure to clinical curricula and with minimum experience in doctor-patient interaction) T2 - at the end of studies, during clerkship (last semester of the 6th year) Medical students (n=582)	Medical students' attitudes at the end of their studies, compared to the beginning of their clinical curricula, are more doctor-centred regarding the sharing dimension, although they remain patient-centred about the caring component of the doctor-patient relationship
10	Noble, M.L. (2007)	United Kingdom	Doctor-Patient Scale Scale to assess confidence in their ability to communicate with patients	The 48-item scale measures the degree of doctor-centredness and disease-orientation, compared with patient-centredness and problem-orientation 11-item five-point scale to assess confidence	To assess students' patient-centred attitudes To compare the two cohorts in terms of patient-centredness and confidence in their ability to communicate with patients	The naturalistic, prospective, longitudinal study assessed at two times: T1 - at the beginning of Year 1 (baseline) T2- at the end of Year 2 (outcome) Medical students (n=454)	Students receiving professional skills training within the first two years at medical school were more patient-centred and more confident in their ability to communicate compared to students receiving the traditional curriculum. All groups showed increases in confidence and patient-centredness no matter on gender or ethnic group membership.
11	Batenburg, V., et al. (1999)	The Netherlands	Doctor-Patient Scale (Dutch version)	48- Items scale A five-point Likert-type statements	Professional attitudes in medical care (measures patient-centredness vs doctor-centredness) and the effect of gender, speciality and training level on attitude	Cross-sectional study General practice trainees (n=37) Surgery trainees (n=31) Final year clerks preferring general practice vs surgery (n=120)	Professional attitudes, in particular, patient-centredness, seem to be related to speciality preference in the final year of graduate medical training and speciality as a career choice It remains unclear whether professional socialization reinforces existing attitudes or whether existing attitudes result in speciality preference.

12	Ross, E.F., and Haidet, P. (2011)	USA	Patient-Practitioner Orientation Scale (PPOS) The task of Medicine Scale (TOMS) (adapted version)	Sharing and Caring TOMS (assesses students' prioritization of biomedical and psychosocial tasks in a patient encounter)		Doctor of Physical Therapy students enrolled in a 32 contact-hour course entitled Psychosocial Aspects of Care (n=49) (close to the end of the didactic curriculum, eight weeks before the students' first full-time, 20-week clinical internship)	Changes in attitudes toward the PCC are possible with educational interventions, the value of providing a didactic educational experience for the student in a curriculum to enhance student attitudes toward PSS
13	Archer, E., et al. (2014)	South Africa	Patient-Practitioner Orientation Scale (PPOS)	18 items, 2 Subscales: Sharing and Caring Six-point Likert scale	To determine the shift in attitude towards patient-centredness in a group of medical students The reliability and validity of PPOS in the South African context were measured	Cross-sectional survey Medical students from 1st to 6th year (n=1127)	1st-year students started with a much lower score (2.65) than studies that were done in countries such as Sweden (4.1) and Brazil (4.6) There is the influence of societal norms and values on 1st-year students' attitudes
14	Moore, M. (2009)	Nepal	Patient–Practitioner Orientation Scale (PPOS) Semi-structured interviews and focus groups The author's participant observations	18 items, 2 Subscales: Sharing and Caring Six-point Likert scale	To ascertain the attitudes of Nepalese medical students and doctors regarding aspects of doctor-patient communication	Cross-sectional survey 4th-year medical students training at the hospital (n = 45) Doctors in a teaching hospital in rural Nepal (n = 18)	Nepalese medical students and junior doctors understand many of the cultural and economic factors that influence medical consultations They expressed moderately patient-centred attitudes towards communication with patients Doctors and students tend to underestimate the patients' strong preference for being given full information
15	Tsai, TC., et al. (2007)	Taiwan	32-item questionnaire (reflected eight characteristics of professionalism defined by the American Board of	32-items, a five-the point rating scale of importance used to identify the extent to which each item reflected the respondents' values/beliefs	To assess professionalism at various educational points in the students' educational development	7th-year medical students at University and Hospital (n=133)	Theoretically meaningful and cohesive eight factors that comprise professionalism: commitment to care; righteous and rule-abiding; pursuing quality patient care; a habit of professional practice; interpersonal relationship; patient-oriented issues;

			Internal Medicine (ABIM)				physician's 'self-development; respect for others
16	Mirsu-Paun, A., et al. (2010)	USA	The Tucker-Culturally Sensitive Health Care Inventory (T-CSHCI)-Provider Form The Service Delivery and Practice subscale of the Cultural Competence Self-Assessment Questionnaire (CCSAQ), Demographic and Clinical Experience Data Questionnaire	141-item, 4-point scale, self-report measure of behaviours and attitudes that patients have indicated to be important for promoting trust in their provider, comfort with their provider, and feeling respected by their provider 19-items, 4-points scale assess cultural competence training needs, measure knowledge of problems with mainstream diagnoses, awareness of the particular needs of culturally diverse populations, and self-perceived ability to formulate treatment plans in accord with patients' cultural values	To explore the factor structure that constitutes patient-centred culturally sensitive health care behaviour and attitudes	3rd and 4th year medical students from four medical schools (n=217)	Five factors are identified: patient- centredness; interpersonal skills; disrespect/disempowerment; competence; cultural knowledge/responsiveness

5.5.2. Instruments for quantitative data collection: the PPOS and SEPCQ-27 questionnaire dissemination

The quantitative part is designed as a questionnaire study with two validated questionnaires in the English language. We use the validated Patient-Practitioner Orientation Scale (PPOS) for evaluating the attitudes of medical profession students, which has already been used several times to evaluate patient-centred beliefs of students and practitioners, first in the USA (Haidet et al., 2002), and then in several other countries such as South Korea (Sohn et al., 2002), Greece (Tsimtsiou Z, Papaharitou S, Kantziou M, Hatzichristou D, Krupat E., 2005) and Nepal (Shankar, Dubey, Subish, & Deshpande, 2006). The PPOS is developed by Krupat et al. (1999) with two subscales: Sharing and Caring. Examples of Sharing items (9 total) are: "The doctor should decide what gets talked about during a visit", "When patients look up medical information on their own, this usually confuses more than it helps" and "Patients should be treated as if they were partners with the doctor, equal in power and status" (reverse scored). Examples of Caring items (9 total) are: "If doctors are truly good at diagnosis and treatment, the way they relate to patients is not that important", "It is not that important to know a patient's culture and background to treat the person's illness" and "A treatment plan cannot succeed if it conflicts with a patient's lifestyle or values'' (reverse scored). PPOS is a six-point Likert scale with response options ranging from Strongly Agree (1) to Strongly Disagree (6) with total scale score (min = 18, max = 108) and scores for two dimensions of patient-centred medical care: sharing (min = 9, max = 54) and caring (min = 9, max = 54). Higher scores correspond to more patient-centred attitudes.

Identification of the instrument which measures self-perceived competencies in PCC did not require systematic analysis as it appeared obvious in a scoping review. In the literature there is confidence in recently developed questionnaires exhibiting patient-centred behaviours of medical student and physician, particularly. Therefore, we used the Self-efficacy in Patient-centredness Questionnaire (SEPCQ-27), an instrument that has been developed by Zachariae et al. in 2015. Although it is a recently developed questionnaire, the final SEPCQ–27 showed satisfactory psychometric properties, a reliable and valid instrument, indicating that the SEPCQ–27 could be a useful instrument for evaluating patient-centredness self-efficacy in both medical students and physicians in various contexts. The questionnaire includes 27 questions distributed in three factors: 1) Exploring the patient perspective (10 items) 2) Sharing information and power (10 items) and 3) Dealing with communicative challenges (7 items). The questionnaire is designed to answer on "I am confident that I am able to: Make the patient feel that I am genuinely interested in knowing what he/she thinks about his/her situation" (Exploring the patient perspective factor), "Record a complete medical history" (Sharing information and power factor) and "Accept when there is no longer curative treatment for the patient" (Dealing with communicative challenges). SEPCQ-27 is a five-point Likert scale with response options from 'to a very low degree' (0) to 'to a very high degree' (4).

Both questionnaires are available and have been already validated in English. A PPOS questionnaire previously has been validated in Portuguese and Swedish. A Swedish translated and validated version of PPOS was used in the article "Patient-centred attitudes among medical students: Gender and work experience in health care make a difference" by Wahlqvist et al., 2010. A European Portuguese validated version of PPOS is used to assess nursing students and nurses' orientation towards patient-centredness in the article "Assessment of nursing students and nurses' orientation towards patient-centredness." (Grilo et al., 2014). The SEPCQ-27 has been validated in English and the Danish language. We can distinguish at least three reasons which lay behind our decision to use both questionnaires in English. First, we wanted to avoid the problems that could appear in the process of validation, such as participants' poor response rate and poor questionnaires' psychometric characteristics. Second, we assume that medical students have a high level of knowledge of the English language. Our assumption is based on the fact that, as highly educated persons who seek accurate knowledge, they are quite attached to scientific medical literature published in English. Thus, some compulsory literature in medical curricula is published in English. Third, the linguistic and semantic meaning of PCC might be misleading once it is translated. PCC linguistic concept consists of compound words, but the overall meaning of these compound words may not reflect the exact meaning in other languages.

These questionnaires are followed by a set of additional questionnaires which includes a set of socio-demographic questions (sex, age, previous work experience, parents' level of education). Our decision is based on the previous research that showed that medical student socioeconomic status and gender had a significant impact on attitudes toward PCC in the USA (Hardeman et al., 2015). For instance, female medical students and medical students from a low -middle income in the USA have more positive attitudes toward PCC than their male and upper-class counterparts. Moreover, medical students who are older than 24 years (the average age of US medical students) hold more positive PCC attitudes since no race differences in attitudes toward PCC is found (Hardeman et al., 2015). Because of this evidence, some additional variables that we assume influence students' attitudes and self-perception (age, sex, previous work experience) were included in the questionnaire.

5.5.3. The instrument for qualitative data collection: Semi-structured interviews with medical students

Interviews helped us to cover students' spontaneous understanding of PPC phenomena as an idea, process and practice. For this purpose, we have developed an interview guide constructed from the important topics discussed in the literature. Most of the topics related to PCC have been discussed from the perspectives of other actors in the health care arena but barely from the perspective of students of the health care profession. We designed an interview guide in the form of seven topics each developed in a set of specific questions that appears as important for profound discussion with students in light of content analysis (Appendix IV). After an introductory part and getting students' agreement on following with interview, all interviews began with a single, open-ended question: 'Have you ever heard about the term patient-centred care?'. It was tested in a pilot interview to check the suitability of the question, which was carefully scrutinized by the investigator to improve the interview technique. The first set of questions covers the topic related to defining the concept of PCC where students, for example, were asked whether they have ever heard about PCC phenomena, what it would mean according to their opinion and to what it relates. The second set covers the PCC as a process. Regarding that, medical students were asked to give an example of the PCC process from their experience, who the key actors in the process are that they can identify, how they would rate the importance of different domains of PCC. The third set of questions covers the theme of student's experience with PCC practice, meaning how they perceived organisation when they had practice in trying to meet the patients' needs, whether students believe that PCC is important and if so, then why it is important; whether they had experienced some PCC barriers in practice. The fourth set of questions covers students' beliefs about the role of students and medical doctors in PCC practice. The fifth theme covers PCC competencies that a doctor should possess. We asked them what–characteristics a medical doctor has to possess that can be attributed to PCC competencies. The sixth set of questions related to the way medical students learn about PCC. An example of the question would be "Whether the PCC should be a part of formal medical curricula?". The seventh theme covers their views on possible suitable solutions for improving PCC in the country's health care system.

5.5.4. Research process

The quantitative data collection was carried out by the end of the first and at the beginning of the second semester of the 2016/2017 academic year. We distributed both questionnaires online with detailed instructions on the purpose of this study and how to comply with the instrument correctly. Universities were contacted via e-mail and kindly asked for their assistance in data collection (depending on their work organization). The secretary of Portuguese medical faculties invited students to take active participation. Also, student unions invited their colleagues via their official social networks to take part and answer sincerely on anonymous research. Unlike the Portuguese case where their official organizations contacted students, contact e-mail addresses of medical students from Linkoping University were sent to the researcher with approval to contact them directly. All students' answers from Portugal and Sweden were collected using the software *Survey and Report* (Artologik) according to Linkoping University licensing arrangements.

The qualitative part of the research was conducted between January and April 2018. Different recruitment strategies and methods were employed in qualitative data collection. The first, similar to quantitative data collection, was a letter about the study (explaining that we would be conducting an interview study with medical students), which was sent to the Secretary of medical faculties of the Lisbon area in Portugal and Linkoping in Sweden. They invited their students via email to take active participation. After two weeks, we repeated an email kindly asking the secretary to send one reminder for students to actively participate. Second, we sent the information letter to student unions and associations of these faculties (but also the national association of medical students in Sweden) asking them for assistance to disseminate the call for research and invite their colleagues via their official social networks. After two weeks, we repeated an email kindly asking representatives of the medical association to send one reminder note to the students, which resulted in a new contact. Third, we applied the method of snowball sampling by asking medical students if they know some of their classmates or other medical students who meet the inclusion criteria willing to participate. After being contacted by medical students who expressed their willingness to participate in this interview study, we left students to decide the place most convenient for them. The majority of the interviews took place in a cafeteria at the University (4 interviews) and the student's home (3 interviews), while some students preferred to have an interview via Skype (3 interviews). Three students preferred to interview via Skype rather than in person because they were in some of the hospitals across Portugal doing their clinical rotation. We used the Skype program as it appears like an affordable and useful way of overcoming geographical barriers (Lo Iacono, Symonds, & Brown, 2016). Interviewees with time and place limitations for face-to-face interviews to participate in research might be encouraged to use the Skype program as a supplement or replacement for overcoming limitations, in a more suitable condition for them (Deakin & Wakefield, 2014; Janghorban, Latifnejad Roudsari, & Taghipour, 2014).

The first five minutes of the interview was dedicated to explaining the rationale behind the interview, asking if they had any questions about the project and informed consent I gave or sent to them in a written copy (APPENDIX III). The interviews lasted from 48 to 80 minutes (on average 64 minutes) and were audio-recorded and transcribed verbatim. For the Skype conversation, we used a free version of the 'ALMOTO program call recorder for Skype'. Video recording is unavailable for the free version; therefore, students were acquainted with this information. Although we had a video call via Skype, only audio was recorded with permission from our participants at the beginning of our interview.

5.5.5. Bias and Problems with Sampling

The initial research plan of our study was to conduct a quantitative and qualitative study in both countries, Portugal and Sweden. The number of respondents for quantitative data collection from Sweden was lower compared to the Portuguese who were contacted by the University and Student's Association. Further, medical Universities in Portugal and Sweden were contacted via e-mail (followed with a reminder e-mail after two weeks) asking for their assistance to spread the information about the project among medical students in their final years (the same criteria as for quantitative data collection) inviting them to participate in an interview process. The invitation letter was sent to medical associations as they have an active role in the student life; therefore, we perceived them as stakeholders, but in Sweden, it turned out we had no response even after resending an e-mail. In Sweden, only two medical students from Linkoping University responded to the direct researcher invitation, asking for more information about the project and expressing their interest in participating in the qualitative part of the research study. Although these two students from Linkoping University met all the inclusion criteria, the number of two medical students was not statistically valid enough for interviewing in Sweden; therefore, we needed to suspend the qualitative data collection in this country. We identify at least two significant biases for data collection. Firstly, it would be probably easier to approach Swedish medical students and get them as participants if the researcher was Sweden-based at the moment of data collection. Second, we believe the number of Swedish participants in the quantitative and qualitative study would be greater if the invitation for participating in the study came from the University units or student's organizations, not directly from the researcher.

5.6. DATA ANALYSIS

Qualitative data are analysed independently from the quantitative but with the purpose of profound knowledge about PCC phenomena and to clarify some issues that remain unclear in the quantitative part of our research.

5.6.1. Data analysis in quantitative research

In data analysis, we applied quantitative and qualitative methods. Beyond the mere descriptive analysis of the data (mean, median, quartiles, minimum and maximum values), we paid particular attention to the correlation analyses between PPOS subscales and SEPCQ-27 factors. Thus, students' social-demographic factors were correlated with PPOS and SEPCQ-27 and its subscales and factors, respectively. Apart from descriptive statistical parameters (mean scores and standard deviation) and frequentation analysis (per cent), we used parameter and non-parameter statistical techniques. First, a statistical measure of the connection between the two variables, Pearson's coefficient of correlation (*r*), was calculated to understand what the correlation between students' beliefs and attitudes toward PCC and students' self-efficacy in patient-centredness is. Second, Pearson's coefficient was applied in examining intercorrelations between PPOS total and PPOS subscales and further between SEPCEQ-27 and SEPCQ Factors. Also, Pearson's coefficient was used to discover existing intercorrelation between PPOS Caring and Sharing subscale and further among SEPCQ-27 three factors. Intercorrelations analysis was conducted on the total, Portuguese and Swedish samples. Third, we applied a test of equity means (t-test) analysis to discover differences between mean scores of different students' groups based on age, gender and work experience for both instruments and PPOS Caring and Sharing subscale and SEPCQ-27 three factors. Four, we applied one-way ANOVA without replication to measure the effect of mother's and father's education on PPOS total, Caring and Sharing Subscales. Five, a t-test was used to discover differences in mean scores on Caring and Sharing PPOS subscales for total, Portuguese and Swedish samples. We used the same to compare mean scores on PPOS total, Caring and Sharing subscale between Portugal and Sweden. In the same token, a t-test was applied to reveal differences in means on SEPCQ-

27 total and SEPCQ factors for total and Portuguese and Swedish samples. Statistical Package for Social Sciences (SPSS) version 24 for Windows was used for data analysis. Due to incomplete responses, questionnaires from four participants were discarded, and the remaining 205 were included in the study. According to instructions given by the authors of the original PPOS and SEPECQ-27 questionnaires, the scores were calculated. Descriptive statistics were calculated for the total score of PPOS and the Sharing and Caring subscales of the PPOS and the total score of SEPCQ-27 and three factors "Exploring the patient perspective" (F1), "Sharing information and power" (F2) and "Dealing with communicative challenges" (F3) for two (Portuguese and Swedish) different student groups.

Test of Normality. An assessment of the normality of data is a prerequisite for many statistical tests because normal data is an underlying assumption in parametric testing. The Kolmogorov–Smirnov (KS) test and exploratory statistics revealed that the distributions of the scores on sharing, caring and the total score of PPOS as well scores for the SEPCQ 27 factors conform to normality standards (*Table 10*).

Table 10. Test of Normality

Test of Normality

	Kolmogorov-Smirnov[a]			**Shapiro-Wik**		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
SEPCQ_F1_SCORE	.098	205	.000	.957	205	.000
SEPCQ_F2_SCORE	.103	205	.000	.973	205	.001
SEPCQ_F3_SCORE	.085	205	.001	.990	205	.142
SEPCQ_TOTAL_SCORE	.064	205	.038	.979	205	.003
PPOS_TOTAL	.080	205	.003	.990	205	.145
PPOS_SHARING	.066	205	.030	.989	205	.130
PPOS_CARING	.095	205	.000	.978	205	.002

a. Liliefors Significance Correction

Validity and Reliability. As a measure of internal consistency, we use the most commonly used indicator of internal consistency the Cronbach alpha, which provides reliability estimates from the consistency of item responses from a single assessment. The generally agreed-upon lower limit for Cronbach‘s alpha (α) is α >.7 (Hair, Anderson, Tatham, & Black, 1998) and acceptable *α* scores fall between .5 to .7 (Morera & Stokes, 2016; Streiner, 2003). After the Cronbach’s alpha was calculated, our results reveal the internal reliability of the PPOS questionnaire and subscales respectively (α= .602 and .812) are acceptable and of the SEPCQ-27 questionnaire (α= .935 and .846) are high. Questionnaires have satisfactory construct validity; therefore, factors that contribute to internal consistency characteristics that we measure are stable and acceptable.

Model of analysis. Our quantitative data analysis is set on the level of factors. We analysed a correlation between two PPOS and three SEPCQ-27 factors for total but also for Portuguese and Swedish samples (*Figure 13*).

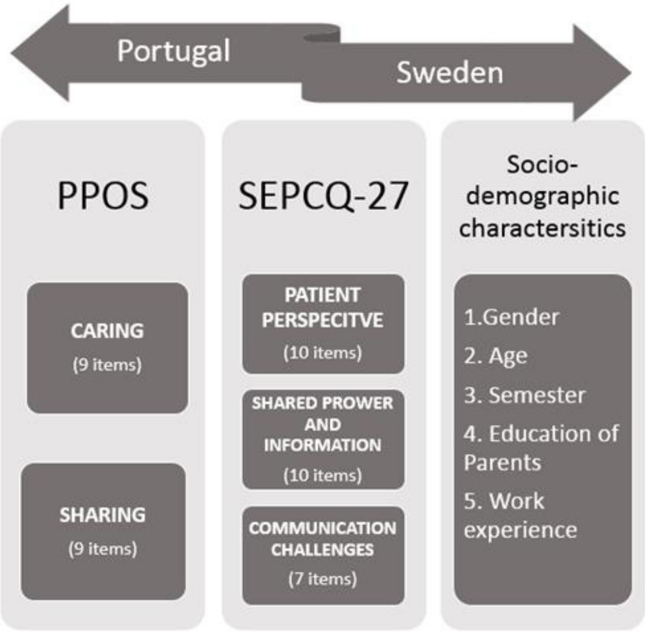

Figure 13. Development of a model for quantitative data analysis

Also, we analyse existing intercorrelations within PPOS (between Caring and Sharing factor) and within SEPCQ-27 three factors (Factor 1- Exploring the patient perspective, Factor 2-Sharing information and power and Factor 3- Dealing with communicative challenges). Additionally, we analyse an intercorrelation between PPOS and SEPCQ-27 questionnaires. The analysis is conducted for total and country (Portugal and Sweden) samples. Additional sociodemographic characteristics of students were used to measure the effects on both total scales and each of the factors. The variable "Semester" was not included in the analysis as it serves as a researcher's control to ensure that students are in their final years of study as it was set as the study's criteria.

5.6.2. Data analysis in qualitative research

The ten recorded students' interviews were transcribed in Word and analysed by using software for data analysis QDA Miner Lite. We highlight that the quotes have not been edited, so errors in English remain. The processing of these qualitative data was made using a deductive content analysis that served as a method for identifying and analysing codes and inductive to identify subcategories (Johnson et al., 2007). The purpose of using content analysis as a research method is to provide new insights and increase the understanding of a specific phenomenon, and to gain a broader and more condensed description of the phenomenon, as well as to describe and quantify a phenomenon (Moldavska & Welo, 2017). Data processing is carried out as follows: (1) reading and organizing raw data; (2) creating codes and (3) combining codes into subcategories that have a common meaning. The themes, and in some cases, categories (when PCC dimensions were identified as categories within the theme) were prepared in advance. As a result of an insight into the data, most categories and subcategories were determined concerning the principles of deductive thematic analysis. For example, when we asked students to explain how they got acquainted with the PCC phenomena (predefined theme), we obtained the students narrative “[…] from watching the doctors' practice, the observation of the doctors’ appointments, from the observation of the ER situations” (Student 10). Using a content analysis tool and the QDMA Miner Lite software, qualitative data were analysed. The following codes are identified: watching the doctors' practice; the observation of the doctors’ appointments; the observation of the ER situations, which enable the forming of the subcategory Learning by observing within the category Informal (learning) (*Table 11*).

Table 11. Example of students' narratives coding

Theme VI	Category	Sub-category	Code	Narrative
The way to get acquainted with PCC phenomena	Informal	Learning by observing	watching the doctors' practice	“our method of teaching is by bservation” (Student 3)
			the observation of the doctors’ appointments	“from watching the doctors' practice, the observation of the doctors’ appointments, from the observation of the ER situations” (Student 10)
			from the observation of the ER situations	

Following predefined themes in our interview guide, we use the deductive method to identify categories and inductive to define subcategories. In our analysis, there are seven themes we have differentiated as follows: Theme 1 provides insight into how students define the concept of PCC; Theme 2 aims to reveal student beliefs about PCC as a process; Theme 3 is about students experiencing PCC in practice; Theme 4 is about students believing in the role of students, and medical doctors in PCC; Theme 5 is about PCC skills; Theme 6 is about how students get to know the phenomena of PCC and finally, Theme 7 reveals students’ beliefs about PCC on the national level.

5.7. ETHICAL CONSIDERATION

Given the nature of the cross-sectional study and the tools employed, we did not need any personal data retrieval. For data collection, we use the software *Survey and Report* (Artologik), which has a pulling option. The program has a feature to determine the link which leads students directly to the pool without disclosing any personal data. To access this pool, it was only possible by using the researcher’s credentials. The program is therefore designed to make the number and percentage of respondents visible, but not the e-mail addresses or any other personal data. After two weeks, the initial e-mail was followed by one additional reminder email. Therefore, the information was collected anonymously and treated with confidentiality, and we did not come across any personal student data (e.g. e-mail address). The research was approved by two Ethical Committees- the University of Evora (n°150/20) and NOVA Medical School (n°27/2016/CEFCM). The Dean approved research in Faculdade de Medicina da Universidade de Lisboa while Medical Faculty at Linköping University did not have requirements regarding approval. In performing qualitative data collection, the participants were given an Informed consent document and the opportunity to discuss the project with the researcher verbally. However, the student could contact the researcher by e-mail or phone. The participants had a chance to request skipping or stopping the interview if a problem arose (e.g. participants showing signs of distress, or simply refusing to answer a question). Our participants were informed in the (Informed) consent form that they had the right to do so at any time during the data collection process. Our participants were reminded that if they wished to do so, they could withdraw their consent even after completion of the data collection procedure. We had pre-warned participants during interviews not to use their names. The Informed Consent sample is listed in Appendix III. To facilitate a connection and a face-to-face conversation in real-time between researcher and interviewee, Skype video call was utilised (Deakin & Wakefield, 2014). Only audio was recorded when permitted by participants, keeping this interview anonymous. For the Skype conversation purpose, we used a free version of the 'ALMOTO program call recorder for Skype' that does not support video recording, and this information was shared with the interviewed students. However, using a Skype interview, interviewees had an option to withdraw from the interview process at any time without notice just by clicking a button (Deakin & Wakefield, 2014; Janghorban et al., 2014) which did not happen in our research study.

Summary

In this chapter, we explain the rationale behind the study for researching student attitudes and self-efficacy in the ability to practice PCC care, with stated purpose and objectives. Besides, we outline the process of a systematic review that has guided the decision to make use of PPOS in our study. However, the details of the research process methodology and the challenges facing the achievement of the research objectives are explained. Issues of trustworthiness are also addressed to ensure that credibility, transferability, reliability and confirmability have been established. The findings of the quantitative (Chapter 7) and qualitative (Chapter 6 and 8) data analysis follow.

Chapter 6

QUALITATIVE DATA ANALYSIS:
FINDINGS FROM THE MEDICAL STUDENTS' CURRICULUMS

INTRODUCTION

Overview and analysis of different perspectives about PCC competencies are conducted based on Picker's eight dimensions that served as a guideline in curricula analysis; therefore, each of the eight Picker dimensions served as themes in our analyses that we discuss further (6.1.- 6.8.). After comprehensive content analysis of medical curriculums and course programs, we identify courses that could be put in one or more categories and themes. However, two additional categories were identified. We found courses that explicitly specify theoretical knowledge and practical skills in the field of *Patient-centred care* (6.9.) and *Health Policy* (6.10.) in learning objectives.

6.1. Courses for providing the medical student with theoretical knowledge and/or practical skills in the dimension of *Information, Communication, and Education*

The dimension of Information, communication, and education appear to be the most prevalent in both countries' medical curricula. In medical curricula across Portugal and Sweden we identify several categories concerning dimension Information, Communication and Education dimension: (1) doctor-patient relationship, (2) conducting an interview, (3) (non)verbal communication, (4) transcultural perspective, 5) communication in different situations, (6) health education and literacy and (7) digital technology communication (*Table 12*).

Table 12. Portuguese and Swedish medical courses: Dimension Information, Communication and Education

Dimension: Information, Communication, and Education		
Category	Portuguese courses	Swedish courses
Doctor-patient relationship	P_Coimbra/1, 7 P_Minho/3, 14 P_FMLU/4, 17, 18 P_NOVA/1, 6, P_Porto/3, 10, 11	S_ Gothenburg /1, 2, 3, 4 S_Karolinska/3, 4, 5 S_LiU/1, 3 S_Lund/2, 4 S_Orebro/1, 2, 3, 6, 9, 10, 11 S_Umea/7 S_Uppsala/3, 5
Conducting interview	P_Coimbra/1, 4 P_Minho/5 P_FMLU/13, 15 P_NOVA/6, 16 P_Porto/9, 10, 11, 13, 14, 19	S_ Gothenburg /3, 5 S_Karolinska/4 S_Orebro/1, 2 S_Lund/7
Non-verbal communication	P_Coimbra/1, 4 P_FMLU/10, 20, 22, 23, P_NOVA/6, 11, 17, 19 P_Porto/1, 3, 6, 8, 9, 10, 12	S_Karolinska/5, 7, 8 S_LiU/2, 3, 6 S_Lund/5, 7, 11, 12 S_Orebro/3, 6 S_Umea/2, 3, 4, 5, 6, 8, 9, 10, 12 S_Uppsala/2, 5, 7, 9, 10
Communication in a difficult situation	P_Coimbra/4 P_Minho/7, 14 P_FMLU/23 P_NOVA/6 P_Porto/6, 11, 19	
Health education and literacy	P_Minho/10, 12 P_FMLU/1, 11, 15 P_NOVA/9 P_Porto/3, 9, 21	
Transcultural perspective		S_Umea/5
Digital technology communication	P_FMLU/19 P_NOVA/13, 14 P_Porto/20	S_LiU/1

The doctor-patient relationship tends to have a central role in the course programs in both countries. Students learn about the importance of the doctor-patient relationship (P_NOVA/1) and doctor-patient interactions in the social and cultural context (P_Coimbra/7). Portuguese medical curriculums emphasize: (a) the psychosocial aspects in the medical approach and uncontrollable effects on the doctor-patient relationship (P_Minho/3), (b) the therapeutic aspect of the doctor-patient relationship- from the contractual relationship to therapeutic relationship and patient's adherence and agreement to therapy (P_Minho/14, P_NOVA/6, P_Porto/11,) and (c) communication as a key factor for doctor-patient relationship (P_Porto/3,10) including advanced aspects of health communication motivational interview and behaviour change (P_NOVA/6). In Sweden, medical students learn about a doctor-patient relationship, so they gain knowledge and competencies in: (a) explaining factors that influence the patient-physician relationship (S_Uppsala/3) and importance of patient-physician relationships for treatment outcomes (S_LiU/3); (b) basic psychological mechanisms that influence the patient-physician relationship to establish contact with the patient (S_Lund/ 4), psychological mechanisms that affect the patient-doctor relationship (S_Karolinska/4) and apply basic psychological concepts in the patient-physician relationship (S_Umea/7); (c) ethical perspective of the interaction between doctor and patient (S_ Gothenburg /1, 2, S_Karolinska/3); (d) the patient's perspective in the patient-doctor relationship (S_ Gothenburg /4) and (e) doctor-patient dialogue and communication (S_Karolinska/4, 5, S_Lund/2, S_LiU/1, S_Uppsala/5) and consultations through interpreters (S_ Gothenburg /3).

In both cases, the concept of *performing a (medical) interview* is present in medical curricula, somewhat more in the programs of Portuguese courses. For instance, Portuguese medical students learn about the concepts of the medical interview (P_Coimbra/1), structure the interview and building the relationship (P_Porto/10), conducting an interview adopting the principles of the biopsychosocial model in the interview (P_Coimbra/4) and conducting clinical interviews conducted in family health units in the community (P_Minho/5). However, courses' programs promote and consolidate the acquisition of basic patient-focused interview skills using simple language and providing personalized information (P_Porto/11, 19). Portuguese students develop basic technical skills of clinical interview and communication in health contexts (P_NOVA/6, P_Porto/9, 13, 14), skills concerning observation, identification and interpretation of human expressions (behaviours, emotional reactions or nonverbal manifestations) at stake in the context of the dynamics of medical consultation (P_Porto/10). In the same token, Portuguese students learn about clinical interview techniques (using simulated patients) (P_FMLU/13, 15), motivational interviewing as a tool for behaviour change (P_Porto/9) and narratives and communication in the clinical encounter, communicative and self-awareness strategies as facilitating tools for their practice (P_NOVA/16). Swedish students learn about a patient-focused consultation and the ethical motives behind this approach, about transcultural meetings with patients from all over the world and consultations through interpreters (S_ Gothenburg /3). They gain competence and skills on how to establish contact with the patient and carry out the introductory part of the consultation in a professional fashion (S_Karolinska/4) and to carry out independently a patient-centred consultation, including interaction, respect and responsiveness, and identify different strategies in the consultation (S_ Gothenburg /5, S_Lund/7).

(Non)verbal communication category appears to be present in the curriculums of both countries. Portuguese students learn about the functions of communication and the importance of nonverbal communication in the doctor-patient relationship (P_Coimbra/1, P_Porto/10). Portuguese students learn to use communication as an instrument for health promotion, behavioural change and motivational interviewing (theory and practice of health behavioural change techniques) (P_Coimbra/4, P_NOVA/17) and advanced aspects of health communication (P_NOVA/6, 11, 17, 19, P_FMLU/20, P_Porto/12). For example, in Portugal medical students learn about the art of observation, communication skills in diverse medical environments (P_Porto/1, 6, 8, 9), the relevance of narratives and communication for the meeting (P_FMLU/22) and the conspiracy of silence (P_FMLU/23). We identify the course that trains medical students in an effective communication methodology, namely with primary care health professionals (doctors and nurses) (P_NOVA/19).

Further, we identify *Sign Language* optional course that gives medical students a chance to learn about the cultural (e.g. deaf culture, parenting and deafness, the deaf community in Portugal and around the world) and linguistic aspects, the basic vocabulary and basic communication in the health area concerning sign language, preparing a student to use the practical knowledge to have a basic communication using sign language in their practice (P_NOVA/11). In contrast, medical courses across Sweden emphasize different communication cultures communication and teamwork, the importance of non-verbal communication in collaborative situations (S_Karolinska/5, S_Lund/5), communication with healthcare staff and colleagues in the context of emergency treatment (S_Lund/12) and communication with personnel of all categories and with other healthcare sectors in general (S_Karolinska/7, 8). Swedish students get acquainted with communicative guidelines on successful team collaboration, communication with patients, relatives and medical staff, how to respond to and communicate with patients, relatives and colleagues in a professional manner (S_Umea/2, 3, 4, 5, 6, 8, 9, 10, 12). Additionally, students learn how to integrate conversation skills with medical knowledge/skills in the PCC (S_LiU/6) and management of conversations (S_LiU/3). For instance, they learn about conversational skills in meeting patients (S_LiU/2), use conversational skills in active listening (S_Uppsala/2), how to apply conversation techniques adapted to the patient's age, emotional and cognitive conditions, life situation and needs integrity, conduct a structured conversation with a patient during acute emotional load and report this to a colleague (S_Lund/11). Swedish students learn to explain basic models for communication from a group and leadership perspective, identify destructive communication techniques (S_Uppsala/7, 10) and apply terminology for colleagues and patients with a language appropriate for the target group (S_Lund/7). Swedish students have a chance to be trained in calling skills through an optional course (S_Uppsala/9) to get to know the idea of transcultural perspective and its context in the light of non-verbal communication, value systems and treatment (S_Umea/5).

Communication in difficult situations appears to be explicitly stated as a learning objective and/or courses' program content in the Portuguese medical curriculums. For example, by identifying the different types of difficult situations, active listening and the PCC model, Portuguese students learn about communication in difficult and specific situations and difficult contexts (the example of oncology) (P_Minho/7, 14, P_Coimbra/4, P_FMLU/23). Hence, Portuguese students learn about the meaning of the conspiracy of silence, and the "truth" to convey (P_FMLU/23); practice communication skills specific to different stages of the life cycle to handle difficult communication situations and report bad news (practical sessions) (P_Porto/11), and master bad news communication skills (P_Coimbra/4, P_NOVA/6). We identify a course Interview- Dealing with Emotions and Reporting Bad News (P_Porto/19) that in its program includes the module Communicating Bad News - Defining Bad News, Modeling and Strategy Rationale. Portuguese students learn about 6-Step Protocol (SPIKES): Prepare the context, find out what the patient already knows, find out at what level the patient wants to know, share information, identify and respond to the patient's feelings and reactions, establish a therapeutic plan and integrate support systems. Hence, students gain other skills: preserving hope, providing realistic information, verbal transmission of bad news - proper word selection, avoid professional slang, confirm accuracy and comprehensibility of information, use simple language and provide personalized information (P_Porto/19).

Health education and literacy appear as an independent category within this dimension dominant mainly in Portuguese course syllabuses. Students get to know the concepts of health promotion together with disease prevention and health education (P_Minho/10, 12, P_FMLU/11, 15, P_NOVA/9, P_Porto/3, 9), as well as the most frequently used health promotion techniques (P_Porto/21) and strategies (P_Minho/10, 12). The concept of health literacy is present in only one compulsory course teaching program (P_FMLU/1), meaning that medical students in both countries do not learn enough about it.

Digital technology communication appears as an independent category in our research because we identify several courses, mainly in optional Portuguese courses, where knowledge about digital technology communication is set as a learning objective. The dynamics of individuals and communities in a digital world affects the domain of medicine. The doctor seems increasingly integrated into a digital functioning which is crucial to know the new individual and group functioning; therefore, some courses empower students with non-traditional communication and assessment skills (P_FMLU/19). For instance, students learn from an anthropological perspective about the social and cultural implications of the relationship between human beings and digital technology (P_FMLU/19). Portuguese students learn about the concept of understanding the value of health information and information systems that support public health and secondary and tertiary prevention strategies and how it enables the cost of the service to ensure permanent equity, opportunity and availability of e-health, mHealth and telemedicine (Portug. *Tele-saúde*) as an instrument of Tele assistance and telepresence (P_NOVA/14, P_Porto/20). In contrast, the concept of e-health in the Swedish medical curriculum was not explicitly set as a learning objective or part of the course teaching program except in one case (S_LiU/1). Portuguese optional course Medicine 4.0 (P_NOVA/13) highlights the idea of entrepreneurship in the medical industry 4.0. This course allows students to understand how technology plays multiple crucial roles in medical practice in the 4th Industrial Revolution, how these innovations have a significant impact on their work environment, may reduce the burden of certain tasks, and prepares students for changes in the fields of cybermedicine, artificial intelligence, robotics and medical devices providing new job opportunities (P_NOVA/13).

The central topic of medical courses that deals with the dimension of Information, Education and Communication is establishing a doctor-patient relationship, conducting interviews and aspects of (non)verbal communication. While medical courses in Portugal are focused on the theoretical aspect of communication use (e.g. the importance of narratives, the art of observation), Swedish courses place conversational skills, active listening skills and the application of conversation techniques adapted to the characteristics of the patient in the focus of their teaching program. Swedish medical students, unlike Portuguese, explicitly learn about transcultural meetings with patients from all over the world and how to conduct a consultation through an interpreter. Our findings from both countries identify that communicating bad news is not explicitly stated as a learning objective or part of teaching programs, except for only one case in Portugal in which these students acquire theoretical knowledge and practical skills related to communicating bad news; still, this course is created as optional. The concept of health literacy, which is part of only one compulsory course in Portugal, is a similar situation, meaning that students in both countries have limited chances of having to learn this concept during their formal medical education studies. Interestingly, in the Portuguese Medical Program there is a Sign Language course that offers medical students an opportunity to learn about the history of the deaf and the principles of sign language communication and skills that tend to overcome barriers of communication with the patient. This type of course is present in only one faculty in Portugal, and it is optional. In terms of the communication and information dimension, regarding the specificity of medical courses in Sweden, the focus is not just on the patient but also on team members. The majority of courses in Sweden emphasize communication skills and teamwork in different communication cultures, as well as non-verbal communication as a learning outcome in a collaborative situation.

6.2. Courses for providing the medical student with theoretical knowledge and/or practical skills in the dimension of *Respect for Patients' Values, Preferences and Expressed Needs*

In terms of respect for the values, preferences and expressed needs of patients, we identify seven significant categories: 1) Treating patients with dignity and respect, 2) Ethics, 3) Human patient's rights and Medical Law, 4) Person as a whole and context, 5) Shared medical decisions, 6) Informed consent and 7) Patient's perspective, expectations and needs (*Table 13*).

Table 13. Portuguese and Swedish medical courses: Dimension Respect for Patients' Values, Preferences and Expressed Needs

Dimension: Respect for Patients' Values, Preferences and Expressed Needs		
Category	Portuguese courses	Swedish courses
Treating patient with dignity and respect	P_Minho/11	S_ Gothenburg /5 S_Karolinska/3, 5, 6 S_LiU/2 S_Lund/1, 6, 7 S_Orebro/1, 2, 9, 10, 11 S_Umea/8, 9
Ethics	P_Algarve/1 P_Beira/2, 9 P_Coimbra/3 P_Minho/1, 4, 5, 7, 11, 14 P_FMLU/4, 16, 23, 25 P_NOVA/10 P_Porto/4, 8	S_ Gothenburg /1, 2 S_Karolinska/3, 5, 7, 8 S_LiU/1, 2, 3, 4 S_Lund/8, 10 S_Orebro/1, 3 11 S_Umea/1, 2, 3, 4,5, 6, 8, 9, 10, 11 S_Uppsala/2
Human patient's rights and Medical Law	P_Coimbra/6, 7 P_Minho/6 P_FMLU/1, 4 P_NOVA/3, 4, 15	S_ Gothenburg /1, 5 S_Lund/7, 8 S_Orebro/1 S_Umea/8, 10, 11 S_Uppsala/2
Person as whole and context	P_Beira/4 P_Coimbra/4 P_Minho/5,12, 13 P_FMLU/1, 4 P_NOVA/2, 6, 9 P_Porto/2, 10	S_ Gothenburg /3, 6 S_Karolinska/1 S_LiU/1, 2 S_Lund/8, 10 S_Orebro/4, 7 S_Umea/2, 4, 6, 10, 11 S_Uppsala/1, 14
Shared medical decisions	P_Porto/9	S_Lund/10, 11 S_Orebro/7, 8
Informed consent	P_Algarve/1 P_Coimbra/1, 3 P_FMLU/16, 25 P_NOVA/3	
Patient's perspective, expectations, and needs	P_NOVA/7	S_ Gothenburg /2, 4 S_Lund/6, 11 S_Umea/4, 5

In general, humanities and human dignity in medicine are present in the medical curriculum (P_Minho/11, S_ Gothenburg /2). *Treating patients with dignity and respect* is part of defined learning objectives more in Swedish than in Portuguese courses. Swedish students learn to act with respect for the dignity of the patient (S_Karolinska/3). For example, students in Sweden gain competence and skills on how to carry out a patient-centred consultation equally and respectfully regardless of background, age or gender (S_ Gothenburg/5; S_Umea/9) and how to customize their patient care with the patient's individual prerequisites with respect for his or her integrity (S_Lund/6, 7). Students gain competence and skills on respect for the patient's right to information, influence and participation in the decision-making process (S_Umea/8) but also to obtain relevant information from patients in patient-doctor dialogue, with respect for the patient's dignity (S_Karolinska/5, 6). Furthermore, students learn to behave respectfully and professionally in relation not just to patients, but to cooperate respectfully and professionally with employees, classmates and teachers (S_Lund/1, 2, 3, 7; S_Karolinska/6).

Addressing the perspective, expectations and needs of patients as an important part of the PCC is not often described as a learning outcome in both countries, with few exceptions in Sweden. Swedish students gain competencies in exploring the patient’s perspective as an integral part of the patient-doctor relationship (the same as in Portugal, P_NOVA/7) and a patient-centred consultation (S_ Gothenburg /2, 4). Further, following patient’s individual prerequisites, with the current state of knowledge, students become competent in customizing their patient care and defining treatment plan (S_Lund/6,11) and become aware of the importance of how power structures can affect communication and cooperation, competent to reflect on how the individual's background, values, experiences, and beliefs and non-verbal communication affect the response in relationships with others (S_Umea/4, 5).

Category *Ethics* appears to be firmly rooted in the medical curriculum in both countries to extend student’s knowledge and experience in ethical issues. For example, in Portugal, students learn about the value of the essential ethical principles that should frame medical attitudes and practices (P_Beira/2, P_Coimbra/3, P_Minho/5). Moreover, students get knowledge about ethical dilemmas and ethical decision making (P_Algarve/1). By having practical contact with issues of ethics (P_Minho/14) or by identifying the concrete situations that imply ethical evaluation and justifying attitudes consistent with the defined principles, students gain the ethical competence necessary to address ethical issues, make appropriate decisions regarding objective situations in medical practice (P_Coimbra/3) and demonstrate self-assessment ability of ethical behaviour (P_Minho/1). Similar to Portuguese colleagues, Swedish medical students also learn to identify the ethical issues associated with serious diseases, evaluate and reflect on ethical problems in the field (S_Karolinska/7, 8, S_Umea/ 10, 11, S_LiU/ 2, 3). Ethical standards (S_Lund/10), ethical codes (S_LiU/1) and ethical skills (S_Lund/8) are an integral part of Swedish education. For example, ethics in the Swedish medical curriculum is often taught through ethical principles that come to the fore in the patient-doctor relationship (S_ Gothenburg /2, S_Karolinska/3, 5). Students learn about the ethical and professional approaches in meeting with patients but also patient’s relatives and medical staff (S_ Gothenburg /2, S_Umea/ 9, S_Uppsala/2). Swedish medical curriculum emphasizes fundamental ethical and communicative guidelines for successful team collaboration (S_Umea/ 3, 4, 5, 6) and the ability to make medical decisions in collaboration with others (S_Umea/ 8). Unlike their colleagues in Sweden, Portuguese students deal with medical bioethics (P_NOVA/10, P_Minho/4, P_Beira/9) and bioethical reflection (P_FMLU/23) during their medical education either through an independent course or as an integral part of the learning objective of other courses in the medical curriculum. Bioethics and Religion and Bioethics in developing countries (P_NOVA/10), are unique examples of emphasizing patient’s religious values and beliefs as important learning outcomes. In both countries, the issue of autonomy as an important segment of the PCC is not often set as a learning objective for medical courses, except in a few cases where students get acquainted with the concept of autonomy as an ethical principle (Minho/ 7, S_LiU/4), the existence of two autonomies - patient autonomy and physician autonomy (P_FMLU/25) and limits of the autonomy of will (P_FMLU/16).

In both countries, medical students get knowledge and awareness of *human/person/patient's rights* (P_Coimbra/6; P_FMLU/1, P_NOVA/3, 4, S_Lund/7; S_ Gothenburg 5) and *medical law issues* (e.g. medicalization concept) (P_Coimbra/7, P_NOVA/4, S_Umea/10, 11). Hence, in Portugal, students learn about the concept of citizenship, social justice (P_NOVA/4) and social intervention phenomena (P_Minho/6). Similarly, Swedish students learn about the social conditions for medical activity in aspects of equal treatment, gender equality and sustainable development. According to learning objectives, Swedish students become competent in explaining what the right to health means based on the principles of accessibility, availability, acceptability, quality and non-discrimination (S_ Gothenburg /1) while at the same time students in Portugal get to know not just the rights and duties of patients, but also of their families, as well as doctors and other health professionals (P_Coimbra/3). While Swedish courses emphasise equal rights perspective and self-awareness (S_Lund/8), respect for the patient's right to information, influence and participation in a decision regarding, e.g. invasive intervention (S_Umea/8, S_Lund/10, 11), Portuguese education on patients' rights and duties relate more to the right to privacy and confidentiality and right to obtaining informed consent (P_NOVA/15). Unlike Swedish courses, learning about *informed consent* appears to be quite present in Portuguese courses according to learning objectives as is shown in Table 13. In the Portuguese curriculum, students explicitly learn about informed consent and refusal (P_NOVA/3) and associated phenomena, e.g. medical professional secrets, confidentiality and data protection (P_FMLU/ 25, P_Algarve/1).

Medical students in both countries get acquainted with the notion of the *human as a person* and learn about the holistic approach of patients (P_FMLU/ 1, 4; S_Uppsala/1) and the importance of having a holistic view of patient and patient's health in the coming profession (S_LiU/1,2; P_Minho/12, P_NOVA/9). It means that medical students learn about the perspective of the person in their specificity, in their complexity as a whole (in their individual, social and cultural functioning patterns) (P_Porto/10) and about the intrinsic and extrinsic influences that affect their health and disease (P_Minho/13). We identify that in most of the Portuguese medical faculties as part of compulsory curricula, students learn about the biopsychosocial model (P_Coimbra/4) as multidimensional integration of the person (physical, psychological, social and spiritual) (P_FMLU/1) and gain competence in identifying social, cultural, economic determinants of health in populations (P_Porto/2). For example, Portuguese students, developing a humanized attitude towards the individual and his family, learn about bio-psycho-social models (models of mental functioning as psychodynamic, cognitive-behavioural, systemic and bio-psycho-social models; neurobiological models) (P_NOVA/6), learn to identify the key determinants of health and disease in individuals, their family, socio-cultural matrices, occupational and social constraints (P_Minho/13) and the interaction between social (e.g. the influence of variables such as education level, type of work, gender, age and habitat) and biological factors on people's health status (P_Beira/4). Medical students across Sweden, like Portuguese colleagues, learn about a holistic approach, including all perspectives - biological, social and psychological. For easier invasive intervention, students learn to analyze and communicate risks and benefits to patients, to communicate this with relatives with the entire image, symptom image and personal background of the patient (S_Lund/10), to explain how living environments, habits, social contact and influences in the general environment and working life affect health (S_ Gothenburg/6) and reflect on how the individual's background, experiences and beliefs affect relationships with others (S_Umea/2, 4, 6). Swedish students gain competence in analyzing clinical situations from a cultural, business intelligence, age, gender and social psychological perspective (S_Umea/10, 11, S_Orebro/1).

Nevertheless, the *holistic approach* in medical studies includes competence in understanding the influence of cultures, subcultures and religion on health and disease (P_Minho/5, P_Beira/4, (S_Uppsala/1). For example, in Sweden, students learn about cultural understanding (S_Lund/8), care based on a cultural and social context that include aspects of diversity in terms of ethnicity, gender and sexual orientation in the interaction with patients, relatives and colleagues (S_Umea/10, 11, S_Uppsala/14) and transcultural meetings with patients from all over the world (S_ Gothenburg /3). In Portugal, for example, we encounter a course where students get acquainted with Indian and Chinese medicine (P_NOVA/2).

Concerning Respect for Patients’ Values, Preferences and Expressed Needs dimension, our results show that learning about the biopsychosocial model and integrated approach is part of compulsory curricula in most of the Portuguese and Swedish medical faculties. Mostly, as an integral part of the patient-doctor relationship, students from both countries learn the skills to explore the patient's perspective. In Swedish medical courses, the competence to treat patients with dignity and respect, equally and respectfully, regardless of background, age or gender, appears to be more dominant than in Portuguese. Compared to Portuguese colleagues, Swedish students gain competence in how to customize their patient care with the individual prerequisites of the patient respecting his or her integrity. In light of the holistic approach, as a curiosity, medical students in Portugal have the chance to get to know the basics of Indian and Chinese medicine, gaining competence in understanding the health and disease influence of cultures, subcultures and religion. Courses aimed at increasing students' knowledge and experience on ethical issues appear to be well enough grounded in the medical curriculum as a compulsory part of education in both countries. While students deal with medical bioethics and bioethical reflection in medical courses across Portugal, emphasizing the religious values and beliefs of patients, the emphasis in medical courses across Sweden is on professionalism and learning about the professional approach and ethical standards, codes and skills in the relationship with the patient, relatives of the patient and medical staff. Informed consent, which could also be considered as a category of Information, Education and Communication dimension, is well-positioned in the compulsory curriculum throughout Portugal.

6.3. Courses for providing the medical student with theoretical knowledge and/or practical skills in the dimension of *Coordination and Integration of Care*

Within the domain of Coordination and Integration of Care, five categories of the medical curriculum in Portugal and Sweden could be identified: 1) Coordination of care and care units' cooperation, 2) the role of different professionals, 3) teamwork and interprofessional collaboration, 4) interdisciplinarity/ multidisciplinary framework and 5) interpersonal relationships (*Table 14*).

Portuguese medical students learn about *Coordination of care and care unit's cooperation* through recognizing and describing the functions (scientific, technical, psychological and social) related to the various Health Centre Units (P_Minho/2, P_NOVA/8). In contrast, Swedish medical curriculums put more emphasis on team collaboration (S_Umea/2), cooperation in a respectful manner with employees (S_LiU/2) and how to develop the ability to make medical decisions in collaboration with other professionals based on current ethical and legal guidelines led by the healthcare team (S_Umea/8, 9). In Sweden, students learn about the transition of the patient by discussing the management of patients with symptoms without a safe medical diagnosis (S_Umea/10, 11).

Table 14. Portuguese and Swedish medical courses: Dimension Coordination and Integration of Care

Dimension: Coordination and Integration of Care		
Category	Portuguese courses	Swedish courses
Coordination of care and care unit's cooperation	P_Minho/2 P_NOVA/8	S_Karolinska/7, 8 S_LiU/2 S_Umea/2, 8, 9, 10, 11
The role of different professionals	P_Beira/1, 5 P_Coimbra/6 P_Minho/12 P_FMLU/1, 25 P_NOVA/3, 7	S_Lund/5, 12 (S_Orebro/1, 3, 4, 6 S_Umea/1, 2, 3, 4, 6, 9 S_Uppsala/10
Teamwork and interprofessional collaboration	P_Beira/1 P_Coimbra/1 P_Minho/2 P_FMLU/5, 9 P_NOVA/1 P_Porto/6, 7	S_ Gothenburg /2 S_Karolinska/5, 9, 10 S_LiU/5 S_Lund/10, 11 S_Orebro/1, 2, 4, 6, 7, 8, 11 S_Umea/1, 2, 3, 4, 5, 6 S_Uppsala/3, 7, 10
Interdisciplinarity/ multidisciplinary framework	P_Beira/2 P_NOVA/5, 19	S_Karolinska/9, 10 S_Orebro/3 S_Lund/3, S_Umea/9
Interpersonal relationships	P_Coimbra/6 P_FMLU/1, 15	

Both student groups gain knowledge of the *roles of various professions* (S_Umea/1, 2, 3, 6; P_Coimbra/6; S_Orebro/1, 2, 4, 6, 7, 8, 11) as well as *profession roles in various healthcare teams* (S_Umea/9) and health institutions (P_Beira/1, 5) that are involved in the care of the patient and different professionals' mutual roles and different communication cultures (S_Lund/5). For example, Portuguese students learn about various roles of the physician, current and future, as a clinician (primary care, secondary, tertiary), educator, researcher and manager, and about knowledge, know-how and know-how to be, with the specification of the main areas of clinical intervention (P_FMLU/1). Portuguese students explicitly learn about the family doctor and his position in the health system (P_Minho/12), the role of different health professionals in primary health care (P_NOVA/7) as well as the physician's social role (P_NOVA/3). Similarly, in both countries, students learn to understand and respect the other professions' responsibilities and competence areas and independence in their professional role in interaction with other professions (S_Uppsala/10) and about the medical responsibility and the rights and duties of patients and healthcare professionals (P_FMLU/25).

Students learn about the importance of *teamwork* in light of *intersectoral cooperation collaboration* in health care (S_ Gothenburg /2; P_FMLU/5, 9; P_Coimbra/1) and multidisciplinary teams (P_Beira/1). The development of communication and teamwork skills is also central (S_Uppsala/10) so the emphasis is on communication with colleagues of all categories concerning their specific area of responsibility and competence (S_Lund/10; S_LiU/5; P_Beira/1) and the significance of non-verbal communication in situations of cooperation (S_Karolinska/5). For example, in Sweden students learn about communicative guidelines for successful team collaboration (S_Umea/6), to discuss and reflect on how the individual's background, values, experiences, and beliefs affect the response in relationships with others and to be aware of the importance of how power structures and hierarchies of groups can affect team communication and cooperation (S_Umea/1, 2, 3, 4, 5, 9) but also how the gender is important in medical practice (S_Orebro/4, S_Uppsala/3, S_Umea/9). In both countries, students learn about teamwork and leadership (P_Porto/6) and gain the ability to function professionally as a leader and co-worker in daily medical work (S_Uppsala/7) while being able to work independently within a team (S_Lund/11).

Students learn about *interdisciplinarity* (P_Beira/2, S_Karolinska/9, 10) and multidisciplinary teams (P_NOVA/19) highlighting the connections between different medical disciplines (S_Lund/3) providing students with competencies to make medical decisions in collaboration with other professionals (S_Umea/9) but also regarding the transition of patient care (P_NOVA/5). *The interpersonal relations* category is not frequently present as an explicitly set learning objective in medical curriculums except in a few Portuguese courses (P_Coimbra/6; P_FMLU/1, 15).

In both countries, almost equally students learn about Coordination and Integration of Care dimension, and this is mostly within the compulsory curriculum. The most dominant category in this dimension is teamwork, inter-professional collaboration and the role of different professionals since we have found that medical students learn about this in all medical faculties in Portugal and Sweden. There appear to be differences between countries in the teaching approach to the coordination of care. While courses in Portugal focus more on the organizational-functional perspective of different health units, the Swedish medical curriculum focuses on human cooperation within a multidisciplinary team that should be professional and respectful, with the ability to make medical decisions in collaboration with other professionals based on current ethical and legal guidelines. In a few cases, Swedish courses emphasize the leadership aspects of multidisciplinary teamwork and leadership that prepare students to be able to work professionally within a team as a leader and co-worker in daily medical work while being able to work independently. Interdisciplinarity appears to be part of the course teaching program in both countries, but its presence is far less in comparison with other categories.

6.4. Courses for providing the medical student with theoretical knowledge and/or practical skills in the dimension of *Emotional Support and Alleviation of Fear and Anxiety*

Dimension Emotional Support tends to be set as a learning objective of many courses within medical curriculums in both countries (P_Coimbra/4, P_Minho/14). All courses that deal with dimension Emotional Support and Alleviation of Fear and Anxiety, we put in four categories as follows: 1) psychosocial aspects in the medical approach, 2) empathy, 3) understanding the emotional reactions to the disease and 4) mourning (*Table 15*).

In both countries, we identify that medical curriculums teach medical students to integrate psychosocial aspects in the medical approach through the form of compulsory courses, such as Medical/Clinical Psychology (P_Minho/3; S_Uppsala/8). For example, students learn about psychological aspects of medical practice (P_Porto/11; S_Umea/ 12), how to apply basic psychological concepts in the patient-physician relationship (S_Umea/7), what the psychological mechanisms that affect the patient-doctor relationship are (S_Karolinska/4, S_Lund/4) and what uncontrollable effects on the doctor-patient relationship are (P_Minho/3).

Table 15. Portuguese and Swedish medical courses: Dimension Emotional Support and Alleviation of Fear and Anxiety

Dimension: Emotional Support and Alleviation of Fear and Anxiety		
Category	Portuguese courses	Swedish courses
Psychosocial aspects of the medical approach	P_Minho/3 P_Porto/11	S_Karolinska/4, 6 S_Lund/4 S_Orebro/5 S_Umea/7, 12 S_Uppsala/8
Empathy	P_Coimbra/4 P_Minho/14 P_Porto/10, 11, 18, 19	S_LiU/2 S_Lund/7, 8, 9, 12 S_Umea/8, 9, 12 S_Uppsala/5
Understanding the emotional reactions to the disease	P_Coimbra/4 P_Minho/7 P_Porto/10, 19	S_Orebro/5
Mourning	P_FMLU/24	

Swedish medical students gain competence in an empathetic and professional attitude in meeting with the patient, relatives and medical staff (S_Umea/9, 12). Swedish students learn that the doctor's ability to convey empathy is closely linked with the doctor's conversational skills within active listening to clarify the patient's part during the consultation (S_Uppsala/5). Similarly, in Portugal, students learn about empathic capacity by "knowing how to listen" (P_Porto/11) and being attentive and available (P_Porto/10). For example, within an optional course, Portuguese students learn how to deal with emotions; detect and explore the patient's emotions; to maintain a professional posture in the presence of strong emotions; empathic techniques of response to emotions (reflection, validation, support, respect and alliance); to reflect on personal (emotional) responses to patients; to develop skills for dealing with emotions, such as the ability to identify and explore emotions, empathic response techniques to emotions and reflection on personal responses to emotions (P_Porto/19). Students learn not only to understand and respond to the patient's feelings and emotional reactions to the disease, and emotional regulation (P_Coimbra/4, P_Porto/19) but also how to recognize burnout (risk factors for burnout, how to recognize burnout, effective strategies for coping with burnout) (P_Minho/7). Within a compulsory course, medical students spend for at least twenty hours with patient. The idea of this course is to bring the future doctor closer to the patients, allowing them to experience the difficulties and feelings that patients feel (P_Porto/1).

Curiously, there is the existence of a course *Grief in Medicine*. Students get the option to learn to identify the main stages of the grieving process: differentiate normal, complicated, psychopathological mourning; identify complicated grief risk factors; know prevention strategies and individual, family and group intervention, and know how to intervene in disaster situations (P_FMLU/24).

Various aspects of the Emotional Support dimension are integrated into the teaching programs of several programs in both countries, slightly more in favour of Sweden, especially when learning about psychosocial aspects of the medical approach and empathy. Mostly, students gain competencies in this field through compulsory courses such as Medical/Clinical Psychology and Professional Development. Specificity is a Grief in Medicine course in the Portuguese Medical Curriculum providing students with expertise in the grieving process. However, this course is optional so that medical students can choose, among others, to acquire competence in one segment of emotional support.

6.5. Courses for providing the medical student with theoretical knowledge and/or practical skills in the dimension of Physical Comfort

In the domain of Physical Comfort, we identify the following two categories: 1) pain management and 2) work settings (*Table 16*). Unlike courses in Swedish medical curriculums, we identify several courses in Portugal where learning about physical comfort is defined as a learning objective.

Table 16. Portuguese and Swedish medical courses: Dimension Physical Comfort

Dimension: Physical Comfort		
Category	Portuguese courses	Swedish courses
Pain management	P_Beira/2 P_FMLU/8,12,14, 27 P_NOVA/18	
Work settings	P_FMLU/26	

Portuguese students through compulsory education gain competencies on how to evaluate different approaches to pain and suffering (P_Beira/2), on psychological aspects of pain (P_FMLU/8), chronic

(P_FMLU/12) and pediatric pain in light of a multidisciplinary approach (P_FMLU/14) and about the problem of end-of-life suffering and symptomatic control through the optional course (P_FMLU/27). Comprehensive learning about pain as a complex phenomenon is possible through one faculty in Portugal within the course named "Pain". Learning objectives of this optional course are set as following: identify patients with pain, understand the patient with pain and its implications; try to identify the etiology of the painful condition; apply analgesia methods that allow effective pain control; evaluate the effectiveness of an instituted analgesic treatment and to understand pain as a multidimensional and complex phenomenon (P_NOVA/18). Learning about work settings and limitation of resources for intervention and physical comfort provision, we identified to be a learning objective in only one optional course (P_FMLU/26).

As part of the Physical Comfort Dimension, pain management seems to be explicitly present in Portuguese medical curricula as a learning objective. In contrast, in Swedish medical courses, we did not encounter any course that deals especially with this dimension of Physical Comfort, but we did in one case in Portugal. Nevertheless, the physical comfort of the patient appears as an integral part of clinically related courses in both countries. However, in our research, we focused only on those courses that explicitly state physical comfort as a learning objective or part of the course program. We could assume that pain management is an integral part of the group of clinical courses.

6.6. Courses for providing the medical student with theoretical knowledge and/or practical skills in the dimension of Involvement of Family and Friends

Given family and friend involvement, Swedish medical curricula focus on the student's ability to collaborate, communicate and create a trustful relationship with patients, their relatives and loved ones based on knowledge, honesty and empathy (S_Lund/8, 9, 12) and how to approach them professionally (S_Karolinska/7, 8) (*Table 17*).

Table 17. Portuguese and Swedish medical courses: Dimension Involvement of Family and Friends

Dimension: Involvement of Family and Friends		
Category	Portuguese courses	Swedish courses
Family as a system	P_Coimbra/5 P_Minho/5 P_FMLU/7, 27 P_NOVA/3, 9, 19 P_Porto/3, 7, 9, 10, 13	S_Karolinska/7, 8 S_Lund/8, 9, 12 S_Orebro/6, 7, 9, 10, 11

In Portugal, learning outcomes are more focused on getting students to know the importance of family in health and disease (P_Minho/5), so that they learn about family as context (P_Porto/3, 10; P_FMLU/7) and how various factors affect the patient's family and other people who live with him (P_Porto/13). For example, Portuguese students learn to perform the family assessment by identifying family type, patterns of intra and extra-family interaction, the pattern of use of services by family members and establishing a family action plan (P_Coimbra/5; P_NOVA/ 9). Learning about doctor's relationship with the patient's family (P_NOVA/3), students gain competence in making decisions relating to patients and their families (P_Porto/7), competencies on communication skills about disease progression, adherence to non-pharmacological measures, pharmacological therapy (adherence, effects, adverse effects, dose titration) in the transition of care (P_NOVA/19), communication with end-of-life patients and their families (P_FMLU/27) and their psychological support in stressful situations (P_Porto/ 9).

The involvement of family and friends in different aspects, especially as a support system for the patient care process, appears to be an integral part of the medical curriculum in both countries, but the number of these courses is less present in both countries compared to courses from other dimensions. The main differences between countries that we have identified relate to competence. While Portuguese curricula, instead of underlining knowledge skills by teaching students the theoretical aspect of family importance in patient care, Swedish curricula enhance the student's professional competence in how to approach patients' relatives professionally.

6.7. Courses for providing the medical student with theoretical knowledge and/or practical skills in the dimension of Transition and continuity

In both countries, the transition and continuity dimension is less explicitly stated as a learning objective for medical curriculum courses. The continued care category and the transition are slightly more present in Portuguese than in Swedish curricula (*Table 18*).

Table 18. Portuguese and Swedish medical courses: Dimension Transition and Continuity

Dimension: Transition and continuity		
Category	Portuguese courses	Swedish courses
Continued care and transition	P_Coimbra/5, 7 P_NOVA/7 P_NOVA/19	S_Lund/13

Within mandatory curricula, Portuguese students get to know the concept of continuity of care and transition in family medicine (P_NOVA/7) and learn to predict the need for continued care by performing family assessment and establishing family action plan (P_Coimbra/5). Further, students gain knowledge about different health care sectors, including alternative and complementary options (P_Coimbra/7). For example, an optional course, Chronic Disease Management in Hospital and Transitional Care (P_NOVA/19) focuses on the proactive management of chronic illness in the hospital environment and on the transition care between hospitalization and Primary Health Care. Within module Transition care between the hospital and the outpatient clinic, students train in effective ways of communication (with primary health professionals), communication with patients, family members/caregivers (on illness development, commitment to non-pharmacological interventions, pharmacological treatment, implementation, consequences, adverse effects, dosage titration) experience and understand the role of each health professional in the multidisciplinary team (the role of nursing in this type of structure; experience and collaborate in outpatient care even in a hospital, for various types of chronic disease)

(P_NOVA/19). In Sweden, students learn about the management of multi-diseased patients. For example, within the course The Individual and the Community, students learn about physician's dual role as a doctor of individuals and society, considering the age and other conditions of the individual and given initiating, continuing or discontinuing pharmacological treatment, also taking polypharmacy and interactions into account (S_Lund/13).

Our results have shown that the number of courses dealing with aspects of the transition and continuity dimension is relatively low compared to the number of courses in the other seven dimensions. The comparison between countries shows that the category of continuing care and the transition is slightly more present in Portuguese curricula than in Swedish; however, it is still low.

6.8. Courses for providing the medical student with theoretical knowledge and/or practical skills in the dimension of Access to Care

Compared to the other dimensions, Access to Care tends to be slightly less present in medical education in favour of Portugal (*Table 19*).

Table 19. Portuguese and Swedish medical courses: Dimension Access to Care

Dimension: Access to Care		
Category	Portuguese courses	Swedish courses
Access to Care	P_FMLU/2, 6, 25 P_Porto/2	S_ Gothenburg /1

Swedish students gain competencies on the principles of accessibility, availability, acceptability in light of the right to health means through the compulsory course (S_ Gothenburg /1). In Portugal, students have a chance to learn about access to health information through optional courses (P_FMLU/25). However, Portuguese students learn about access to care in light of equity (P_FMLU/2,6) and inequality (P_Porto/2), such as health care in vulnerable populations, as part of compulsory education.

Although learning about access to care makes up most of the compulsory curricula in both countries, the number of courses specifically set as a learning goal is still small relative to results for other dimensions. Compared to the other seven dimensions, our findings on access to care indicate that this dimension is less present in the medical curriculum than in other dimensions, marginally in favour of Portugal.

6.9. Courses for providing the medical student with theoretical knowledge and/or practical skills in the dimension of Patient-centred Care (PCC)

Analyzing medical curriculums in both nations, we did not find a specific course called patient-centered care. The phenomenon of PCC is an integral part of certain other courses of the medical curriculum, either as a learning objective or as part of the program content of the courses (*Table 20*).

Table 20. Portuguese and Swedish medical courses: Patient-centred Care (PCC) concept

Patient-centred Care concept		
Category	Portuguese courses	Swedish courses
PCC Concept	P_Coimbra/4, 5 P_Minho/7 P_FMLU/15 P_NOVA/7, 8, 13 P_Porto/3, 11, 19	S_ Gothenburg /2, 3, 5 S_LiU/6 S_Lund/5 S_Umea/5, 7, 8 S_Uppsala/3

Students in Portugal learn about applying person-centred care strategies as an approach, and it is closely linked with Identifying the expectations of people who consult the doctor (P_NOVA/7, 8, 13). For example, they gain knowledge about the patient-centred approach within General and Family medicine (P_NOVA/8) as part of compulsory education. Portuguese students learn what it means to take a person-centred approach specifically: 1) Make a person-centred medical history and conduct a proper clinical examination, 2)- Incorporate psychosocial, cultural, and family data into the patient follow-up plan, 3) Communicate effectively with patients, 4) Identify and manage the most common community health problems, 5) Use a probabilistic estimate in diagnostic reasoning, 6) Use time as a diagnostic resource, 7) Perform a targeted objective test, 8) Recognize the most commonly used auxiliary diagnostic tests and know how to interpret them, 9) Coordinate health care, 10) Identify existing community health resources, 11) Promote the articulation of care provided by different professionals, 12) Make therapeutic decisions that take into account the limitations of clinical data and cost-effectiveness, 13) Correctly prescribe the most commonly used drugs and 14) Identify health risks in certain patients (P_NOVA/8). However, students learn that patient assessment is closely linked to PCC (P_Porto/3, 11, 19). Likewise, in Sweden, students learn to establish and apply a patient-oriented approach and act professionally politely and thoughtfully when meeting patients in different care situations, not just patients but relatives, staff, fellow students and teachers (S_Umea/7, S_Uppsala/3, S_Lund/5). Swedish students study to exercise and deliver a patient-centred approach that is characterized by trust, empathy and respect for the patient's right to information, patient’s influence and participation in the decision-making process (S_Umea/8) thus, basic concepts regarding patient-centred working methods and different mutual roles and different communication culture are covered (S_Lund/5).

Students are taught the phenomena of PCC through the patient-focused interview in both countries. In Portugal, a patient-focused interview is part of the patient-centred clinical method in family medicine consultation that includes knowledge on interview techniques, clinical interview and types of interpersonal communication (P_FMLU/15). For instance, Portuguese students learn to conduct an interview adopting the principles of the biopsychosocial model as an essential part of patient-centred medicine (P_Coimbra/4). Learning about the patient-centred interview in Portuguese medical education is part of optional education and includes knowledge on models and strategic components; verbal and nonverbal attention showing behaviour; obtaining patient perspective, skills and strategies; specific communication techniques; dealing with emotions and communicating bad news (defining bad news, modelling and strategy rationale) and promotion and consolidation of the acquisition of basic patient-focused interview skills (P_Porto/11,19). Swedish students learn about the patient-centred consultation as a process (S_Umea/5), how basic concepts in a patient-centred consultation ~~is~~ are closely linked to the patient's perspective (S_ Gothenburg /2) and the ethical motives behind this approach and a patient-focused consultation (S_ Gothenburg /3).

We understand that Portuguese students have the option of learning about PCC in the light of patient-centred innovation in the medical sector influenced by the 4th Industrial Revolution. The course prepares students for changes in the fields of cybermedicine, artificial intelligence, robotics and medical devices that affect the provision of healthcare services (P_NOVA/13).

Medical curriculums recognize the importance not only of gaining knowledge of PCC but also of developing competencies and skills relevant to PCC phenomena. Swedish medical curricula train students to develop competence and skills to independently carry out a patient-centred consultation, including interaction, respect and responsiveness, and identify different strategies in the consultation (S_ Gothenburg /5), to integrate conversation skills with medical knowledge/skills in the patient-centred care (S_LiU/6). In Portugal, students gain communication skills particularly in difficult situations within the PCC model (e.g. identifying the different types of difficult situations, active listening) (P_Minho/7) as well as skills and attitudes necessary for the exercise of person-centred care in family medicine (P_Coimbra/5).

Students learn about the PCC phenomenon in a fairly similar way in both countries, either as a patient experience approach or as part of the interview process. In the majority of cases, learning about the PCC phenomenon in the context of carrying out a patient-centred consultation, tends to be a part of compulsory education. However, in the case of Portuguese faculties, the learning of patient-focused interview skills is part of an optional course.

6.10. Courses for providing the medical student with theoretical knowledge and/or practical skills in the field of *Health Policy*

In our analysis of medical curricula in both countries, we identify courses as separate categories that provide students with information and skills that are essential for developing a prerequisite for PCC practice or for performing PCC dimensions. These courses which we follow in the aspect of health policy consist of four inclusive categories: 1) Health leadership, management and administration, 2) Health economics and management, 3) Health care quality and 4) Health systems and organization (*Table 21*).

Table 21. Portuguese and Swedish medical courses: Health Policy domain

Health Policy domain		
Category	Portuguese courses	Swedish courses
Health Leadership, management and administration	P_Beira/10 P_Minho/2, 7, 10, 12, 14 P_FMLU/4, 26 P_NOVA/4, 12, 13 P_Porto/5, 6	S_Karolinska/1, 11 S_LiU/6 S_Lund/1, 8 S_Orebro/7, 8, 11 S_Umea/8, 9, 10, 12 S_Uppsala/5, 7, 12
Health Economics and Management	P_Coimbra/8 P_Minho/10, 13 P_FMLU/21 P_NOVA/3, 4 P_Porto/16	S_ Gothenburg/6 S_LiU/4 S_Orebro/9 S_Umea/7, 11
Health Care quality	P_NOVA/4	S_LiU/5 S_Orebro/11 S_Uppsala/12
Health Systems and Organization	P_Beira/1, 5 P_Minho/8, 10 P_FMLU/2, 6, 11, 15, 25 P_NOVA/1, 3, 4, 7, 9, P_Porto/9, 17	S_Karolinska/11 S_Lund/7, 8 S_Umea/11, 12 S_Uppsala/1

Our analysis shows that health leadership and management are part of medical education in both countries. In Portugal, we notice a course named *Health leadership and management* that is taught within the compulsory curriculum (P_Beira/10). In the same token, the Portuguese student learns to recognize and describe the functions (scientific, technical, psychological and social) related to the various health centre units and to identify the difficulties associated with performance (P_Minho/2). Additionally, in Portugal students learn within a compulsory education about the concept of satisfaction of users: why it is important, a perspective of the physician, a perspective of the user, dealing with error, complaints (P_Minho/7), discuss the issues of health administration and management in light of economics ethics, quality (P_Minho/12, 14) and entrepreneurship in medical industry 4.0 (P_NOVA/13). Further, an optional Portuguese course named *Health Policy and Management* aims to introduce students to the minimum theoretical knowledge on health program managers: what it means to be a manager in the health area, limitation of resources for intervention, health systems response, health strategies, the value of technologies, consumers, providers and financiers and what the role of the doctor in this regard is (P_FMLU/26). Within an optional course also, students learn about value-based health care (VBHC), a concept that includes the basic knowledge about health expenditure growth, implications of varying health outcomes, notions of efficiency and effectiveness, results from what matters to patients, leadership, culture and change management, and to lead within health organizations the transformation towards the implementation (P_NOVA/12). Students in Portugal learn about teamwork and health leadership in light of non-technical skills in critical event management (P_Porto/6), communication skills application (P_Minho/10) and group dynamics, conflict management, organizational and relational ethics (P_FMLU/4).

Swedish medical students through practical exercises gain competencies on leadership in the hospital environment (S_Lund/8), the role of leadership and organization (S_Karolinska/11, S_LiU/6), leadership teamwork (S_Uppsala/5) and group dynamics (S_Umea/12). For example, as a learning outcome, it defined student's ability to lead the healthcare team (S_Umea/10) and to function professionally as a leader and co-worker in daily medical work, knowledge about how health care is managed and organized in Sweden and how to conduct quality and business development in an effective way (S_Uppsala/12). Also, Swedish students learn to understand how good leadership follows the group's development, have knowledge of leadership theory and skills in conflict management, develop the ability to communicate with other professionals (S_Umea/8) and how the participants 'and leaders' approach and dialogue/conversational strategies can affect cooperation and work for management/leadership in a group (S_Karolinska/1, S_Lund/1). Swedish students learn to understand the importance of how hierarchies of groups and gender can affect communications and collaboration leadership in conflict management (S_Umea/8, 9) and to identify functional leadership behaviours, describe behaviour modification models, learn psychology-based methods for behaviour change, apply to learn psychology-based methods of feedback, apply to learn psychology-based methods to lead groups (S_Uppsala/7). In Sweden, for example, leadership and teamwork are trained together with communication skills (S_Orebro/7, 8).

Portuguese medical students gain knowledge on the basics of health administration (P_NOVA/4, P_Minho/12, 14) and we identify one specific optional course called Hospital administration (P_Porto/5). A similar course we could not identify in medical curriculums across Sweden.

In both countries, knowledge of the fundamental concept of health economics and management has its position in medical curriculums. Analysis of the Portuguese medical curriculum reveals, mainly within optional courses, that students learn about the health perspective as an economic good and as an investment (P_FMLU/21) but also learn about the economic aspect of health from the perspective of medical professionalism in today's society and the doctor's new role (P_Porto/16). Besides, students learn about the fundamentals of health economics and gain knowledge on how to apply some tools available for conducting economic analyses in health including benchmarking (P_Minho/10, 13) and how to manage health services (P_NOVA/3). For example, within the optional course *Health Economics and Management*, Portuguese medical students have an opportunity to learn about the quality and quantity of health care provided in a social and cultural framework of national health systems, the role of states, management mechanisms of primary and hospital care (understanding the framework of the various health systems: the role of the state and other assets in regulating, financing and providing care - health assessment methodologies and techniques in the models of management of primary and hospital care) (P_Coimbra/8). Swedish medical students learn about management of health care embracing basic theoretical knowledge on health economics and priorities, principles for information management in health care (S_LiU/4), the principles of cost-effectiveness analysis management (S_Umea/7, economics and organization for healthcare services (S_ Gothenburg/6) and economic impact of clinical management (S_Umea/11).

Health care quality is part of the curriculum of future medical doctors. Students in Portugal gain knowledge on the quality of health service (P_NOVA/4). In contrast, in Sweden, students learn about the difference between a few different methods for quality, different tools for quality and business development (S_Uppsala/12), how health care quality contributes to development and how it can be used to contribute to equal care (S_LiU/5).

We identify in the medical curriculums of both countries that students learn about health systems and organizations. In general, students gain theoretical knowledge about health systems (definition and evolution of health systems, the applicability of health programs) (P_Minho/8), and specifically about the functioning and organization of the health system in Portugal, as for example, about health policies, National Health Plans, existing health structures and human resources (P_Beira/1, 5). The student becomes able to identify in the Portuguese National Health Service, and in the community and social care institutions, the stakeholders, their specific competencies, different levels of action and functions (P_NOVA/1, 3, 4, 9, P_Porto/9, 17) and gain knowledge of the organization of Primary Health Care centres in Portugal, in its different aspects (P_NOVA/7, P_FMLU/11, 15). However, students learn not just about the health system in Portugal but also across Europe (P_FMLU/2, 6, 25) and to recognize assessment and comparison tools of different Health Systems (P_Minho/10). Likewise, Swedish medical students gain theoretical knowledge about the role of health systems, health policy (S_Lund/7) and describe the general organization of the Swedish health care system (S_Karolinska/11, S_Lund/8, S_Umea/11, 12, S_Uppsala/1).

The additional theme of PCC in Health Policy plays a visible role in education programs in both countries. Medical curricula in both countries recognize the importance of educating future doctors in the field of health leadership and management influenced by the NPM and NPS trends (see Section 4.1.). While the preparation of Portuguese medical students for leadership and management skills is partly defined in optional courses, it is integrated into compulsory education in Sweden. In the same way, courses that teach students the economic aspects of health and the organization of health systems are being held again for the benefit of Sweden. Compared to the leadership and management category, the category of quality of health care demonstrates that little attention is paid to it in both countries' education programs. In conclusion, dimensions such as Information, Education and Communication; Respect for Patients’ Values, Preferences and Expressed Needs dimensions; and Coordination and Integration of Care, together with courses related to Health Policy theme, are well rooted in the education of future doctors in both countries, unlike the other five of Picker’s dimensions.

6.11. SUMMARY

Our systematic analysis shows several important results. Firstly, our study reveals that no course exists that comprehensively teaches students about PCC phenomena. We found that learning about the phenomena is rather fragmented, meaning that various courses teach students about PCC dimension and attributes. Secondly, while those courses form an integral part of compulsory curriculums, in the Portuguese case a certain number of courses are defined as optional. Thirdly, while in Portugal, medical courses are oriented towards knowledge competence, Swedish courses in the focus of their teaching program put an emphasis on skills competence. Fourthly, majority of courses in both countries dealt mainly with three dimensions and their different attributes: Information, education and communication; Respect for Patients' Values, Preferences and Expressed Needs Dimensions; and Coordination and Integration of Care. The dimensions of Emotional Support, Physical Comfort, Family and Friend Involvement, Transition and Continuity, and Access to Care compared to others, have a smaller part in both countries' medical curricula. Bearing in mind the existing difference in education, we aim to explore medical students' attitudes about PCC and self-perceived efficacy in the ability to practice patient-centric behaviour in Portugal and Sweden (Chapter 7), and what Portuguese medical students perceive as barriers in learning and practising PCC (Chapter 8).

Chapter 7

QUANTITATIVE DATA ANALYSIS:

FINDINGS FROM THE MEDICAL STUDENTS RESPONSES ON PPOS AND SEPCQ-27

INTRODUCTION

In this chapter, we present the findings from the medical student responses on the PPOS (Section 7.1.) and SEPCQ-27 questionnaire (Section 7.2.). The first step in the analysis is to identify what the general beliefs and attitudes of medical students about PCC phenomena are. We start the analysis with a description of PPOS Caring and Sharing subscales (Section 7.1.1.) followed with PPOS Sharing and Caring subscales analysis for total, Portuguese and Swedish sample (Section 7.1.2.). Further, we examine the intercorrelation between the PPOS Sharing and Caring subscale (7.1.3.) and effect of age (7.1.4.), gender (7.1.5.), parents' education (7.1.6.) and work experience factor (7.1.7.). Similarly, in analysis of SEPCQ-27, we started with the description (Section 7.2.1.) and scores on SEPCQ-27 and three factors for total, Portuguese and Swedish sample (Section 7.2.2.). Analysis of intercorrelation among the SEPCQ-27 factors (Section 7.2.3.) is followed by results concerning the effect of gender (Section 7.2.4.), age (Section 7.2.5.), parent's education (Section 7.2.6.) and previous work experience (Section 7.2.7.). After comprehensive analysis for each of the instruments and sample, we look for existing correlation between PPOS subscales and the SEPCQ-27 factors, meaning correlation between students' beliefs and attitudes and self-perceived competencies concerning PCC (Section 7.3.).

7.1. PATIENT-PRACTITIONER ORIENTATION SCALE (PPOS)

7.1.1. Description of PPOS Caring and Sharing subscales

The first step in our analysis was directed to identify what the general beliefs and attitudes of medical students about PCC phenomena are. Medical students were asked to identify which of the given statements are best to reflect their beliefs and attitudes about patient-practitioner relations as one of the main attributes of PCC. A number of 18 indicators were offered within the Caring and Sharing scale. Caring scale refers to the extent that respondents believe that: "a) caring about emotions and good interpersonal relations is a key aspect of the medical encounter and b) that practitioners should care about the patient as a whole person rather than as a medical condition". The Caring scale encompasses the following 9 items under number: 2, 3, 6, 7, 11, 13, 14, 16 and 17, and it is considered as "the social/emotional oriented realm" (Krupat et al., 1999, p. 354). Sharing scale as "the task-oriented realm" reflects the extent to "which the respondent believes that a) practitioners and patients should share power and control on a relatively equal basis, and b) that practitioners should share as much information with their patients as possible" (Krupat et al., 1999, p. 354). The sharing scale encompasses the following 9 items under number:

1, 4, 5, 8, 9, 10, 12, 15, and 18. Each item was scored in a range from 1 for “Strongly Disagree” to a maximum score of 6 for “Strongly Agree”. According to scoring instructions, three questions (Q9, Q13, Q17) have been reversed. Following this item’s coding, the maximum possible score for each of the subscales was 54 while for total PPOS the maximum possible score was 108. It means that three (3) is a mean score for each item and subscale. Summing the answers offers a spectrum in which higher scores represent a belief that the provider is patient-centred, and lower scores represent a belief that the provider is doctor-centred or disease-centred.

Descriptive statistical analysis was used to generalize the results to determine the percentages of responses to all items in the PPOS and SEPCQ-27 questionnaires, respectively. In the following summary of our findings, we are going to operate with the term “majority”, meaning the higher number of respondents (above 50%) answered either agree or disagree with the statement. Also, we use the terms disagree/agree once when total students’ answers (encompasses strongly, moderately, slightly disagree/agree) were more than 2/3 (over 66%) of the total student’s sample. The statistical significance of relationships among selected variables was determined using the t-test. The level of significance was set at 0.05.

7.1.1.1. Student responses to the PPOS Caring subscale

The percentage of students' total sample answered on each of the items within the subscale that explain caring attitude is presented in *Table 22*.

Table 22. Student responses (%) to the PPOS Caring items

Item No.	% of Student					
	Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
2.	21.5	**36.8**	14.8	20.1	5.7	1.0
3.	15.8	**29.7**	26.8	14.8	9.6	3.3
6.	**60.3**	29.7	7.2	1.4	1.4	0.0
7.	**71.3**	22.0	3.8	1.9	1.0	0.0
11.	**43.1**	35.4	12.0	5.7	2.9	1.0
13.	1.9	3.8	7.2	13.4	34.4	**39.2**
14.	17.7	**35.4**	19.6	15.3	11.0	1.0
16.	**62.7**	25.4	5.3	1.9	3.3	1.4
17.	3.8	8.1	13.9	**36.4**	25.4	12.4

Our results show that the majority of medical students’ answers were oriented towards a caring attitude in PCC. For several questions, most of the students’ answers were in the range of strongly to moderately disagreeing with the statements. Almost all students disagree with the statement that it is not important how a patient is treated if a doctor is successful in clinical (diagnosis and treatment) aspect (93.3%); that doctor asking a patient about his background interferes too much with the patient’s privacy (90%) and that for the doctor to treat the patient, it is not important to know patient’s background and culture. In the same token, most of the students, almost 3/4, slightly, moderately and strongly agree that in the doctor's treatment of the patient, humour is a major ingredient.

7.1.1.2. Student responses to the PPOS Sharing subscale

In the following *Table 23*, we present the student response rate on Sharing subscale items for the total sample.

Table 23. Student responses (%) to the PPOS Sharing items

Item No.	% of Student					
	Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1.	8.6	**36.8**	19.1	24.9	10.0	0.5
4.	**43.1**	36.4	6.7	10.0	2.4	1.4
5.	16.7	**29.2**	21.5	20.6	10.0	1.9
8.	13.9	24.9	**28.7**	22.0	8.6	1.9
9.	5.3	11.5	19.1	11.0	**31.1**	22.0
10.	1.0	17.2	17.7	**35.9**	24.4	3.8
12.	23.0	**33.0**	20.1	13.4	8.1	2.4
15.	20.6	**25.8**	21.5	21.5	8.6	1.9
18.	2.9	3.8	20.1	**31.6**	25.8	15.8

At very first glance, the distribution of the answers on the Sharing subscale seems to be more diverse than on the Caring subscale meaning that medical students differ in their answers regarding the Sharing attitude. Most of the students disagree that for the benefit of the patient, it is best not to provide a complete explanation of his medical condition (86.2%), while most of them disagree with the assertion that the patient's disagreement with the doctor is an indication that the doctor is losing the patient's respect and trust (76.1%). Furthermore, the majority of students are not in compliance with the statement that the doctor can determine what to speak about during a consultation (64.5%). It is significant that the majority of medical students agreed on a statement seeking medical information on their own confuses patients (64.1%) and that patients should be regarded as equal partners with the doctor in power and status (67.5%).

7.1.2. PPOS Sharing and Caring subscales for total, Portuguese and Swedish sample

Our analysis initiated with a descriptive analysis. As it is indicated in the scoring instructions for this questionnaire, one Total PPOS means the score was calculated for the 18 items and two sub-scale scores for the entire sample and each country, Portugal and Sweden (*Table 24*).

Table 24. Descriptive statistics for the PPOS

		Total sample		Portugal		Sweden	
		Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error
PPOS total score	Mean	4.43		**4.46**	.037	4.37	.051
	Std. Deviation	.428		.432		.418	
	Skewness	-.096	.170	-.054	.206	-.231	.293
	Kurtosis	-.149	.338	-.224	.410	.014	.578
	N	205		138		67	
PPOS CARING	Mean	4.83	.034	**4.93**	.037	4.63	.063
	Std. Deviation	.487		,442		.518	
	Skewness	-.541	.170	-.249	.206	-.733	.293
	Kurtosis	.389	.338	-.370	.410	.304	.578
	N	205		138		67	
PPOS SHARING	Mean	4.02	.042	3.97	.052	**4.10**	.072
	Std. Deviation	.612		.618		.595	
	Skewness	-.202	.170	-.177	.206	-.237	.293
	Kurtosis	.197	.338	.612	.410	-.718	.578
	N	205		138		67	

Following interpretation that total score ranges from “patient-centred” to “doctor” or “disease-centred’’, while the higher score reflects the more patient-centred the orientation, our results for the PPOS questionnaire for the total sample are considered to be over the PPOS average (MS=4.43; SD=.428). The results for the PPOS questionnaire for Portuguese samples are considered to be slightly above the total sample average (MS=4.46; SD=.432). In contrast, the results for the PPOS questionnaire for Swedish samples are considered to be slightly under the average scores obtained for the total sample (MS=4.37; SD=.418) but still over the average PPOS mean score. Portuguese medical students show a slightly higher patient-oriented attitude than their colleagues from Sweden.

The total score on PPOS caring scale for the total sample (MS=4.83; SD=.487) is above the calculated means score for the caring subscale. Scores on PPOS caring scale for the Portuguese sample (M=4.93; SD=.442) are higher while scores obtained on PPOS caring scale for the Swedish sample are lower than the total sample average (MS= 4.63; SD=.518). Portuguese students show a higher caring attitude in comparison with the total and Swedish samples. The total score on the PPOS sharing scale for the total sample is slightly above the subscale’s means score (MS=4.02; SD=.612). The PPOS Sharing scale results for the Portuguese sample (MS=3.97; SD=.618) is slightly under while the Swedish sample score (MS=4.10; SD=.595) is slightly higher than the score obtained on the total sample.

Further in our analysis, we use a t-test to compare scores on two variables (Caring and Sharing) on the total as well as on country samples (*Table 25*).

Table 25. Results on PPOS Sharing and Caring for total, Portuguese and Swedish sample

		Mean	N	Std. Deviation	Std.Error Mean	t-test and P-value
Total sample	PPOS Sharing	4.020	205	.612	.042	*t*(204)=-16.642, *p*=.000
	PPOS Caring	4.836	205	.487	.034	
Portugal	PPOS Sharing	3.978	138	.618	.052	*t*(137)=-17.509, *p*=.000
	PPOS Caring	4.932	138	.442	.037	
Sweden	PPOS Sharing	4.107	67	.595	.072	*t*(66)=-5.862, *p*=.000
	PPOS Caring	4.638	67	.518	.063	

Results obtained on a t-test on the total sample (*t*(204)=-16.642, *p*=.000) reveals that medical students in general (total sample) have higher scores on Caring than on the Sharing scale. The same results we found for Portugal (t(137)=-17.509, *p*=.000) and Sweden (t(66)=-5.862, *p*=.000), meaning that scores on Caring subscale are higher than on Sharing among the medical students within-country sample. In the same token, we made a comparison of scores for the PPOS, Sharing and Caring subscales between Portugal and Sweden (*Table 26*).

Table 26. Comparison of means for Portugal and Sweden on PPOS total, Sharing, and Caring

	Country	N	Mean	Std. Deviation	Std. Error Mean	t-test and P-value
PPOS total	Portugal	138	4.46	.432	.037	t(203)=1.290, p=.198
	Sweden	67	4.37	.418	.051	
PPOS Sharing	Portugal	138	3.97	.618	.052	t(203)=-1.423, p=.156
	Sweden	67	4.10	.595	.072	
PPOS Caring	Portugal	138	4.93	.442	.037	t(203)=4.210, p=.000
	Sweden	67	4.63	.518	.063	

Test of equity means (independent sample t-test) between Portugal and Sweden confirms the difference is significant only for the variable PPOS Caring *t*(203)=4.210, *p*=.000, $^{\eta2}$= 0.09), the Portuguese mean being higher than the Swedish mean in this variable.

7.1.3. PPOS Sharing and Caring subscale intercorrelation

The next level of our analysis was the level of intercorrelations for the patient-practitioner orientation scale. We examined whether there was a correlation between Total PPOS and Caring and Sharing subscales for total as well for Portuguese and Swedish sample (*Table 27*).

Table 27. Intercorrelation PPOS total with Caring and Sharing Subscales for total, Portuguese, and Swedish sample

		Total sample	Portugal	Sweden
		PPOS total		
PPOS CARING Subscale	Pearson Correlation	**.714**	**.733**	**.707**
	Sig. (2-tailed)	.000	.000	.000
	N	205	138	67
PPOS SHARING Subscale	Pearson Correlation	**.830**	**.873**	**.788**
	Sig. (2-tailed)	.000	.000	.000
	N	205	138	67

Correlation is significant at the 0.01 level (2-tailed).

Our results reveal a significant correlation between PPOS total and Caring and PPOS total with the Sharing subscale. These intercorrelations are highly significant (*p*=.000) on the total as well as on the country sample, meaning that all subscales and PPOS scale scores are significantly related to each other. Furthermore, we examined whether there exists a correlation between Caring and Sharing subscale within the patient-practitioner orientation scale, for total as well for Portuguese and Swedish sample (*Table 28*).

Table 28. PPOS Caring and Sharing subscales intercorrelation on the total, Portuguese, and Swedish sample

		Total sample	Portugal	Sweden
		PPOS SHARING SCORES		
PPOS CARING SCORES	Pearson Correlation	**.202**	**.309**	.121
	Sig. (2-tailed)	.004	.000	.330
	N	205	138	67

Correlation is significant at the 0.01 level (2-tailed).

On the total sample, results (*r*=.202, *p*=.004) reveal evidence of the correlation between Sharing and Caring subscales within the PPOS questionnaire. Results on the country level reveal that a significant correlation between the Caring and Sharing PPOS subscale exists in Portugal (r=.202, *p*=.000) but not in Sweden (r=.121, *p*=.330).

7.1.4. PPOS Sharing and Caring subscale and age

The student's age was considered with the purpose of discovering possible differences in PPOS Sharing and Caring subscales. We used the age mean score obtained on the total sample (MS=24.32) to divide the total sample into two different age groups. The first was a group of 'younger students', and it embodied all those students under 24.32 years while the second group of 'older students' encompassed all those students above 24.32 years. The description of 'age' as a categorical variable illustrates that more than 70.58% (n=144) of all students in our quantitative research are younger, while 29.41% (n-=60) belongs to the group of 'older' students. Further, to find differences between two student groups based on age, we applied an Independent sample t-test. Subscales were considered as dependent variables (within-subjects factor) while age was considered as the independent variable.

Total PPOS. When we compare mean scores obtained for students on total sample, our results reveal that differences of mean scores between 'younger' (MS=4.43, SD=.396) and 'older' (MS=4.42, SD=.482) are not to be considered as significant (*t*(93.753)=.126, *p*=.900), as well as for Portugal (*t*(135)= -1.909, *p*=.058) and Sweden (*t*(65)=-.975, *p*=.333). Those results mean there is no difference between students of different ages on their attitudes towards patient-practitioner orientation scale either on the total sample or per country.

Sharing. Since the results for the age variable is not significant (*t*(202)=-1.220, *p*=.224), it means that there is no significant difference between the 'younger' and 'older' student's group regarding Sharing subscale in the total sample. The situation is similar in Portugal (*t*(16.810)=-.805, *p*=.432) and Sweden (*t*(65)=.510, *p*=.612) as well, meaning there is no difference between age groups within country sample on Sharing subscale.

Caring. For the total sample of medical students, the difference between 'younger' and 'older' students appears not to be significant (*t*(202)=-1.743, *p*=.083). The same results are revealed in the group of Swedish sample (*t*(65)=.983, *p*=.329) with no significant differences. Unlike these results on total and the Swedish sample, we found that in Portugal there is a difference in mean scores between 'younger' (MS=4.90, SD=.441) and 'older' (MS=5.15, SD=.407) which is significant (*t*(135)=-2.164, *p*=.032) in favour of 'older' student's group, meaning that Portuguese medical student with age have more caring than sharing attitudes.

7.1.5. PPOS Sharing and Caring subscale and gender

Following a matrix of correlation between socio-demographic factors and PPOS, we further examined the correlation of gender with PPOS total and Sharing and Caring subscales on total and country samples.

Total PPOS. On total sample, there was a significant difference in the scores for male (MS=4.28, SD=.437) and female (MS=4.50, SD=.406) on total PPOS (t(203)=-3.613, p=.000), meaning that women have a more positive attitude towards PCC than their male colleagues. In Portugal, difference in the scores for male (MS=4.31, SD=.452) and female (MS=4.51, SD=.416) on total PPOS appears to be significant (*t*(136)=-2.365, *p*=.019). In Sweden, difference in the scores for male (MS=4.25, SD=.423) and female (MS=4.50, SD= .380) on total PPOS appears to be significant (*t*(65)=-2.522, *p*=.014) as well.

Sharing. On total sample, there was a significant difference in the scores for male (MS=3.87, SD=.641) and female (MS=4.09, SD=.584) on PPOS Sharing (*t(*203)=-2.543, *p*=.012). In Portugal, difference in the scores for male (MS=3.81, SD=.702) and female (MS=4.03, SD=.577) on total PPO Sharing appears to be on the margin of significance (*t*(136)=-1.943, *p*=.054). In Sweden, difference in the scores for male (MS=3.93, SD=.570) and female (MS=4.27, SD=.581) on PPOS Sharing appears to be significant (t(65)=-2.358, *p*=.021). Results as such suggest that students differ in their sharing attitudes based on gender, meaning that female medical students are more prone to sharing attitude than their male colleagues.

Caring. On total sample, there was a significant difference in the scores for male (MS=4.69, SD=.521) and female (MS=4.91, SD= .453) on Caring PPOS subscale (*t*(203)=-3.078, *p*=.002) in favour of female medical students. In Portugal, difference in the scores for male (MS=4.81, SD=.454) and female (MS=4.97, SD=.432) on PPOS Caring appears to be on the margin of significance (*t*(136)=-1.873, *p* = .063). In Sweden, difference in the scores for male (MS=4.55, SD=.563) and female (MS=4.71, SD=.465) on PPOS Caring appears not to be significant (*t*(65)=-1.296, *p*=.200).

7.1.6. PPOS Sharing and Caring subscale and parents' education

We applied one-way ANOVA without replication to measure the effect of mother's and father's education on PPOS on total students' sample as well as for each country. After data observation, we removed answers for non-education and PhD as we obtained few answers, with the expectation of improving the sensitivity of results.

Total PPOS. On total sample, there was not a significant difference between student groups based on the highest level of education of father, meaning that in general, students' attitude does not differ based on father's level of education (F(2, 169)=17706,631, *p*=.000). On the total sample, there was not a significant difference between student groups based on the highest level of education of mother F(2, 176)=.581, *p*=.560, meaning that in general, students' attitudes do not differ based on mother's level of education. The situation is similar in Portugal and Sweden. Results on total PPOS, shows that in Portugal (F(2, 115)=1.599, *p*=207) and in Sweden F(2, 51)=.498, *p*=.610, father's education has no effect on PCC attitude of medical students. The same results we found for mother's education: in Portugal (F(2, 115)=.078, *p*=.925) and in Sweden (F(2, 58)=2.008, *p*=.413). Parents' education does not affect medical student's attitudes towards PPC in these two countries.

Caring. We applied one-way ANOVA without replication to measure the effect of mother's and father's education on the PPOS Caring subscale among a total sample of students. We considered the parents' education level as an independent and the Caring subscale as the dependent variable.

Results on the Caring subscale for the total sample reveal no significant difference in mean scores among groups based on the mother's level of education (F(2, 176)=1.066, *p*=.368) meaning that mothers education level does not affect caring attitude among medical students. We found similar results for countries' sample where in Portugal (F(2, 115)=1.022, *p*=.363) and Sweden (F(3, 58)=.398, p=.673) the effect of mother's education level on student's caring attitudes is not significant.

Results on the Caring subscale for the total sample reveal no significant difference among groups based on means scores obtained for the father’s level of education (F(2, 169)=2.130, *p*=.122). The education of the father does not affect the caring attitude among medical students, taking into account the total sample. In contrast, father's education in the group of Portuguese medical students affects the Caring subscale of PPOS. It means that between three groups of students whose father has completed secondary education, bachelor or master, there are some differences. A subsequent comparison of mean scores shows that medical students that belong to the group of student's father with master level of education (MS=4.79, SD=.376), have lower scores on Caring subscale (F(2, 115=4.102), p=.019, η^2=.067) than students in the group of father's bachelors (MS=5.03, SD=.376) and ‘high/secondary school’ (MS=5.01, SD=.454) (*Figure 14*).

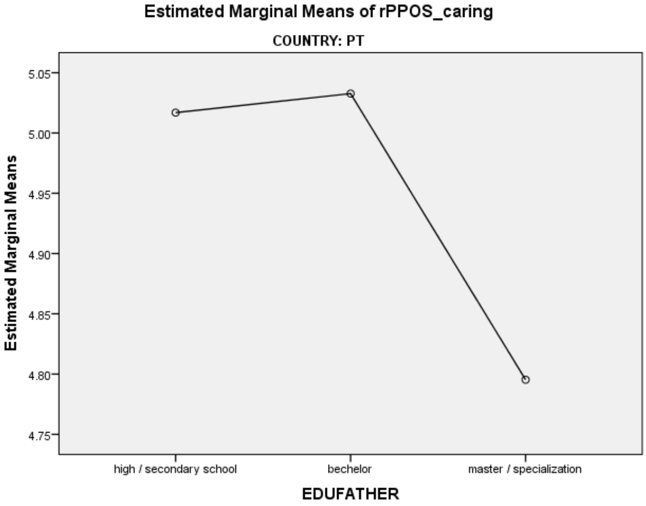

Figure 14. Estimated marginal means for PPOS Caring Subscale and education of father of Portuguese sample students

In Sweden, the difference between groups does not exist, meaning that the effect of father’s education on the Caring attitude of medical students is non-existent (F(2, 51=.244), *p*=.785).

Sharing. The level of mother's education does not affect Sharing PPOS Subscale on the total sample (F(2, 176)=.859, *p*= .425). In the same token, mother's level of education does not have effect on Sharing attitude among Portuguese (F(2, 115)=.125, *p*=.883) and Swedish (F(2, 58)=2.396, *p*=.100) medical students. It means that the difference in the Sharing subscale does not exist among students based on the mother's level of education. The level of education of the father does not affect sharing attitude among students on total sample meaning that mean scores of three groups of students divided based on the education level of their parents do not significantly differ F(2, 169)=.192, *p*=.826, η^2=.002). Father's education does not have an effect either in Portugal (F(2, 115)=.194, *p*=.824) or in Sweden (F(2, 51)=.714, *p*=.495).

Regardless of the level of analysis (total or country sample), the education level of parents does not affect medical student's Sharing attitudes towards patients. Nevertheless, the father's level of education in Portugal affects the Caring attitude of medical students toward patients.

7.1.7. PPOS Sharing and Caring subscale and work experience

In our further analysis, an independent-samples t-test was conducted to compare patient-centredness attitude between medical students who had and who did not have any earlier work experience on total and county sample

Total PPOS. On total sample, there was not a significant difference in the scores for those who had (MS=4.45, SD=.483) and did not have (MS=4.42, SD=.401) earlier work experience (*t*(111.521)=.547, *p*=.585). Results for Sweden appear to be the same, meaning that no significant difference in the scores was found between these two groups (*t*(65)=-.697, *p*=.488). Unlike these results, in Portugal difference in the scores for those who had (MS=4.67, SD=.482) and did not have (MS=4.41, SD=.412) earlier work experience appear to be significant (*t*(136)=2.582, *p*=.011). These results suggest that there is a more positive attitude towards the patient-practitioner relationship in those Portuguese students who had some earlier work experience.

Caring. On the total sample, no significant difference is found in the scores for a group with (MS=4.76, SD=.566) and without (M=4.86, SD=.442) work experience (*t*(106.371)=-1.291, *p*=.200). These results suggest that earlier work experience does affect medical student's caring attitude towards patients on the total sample. The same results are found between these two groups within the Swedish student sample (*t*(65)=-1.379, *p*=.173). Unlike these results, a significant difference in mean scores for the group with (MS=5.15, SD=.388) and without (MS=4.88, SD=.440) work experience (*t*(136)=2.647, *p*=.009) on the Caring scale is found within the Portuguese student group. These results reflect that Portuguese students with work experience have a more positive attitude towards the caring PPOS dimension.

Sharing. For a group with (MS= 4.13, SD=.637) and without (MS= 3.93, SD=.594) work experience there was a significant and marginal difference in the scores on the total sample (t(203)=1.945, p=.053)**.** In Portugal, a difference in the scores for a group with (MS=4.18, SD=.704) and without (MS=3.93, SD=.596) work experience (*t*(136)=1.694, *p*=.093) appears not to be significant. Similar results are found in Sweden where the difference in the scores for the group with (MS=4.11, SD=.609) and without (MS=4.08, SD=.579) work experience (*t*(65)=.209, *p*=.835) appears not to be significant as well.

From the total sample perspective, it appears that work experience affects the sharing dimension of PPOS but not the Caring dimension and PPOS in total, in that this difference appears to be on a marginal level. Unlike these results, medical students in Portugal, based on earlier work experience, do not differ on the Sharing subscale but do on the Caring and total PPOS. Results from Sweden suggest that differences between groups do not differ; therefore, work experience is not correlated with those subscales and patient-practitioner orientation scale in general.

7.2. THE SELF-EFFICACY IN PATIENT-CENTREDNESS QUESTIONNAIRE (SEPCQ-27)

7.2.1. Description of three SEPCQ-27 factors

The first step in our analysis of SEPCEQ -27 was directed to identify how medical students perceive their competencies and confidence in the ability to practice PCC. Medical students were asked to provide an assessment of the statement. The number of 27 items was divided into three scales, with a total score range from 0-108.

The first, "Exploring the patient perspective" refers to the extent that respondents assess themselves at being confident to be able to make the patient aware that they are interested in patient's situation, how attentive and responsive to patient's needs they are, and exhibit concern in a caring, empathetic and compassionate manner. This scale encompasses the following 10 items under numbers: 1, 4, 5, 9, 10, 14, 17, 20, 23 and 24. The score on Factor 1 ranges from 0-40. The second, "Sharing information and power" scale reflects the extent to which medical students perceive themselves as competent to be able to provide treatment-related information (side effects, procedures, prognosis) to the patient so that they can reach an agreement with the patient regarding the treatment plan and treatment procedure which are best for the patient. This scale encompasses the following 10 items under numbers: 2, 6, 7, 11, 12, 15, 18, 21, 25 and 26. The score on Factor 2 ranges from 0-40. The third, "Dealing with communicative challenges" scale refers to students' self-perceived competencies on being able to deal with own feelings and emotional reactions in communication with patients and difficult situations and to stay focused on what is the best for the patient. This scale encompasses the following seven items under numbers: 3, 8, 13, 16, 19, 18, 22 and 27. The factor 3 score ranges from 0-26.

7.2.1.1. Student responses to the SEPCQ-27 items

The majority of the medical students answered on all the statements either 'high' or 'medium' meaning that the majority of students self-perceived themselves as being competent and confident in the ability to practice PCC (*Table 29*).

Table 29. Students' responses (%) on the total for the SEPCQ-27 items for the total sample

Item No.	the Self-Efficacy in Patient-centredness Questionnaire (SEPCQ) items	% of Students				
		Very Low	Low	Medium	High	Very High
1.	Make the patient feel that I am genuinely interested in knowing what he/she thinks about his/her situation	0.0	1.4	16.3	**56.5**	25.8
2.	Record a complete medical history	0.5	2.9	30.6	**49.8**	16.3
3.	Accept when there is no longer curative treatment for the patient	3.8	20.1	**43.1**	26.3	6.7
4.	Make the patient feel that I have time to listen	0.5	1.4	25.8	**49.8**	22.5
5.	Recognize the patient's thoughts and feelings	0.5	4.8	23.4	**53.6**	17.7
6.	Reach agreement with the patient about the treatment plan to be implemented	1.0	8.1	32.5	**46.9**	11.5
7.	Advise and support the patient in making decisions about his/her treatment	2.4	5.7	32.1	**49.3**	10.5
8.	Be aware of when my own feelings affect my communication with the patient	0.0	10.0	34.9	**42.6**	12.4
9.	Be attentive and responsive	0.0	0.5	13.4	**55.5**	30.6
10.	Be aware of when the patient is scared or concerned	0.0	2.9	14.8	**64.6**	17.7
11.	Ensure that the patient makes his/her decisions on an informed basis	0.0	6.7	29.2	**49.3**	14.8
12.	Explain the diagnosis and treatment plan to the patient so that he/she understands	0.5	1.9	22.0	**50.2**	25.4
13.	Deal with my own emotional reactions when the situation is difficult for me	2.4	14.4	**49.3**	26.8	7.2
14.	Treat the patient in a caring manner	1.0	1.0	13.9	**52.2**	32.1
15.	Explain things so that the patient feels well-informed	1.0	1.4	19.1	**55.0**	23.4
16.	To maintain the relationship with the patient when he/she is angry	3.8	19.1	**50.7**	23.9	2.4
17.	Make the patient experience me as empathetic	0.5	2.4	18.7	**56.0**	22.5
18.	Inform the patient about the expected side effects, so the patient understands them	1.0	6.2	31.6	**49.8**	11.5
19.	To stay focused on what is best for the patient if there is a professional disagreement about the diagnosis and treatment	0.5	9.6	38.3	**42.6**	9.1
20.	Make the patient feel that he/she can talk with me about confidential, personal issues	1.0	4.8	26.8	**45.5**	22.0
21.	Explain how the treatment works or is expected to work	1.0	1.4	24.9	**54.5**	18.2
22.	Avoid letting myself be influenced by preconceptions about the patient	0.0	9.1	**48.3**	34.0	8.6
23.	Show a genuine interest in the patient and his/her situation	0.5	1.4	12.0	**52.2**	34.0
24.	Focus on compassion, care, and symptomatic treatment, when there is no curative treatment	1.0	3.8	21.5	**47.8**	25.8
25.	Explain how the treatment is likely to affect the patient's conditionon, so that the patient understands	0.0	3.8	25.4	**55.5**	15.3
26.	Explain the treatment procedures, so that the patient understands them	0.0	2.9	23.9	**53.6**	19.6
27.	Separate my personal views from my approach in the professional situation	0.0	7.2	**40.2**	38.8	13.9

*Because of rounding, not all percentages total 100

Most of the answers fall on the right side of the scale, meaning that most of the students' responses fall between medium to very high. It is possible to distinguish a set of questions on which most of the medical students' answers were in the range from high to very high. For example, most of the students perceived themselves as highly or very highly competent: in making the patient feel that he/she (medical student) is interested in hearing the patient's reflection on his/her situation (Q1) (82.3%), to be aware of when a patient is concerned (Q10) (82.3%), to be attentive and responsive (Q9) (86.1%), to treat the patient in a caring manner (Q14) (84.3%) and to show an interest in the patient and his/her situation (Q23) (86,2%). Most of the questions mentioned above belong to Factor 1, meaning that most of the students perceive themselves as highly to very highly competent in Exploring the patient perspective.

It is noticeable that some of the students' responses that fall from medium to high, also have a high percentage of the students who perceived themselves as low in confidence in their ability. Those questions are requiring attention. For instance, most of the students answered from medium to high on the question on how they perceive their confidence in being able to accept when there is ~~a~~ no longer a curative treatment for the patient (Q3) (69.4%) but still 20% of students perceive their ability as low. In the same token, most of the student perceive themselves, from medium to high range, their ability to maintain the relationship with the patients when he/she is angry (Q16) (74.6%) and to deal with their emotional reactions in stressful situations (Q13) (76.1%) but at the same time, still 19% and 14.4% of students, respectively, perceived themselves as having low confidence in their ability regarding these items. It is interesting to note that the majority of "medium" answers were on the questions that belong to Factor 3, meaning that medical students perceive themselves as less confident in dealing with communicative challenges.

7.2.2. Scores on SEPCQ-27 and three factors for total, Portuguese and Swedish sample

*Descriptive statistics***.** As indicated in scoring instructions for this questionnaire, we calculate total scores for SEPCQ-27 and three factors for the total sample, Portuguese and Swedish students' groups (*Table 30*).

Table 30. SEPCQ-27 mean score

		Total Sample		Portugal		Sweden	
		Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error
SEPCQ F1_SCORE	Mean	30.02	.369	29.61	.420	**30.88**	.718
	Std. Deviation	5.280		4.934		5.876	
	Skewness	-.811	.170	-.724	.206	-1.085	.293
	Kurtosis	1.989	.338	.654	.410	3.831	.578
SEPCQ F2_SCORE	Mean	27.96	.410	27.68	.495	**28.54**	.733
	Std. Deviation	5.871		5.811		5.996	
	Skewness	-.463	.170	-.399	.206	-.620	.293
	Kurtosis	.715	.338	.445	.410	1.492	.578
SEPCQ F3_SCORE	Mean	16.42	.268	15.98	.326	**17.34**	.453
	Std. Deviation	3.837		3.833		3.707	
	Skewness	.045	.170	-.022	.206	.255	.293
	Kurtosis	.224	.338	.337	.410	-.185	.578
SEPCQ TOTAL_SCORE	Mean	74.41	.903	73.27	1.063	**76.76**	1.658
	Std. Deviation	12.927		12.493		13.573	
	Skewness	-.421	.170	-.386	.206	-.595	.293
	Kurtosis	1.304	.338	.665	.410	2.725	.578

Total scores obtained on SEPCQ 27 for the total sample are to be considered as high (MS=74.41; SD=12.927). Results for Portugal (MS=73.27; SD=12.493) and Sweden (MS=76.76; SD=13.573) are close to the mean score for the total sample while Swedish scores are slightly higher than on total sample score. It means that Swedish medical students show more confidence in their ability to behave in a way that is considered patient-centred.

Furthermore, we calculated scores for three sub-scales for the entire sample and each country, Portugal and Sweden. *Factor 1- “Exploring the patient perspective”.* The total score obtained for Factor 1 (MS=30.02; SD=5.280) in the total sample is above the average score calculated for this Factor. It demonstrates a high level of confidence among the total sample of medical students in their ability to be attentive and interested in listening to patient’s thoughts, feelings and concerns about the situation by being empathetic and compassionate. In comparison with the total sample, Swedish results (MS=30.88; SD=5.876) are slightly above while Portuguese results (MS=29.61; SD=4.934) are slightly under the score obtained on the total sample, meaning that Swedish students show more confidence in exploring the patient perspective than Portuguese medical students.

Factor 2- "Sharing information and power". The total score obtained for Factor 2 (MS=27.96; SD=5.871) in the total sample gravitates more to average than to maximum possible scores on this Factor. On total sample, it demonstrates students’ confidence above the average in their ability to explain the diagnosis, treatment plan and treatment prognosis so that patient can feel informed, and capable of bringing decision regarding treatment option. While Portuguese students’ results (MS=27.68; SD=5.811) gravitate to the score obtained on the total sample, the Swedish result (MS=28.54; SD=5.996) is slightly above them. In comparison with the total sample, Swedish students show that they are slightly more confident than Portuguese students in exhibiting this behaviour.

Factor 3- "Dealing with communicative challenges". The total score obtained for Factor 3 (MS=16.42; SD=3.837) in the total sample gravitates to the average score Factor. It demonstrates there is around the average level of confidence among a total sample of medical students in their ability to keep being professional by dealing with their own and patient’s emotional reactions in difficult situations, and staying focused on what is the best for the patient if there is disagreement among professionals. While Portuguese results (MS=15.98; SD=3.837) are under the total sample score on this factor, Swedish results are above (MS=17.34; SD=3.707). In comparison with the total sample, Swedish students show that they are slightly more confident than Portuguese students in exhibiting this behaviour. Although differences in mean scores exist between countries, a t-test reveals a significant difference between countries for Factor 3 SEPCQ ($^{\eta 2}$=.03) where the mean for Portuguese medical students was higher than the mean for Swedish.

7.2.3. The SEPCQ-27 factors intercorrelation

The next level of our analysis was to assess the correlation within the SEPCQ-27. We applied Pearson's Correlation to see if some significant correlation exists among the three factors and SEPCQ-27 total. The analysis is conducted on the total sample but also for each country sample (*Table 31*).

Table 31. The SEPCQ-27 factors' intercorrelation

		Total sample			Portugal			Sweden		
		SEPCQ F1	SEPCQ F2	SEPCQ F3	SEPCQ F1	SEPCQ F2	SEPCQ F3	SEPCQ F1	SEPCQ F2	SEPCQ F3
SEPCQ F1	Pearson Correlation		**.630**	**.614**		**.624**	**.599**		**.637**	**.631**
	Sig. (2-tailed)		.000	.000		.000	.000		.000	.000
	N		205	205		138	138		67	67
SEPCQ F2	Pearson Correlation			**.580**			**.557**			**.621**
	Sig. (2-tailed)			.000			.000			.000
	N			205			138			67
SEPCQ TOTAL	Pearson Correlation	**.877**	**.884**	**.811**	**.869**	**.883**	**.802**	**.887**	**.887**	**.821**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	205	205	205	138	138	138	67	67	67

Correlation is significant at the 0.05 level (2-tailed).

We observe that overall, the correlation coefficient (r) equals are in range .557 for the correlation between Factor 2 and Factor 3 for Portuguese sample, to .887 for correlation SEPCQ-27 total and Factor 1 as well as Factor 2 for a Swedish sample. All the presented results are indicating a strong positive relationship with a level of significance *p*=.000. Seeing the results for total and country samples more closely, we found that the correlation coefficient (r) equals SEPCQ-27 total, and its Factors are in the range between .802 and .887 meaning that all the three SEPCQ-27 factors are strongly correlated with the total scale.

At the level of factors Intercorrelation, it appears that the correlation between Factor 1 and Factor2 is the strongest, the correlation between Factor 2 and Factor 3 lowest, while the correlation between Factor 1 and Factor 3 falls in-between. This "results pattern" as such is obtained on the total as well on countries' samples. For example, in the total sample, the highest intercorrelation is found between Factor 1 and Factor 2 SEPCQ-27 (r=.630, *p*=.000), and this correlation is positive. Comparing to the results on the total sample, the correlation between Factor 1 and Factor 2 is even stronger in Sweden (r=.637, *p*=.000) and slightly weaker in Portugal (r=.624, *p*=.000). Since these correlations are positive, it means that all those students who show higher scores on Factor 1 show high scores on Factor 2 as well. Considering intercorrelation between Factor 2 and Factor 3 results in Sweden show a strong positive (r=.621, *p*=.000) which is above the results for the total sample (r=.580, *p*=.000). As mentioned, the result for the intercorrelation of Factor 2 and Factor 3 (r=.557, *p*=.000) is to be considered the weakest among samples but also the SEPCQ-27 as a whole. Factor 1 also correlates with Factor 3 on all samples. This correlation is significant and to be considered as strong and positive (r=.614, *p*=.000) on the total sample, whereas Swedish sample results (r=.631, *p*=.000) are above while Portuguese results (r=.599, *p*=.000) are under the r- equal for the total sample.

7.2.4. The SEPCQ-27 factors and gender

In further analysis, we applied an Independent sample t-test to calculate the effect of gender on three factors' scores and the SEPCQ-27 total score. On the level of total sample, no significant difference was found between means for the SEPCQ-27 total (t(203)=-.246, *p*=.806) or on Factor 1 (t(203)=-.940, *p*=.348), and Factor 2 (t(203)=-.859, *p*=.391). Borderline significance is found on Factor 3 (t(203)=-1.786, *p*=.076). In Portugal and Sweden, we did not find significant differences between a male and female medical student on any of the three SEPCQ factors and SEPCQ-27 in general. In the Swedish group, a borderline significance exists only on Factor 1 t(65)=-1.911, *p*=.060).

7.2.5. The SEPCQ-27 factors and age

For the reason of a better understanding of whether there is a difference in means among medical students on the SEPCQ-27 factors, we have considered the category of student's age. Results obtained for Factor 1 (t(202)=-1.501, *p*=.135), Factor 2 (t(202)=-.957, *p*=.340) and the SEPCQ-27 total score (t(202)= -1.718, *p*=.087) did not show significance in mean scores. However, the result obtained on Factor 3 (t(202)=-2.260, *p*=.025) reveals that age has the main effect on how students are able to deal with communicative challenges. In Portugal, as it is on the total sample, difference based on student's age appears only on Factor 3 as well (t(135)=-2.437, *p*=.016) meaning that 'older' students are able to deal with communicative challenges better than their 'younger' colleagues**.** In the group of Swedish students, no significant differences are found, which means that students under and above 24 years show similar results on all the SEPCQ-27 factors.

7.2.6. The SEPCQ-27 factors and level of parent's education

Further analysis was focused on discovering differences between student's self-reported competencies based on the level of parent's education. Firstly, one-way ANOVA without replication is applied to the total sample for both groups (mother and father). It discovered significant differences of mean scores related to mother's educational level only on Factor 3 SEPCQ F(4, 199)=4.41, *p*=.002 (*Table 32*) while on Factor 1 (F(4, 199)=.593, *p*=.668) and Factor 2 (F(4, 199)=1.621, *p*=.170). On the other hand, no significant differences related to father's educational level on any of three the SEPCQ factors were found: Factor 1 (F(4, 200)=.337, *p*=.853), Factor 2 (F(4, 200)=1.974, *p*=.100) and Factor 3 SEPCQ (F(4, 200)=.693, *p*=.597) considering total sample.

Table 32. Differences based on the level of education of mother for SEPCQ-27 Factor 3-total sample

Factor 3	Mother's level of education	N	Mean	Std. Deviation	One-way ANOVA without replication and p-value
	Non or primary	9	13.44	2.78	F(4, 199)=4.41 p=.002
	High/secondary school	45	17.82	3.67	
	Bachelor	61	15.84	3.83	
	Master/Specialization	73	16.84	3.69	
	PhD	16	14.81	3.83	

Additional multiple comparisons of mother's levels of education show a significant difference on Factor 3 between groups "none or primary school" and 'high/secondary school' on total sample (*p*=.014). It means that medical students whose mother attended high school, show higher scores on dealing with communicative challenges in comparison with those whose mother has elementary education. Another significant difference we found was between students whose mother had high school and bachelor education (*p*=.070) and high school and PhD level of education (*p*=.059). Secondly, after an analysis of the total sample, we analyzed the country sample. Two-way ANOVA with the country as one and mother's/father's education level as the second independent variable was conducted in our further analysis. Due to poor response, which affects some sensitive differences, the category of non/primary educational level and PhD level within the education level variables of mother and father were excluded from the analysis. Two-way ANOVA highlighted two independent variables (countries and the educational level of mother/father with three categories-high schools, bachelor and master) and the SEPCQ 27 factors as dependent variables.

On Factor 1, results do not show the main effect of the mother's or father's educational level. It means there are no differences between groups based on mother's (*p*=.215) and father's (*p*=.672) level of education as well as no interaction between parent's level of education and country (mother *p*=.370, father *p*=.631). Nevertheless, significant difference between means exist between Portugal and Sweden (F(1, 173)=3.82, *p*=.052 on Factor 1 regarding effect of mother's education (*Figure 15*), while it is not significant for father's education F(1, 172)=.865, *p*=.354.

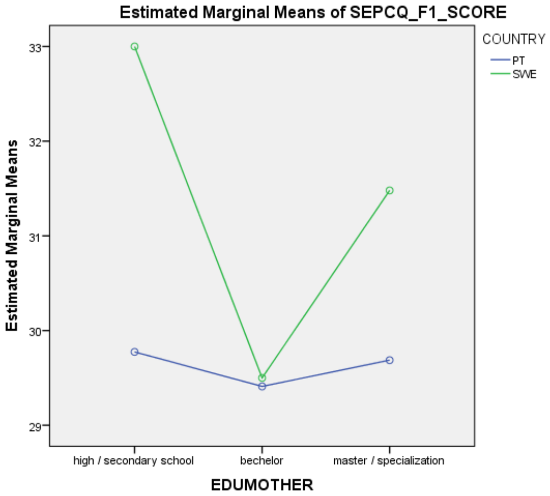

Figure 15. SEPCQ Factor 1 and mother's level of education-difference between Portugal and Sweden

On Factor 2, no significant difference is found between levels of education either for mother or father category and no significant difference between countries. It indicates that the education level of parents does not affect a medical student's confidence in the ability to share information and power with the patient. For Factor 3 as dependent variable, differences between groups based on the level of mothers' education (F(2, 173)=3.83, *p*=.024) and (F(1, 173)=5.13, *p*=.025) appear to be significant. Nevertheless, the interaction between a mother's level of education and country does not exist (*p*=.859), meaning that a mother's level of education has the same effect in both countries. Additional analysis shows a significant difference between primary/high school and bachelor level of mother's education (*p*=.025) (*Figure 16*).

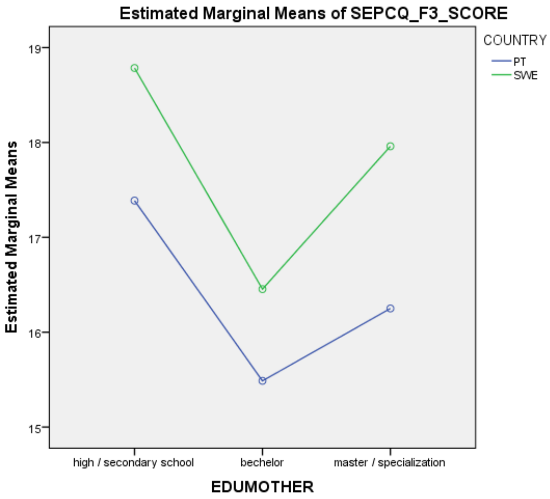

Figure 16. Difference between primary/high school and bachelor level of mother's education on SEPCQ-27 Factor 3

Only a significant difference exists between countries (F(1, 166)=5.91, *p*=.016) on Factor 3 concerning the father's level of education (*Figure 17*). It implies that based on the level of education of the father, students differ depending on the country.

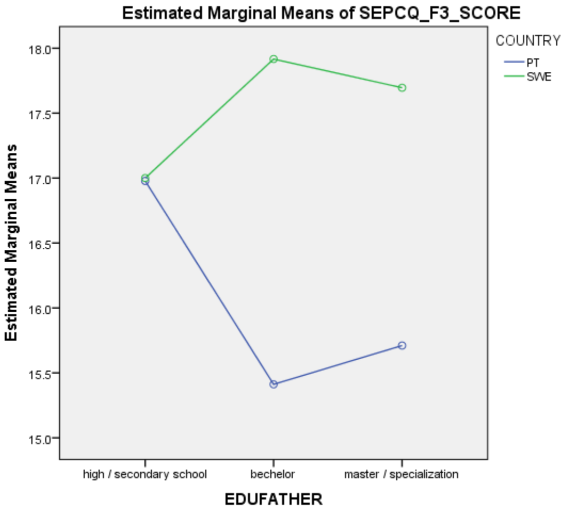

Figure 17. Father's level of education and SEPCQ-27 Factor 3 - differences between Portugal and Sweden

The difference between groups based on different levels of education of fathers and Factor 3 does not appear to be significant (*p=.890*).

7.2.7. The SEPCQ-27 factors and work experience

On the level of total sample, some previous working experience has the main effect on Factor 2 (t(203)=1.96, *p*=.052), Factor 3 (t(203)=2.62, *p*=.009) and SEPCQ- 27 total (t(203)=2.43, *p*=.016) (*Table 33*). It does not have a significant effect only on Factor 1 (t(203)=1.854, *p*=.065).

Table 33. Group statistics for students with(out) working experience on SEPCQ-27 factors-total sample

Q. “Did you have already any work experience before you have started University education?”		N	Mean Score	Standard Deviation	t-test and P-value
SEPCQ F2 score	yes	67	29.10	6.103	t(203)=1.96, p=.052
	no	138	27.41	5.695	
SEPCQ F3 score	yes	67	17.42	3.877	t(203)=2.62, p=.009
	no	138	15.94	3.737	
SEPCQ total	yes	67	77.52	13.904	t(203)=2.43, p=.016
	no	138	72.90	12.193	

In Portugal, differences exist on Factor 3 (t(136)=2.118, *p*=.036) and the SEPCQ-27 total (t(136)=2.132, *p*= .035) meaning that those medical students in Portugal who have earlier work experience perceived themselves as more confident in dealing with communicative challenges in communication with patients. Borderline significance is found on Factor 1 in Portugal (t(136)=1.835, *p*=.069) and Sweden (t(65)=-1.911, *p*=.060), but these differences are not sufficiently differentiated in both countries to be regarded as significant.

7.3. CORRELATION BETWEEN PPOS SUBSCALES AND THE SEPCQ-27 FACTORS

Our next step in the process of data analysis was to discover possible correlations between the instruments PPOS and SEPCQ-27. For both questionnaires, we correlated total scores first on the total sample and then on each of the countries *per sé* (*Table 34*).

Table 34. Correlation PPOS subscales and SEPCQ-27 factors -total, Portugal, and Sweden Correlation PPOS and SEPCQ total scores

		Total sample	Portugal	Sweden	Total sample	Portugal	Sweden	Total sample	Portugal	Sweden
		PPOS CARING			PPOS SHARING			PPOS TOTAL		
SEPCQ F1	Pearson Correlation	**.218**	.116	**.481**	.106	.090	.109	**.200**	.123	**.376**
	Sig. (2-tailed)	.002	.177	.000	.130	.296	.859	.004	.150	.002
	N	205	138	67	205	138	67	205	138	67
SEPCQ F2	Pearson Correlation	.068	.018	.219	-.028	-.042	-.022	.019	-.021	.120
	Sig. (2-tailed)	.330	.837	.075	.686	.626	.859	.791	.808	.332
	N	205	138	67	205	138	67	205	138	67
SEPCQ F3	Pearson Correlation	.013	-.033	**.241**	.028	-.018	.077	.027	-.030	.205
	Sig. (2-tailed)	.858	.698	.049	.693	.834	.537	.701	.727	.097
	N	205	138	67	205	138	67	205	138	67
SEPCQ TOTAL	Pearson Correlation	.124	.044	**.371**	.039	.010	.058	.098	.030	**.272**
	Sig. (2-tailed)	.077	.611	.002	.581	.904	.639	.162	.729	.026
	N	205	138	67	205	138	67	205	138	67

Correlation is significant at the 0.05 level (2-tailed).

Correlation between SEPCQ and PPOS does not show significant correlation on total sample (r= -0.98, *p*= .162) or for Portugal (r= -0.030, *p*= .729). On the other hand, in Sweden, there is a correlation, and it is positive (r= .272, *p*=.026). It implies that as more Swedish medical students have stronger beliefs and attitudes towards the patient-doctor relationship, they feel more confident about the ability to be patient-centred.

Besides the PPOS total correlation with the SEPCQ total, a weak positive linear correlation between the total PPOS and the total SEPCQ Factor 1 and the Swedish sample was found. On the other hand, in the Swedish context, the SEPCQ total only has a positive correlation with the Caring PPOS subscale. What is interesting is that PPOS sharing does not correlate with SEPCQ-27 total and its factors on total or on country sample.

The PPPO Caring subscale has a moderate positive correlation with Factor 1 SEPCQ-27 on total (r=.218, *p*=.002) and Swedish sample (r= .481, *p*=.000) and a positive correlation with Factor 3 SEPCQ-27 in Swedish sample (r=.241, *p*=.049). Although this correlation appears as significant, it is not to be considered as strong. Unlike the Caring subscale, the Sharing subscale does not correlate with total SEPCQ-27 total and none of the SEPCQ factors on any of the samples.

7.4. SUMMARY

In this chapter, we present results obtained from medical students from Portugal and Sweden using two standardized questionnaires - the PPOS and SEPCQ-27 to measure their beliefs and self-perceived competencies concerning PCC, retrospectively. In general, our results show that medical students have more patient-centric caring than sharing attitudes and self-perceived themselves as being competent and confident in the ability to practice PCC. While Portuguese medical students show more caring attitudes compared to their Swedish colleagues, Swedish medical students show more confidence in their ability for patient-centric behaviours. Gender is an essential factor to be considered in assessing medical students' attitudes because our results show that gender has the main effect on both subscales of the PPOS. At the same time, to some extent, earlier work experience influences sharing attitudes among medical students. Study results of our quantitative research are discussed in detail in Section 9.1.

Chapter 8

QUALITATIVE DATA ANALYSIS: FINDINGS FROM THE MEDICAL STUDENTS INTERVIEWS

INTRODUCTION

In this chapter, we present the findings from the students' interviews data. Following predefined themes in the interview guide, seven themes are distinguished (deductive analysis). Theme 1 is about how students define the PCC concept (Section 8.1.). Theme 2 aims to discover if students believe in the PCC as a process (Section 8.2.). Theme 3 is about students' practical experience with the PCC (Section 8.3.). Theme 4 is about students who believe in the role of students and medical doctors in the PCC (Section 8.4). Theme 5 concerns the competence of the PCC (Section 8.5.). Theme 6 is about how students get to know about the PCC phenomenon (Section 8.6.). Finally, in Theme 7, students' beliefs about the PCC at the national level are revealed (Section 8.7.). The data for each of these dimensions is extensive, so we use the deductive method to identify categories and the inductive method to identify subcategories.

8.1. THEME I: DEFINING THE CONCEPT OF PCC

Within Theme I, we aimed to understand what the students believe about the PCC concept and the eight Picker dimensions; therefore, we distinguish two categories: Defining the PCC Concept (8.1.1.) and Defining the PCC dimensions (8.1.2.) (*Table 35*).

Table 35. Theme I: Defining the concept of PCC care and categories of the student's interviews data

THEME I DEFINING THE CONCEPT OF PCC	Category 1: Defining the PCC Concept Category 2: Defining the PCC dimensions

Further, we discuss the results for these two categories within Theme I, including results subcategories and attributes for each PCC dimension.

8.1.1. Category 1: Defining the PCC Concept

In this part, our results concern whether medical students have had a chance to hear about the term 'patient-centred care', how they would define PCC, what it means, and what it relates to. Most of the students, seven of them, say they have heard about the term or concept of the PCC, while only three students have never heard about the exact term. Out of the seven students who heard about the term, only two have been familiar with the PCC concept itself since they were taught about it in the course of their studies. Besides, most students indicate that they are partially familiar with the concept underlining that they have never heard of the eight dimensions of the PCC.

> “I was taught in the school that we have two types of care. Well, the more doctrinal type, the more centred in the doctor and the more central to the patients […] we are moving from more ‘doctor knows it all’ to ‘the patient-centred care’, and that is the future. Yes, I was taught that.” (Student 3, F)

> “[…] I cannot remember that we were talking a lot about patient-centred care in this form, in a structure, in a nice form. It is the thing that you learn unconsciously basically, but we had never had this presented, structured.” (Student 1, F)

Some students perceive the PCC as being associated with the primary level of care, arguing for the importance of a long-term doctor-patient relationship in preventive and chronic disease care as a vital part of the PCC. However, some students recognize the value of the PCC for secondary and tertiary levels of care, highlighting the difference between primary and hospital care. The continuity of the care process appears to be an excellent attribute of the PCC for students who also believe that the PCC depends on the medical speciality. For example, some medical specialities are more prone to the provision of PCC than others, as might be the case with internal medicine, when the doctor may have more consultations. In contrast, in the case of surgery, the doctor has one or two consultations with the patient but, as soon as the patient is discharged, he loses track of the patient's follow-up. Students believe that not all medical specialities are concerned about this role of treating a person in a kind of holistic way; however, the PCC should be 'everywhere theoretically' (Student 8) as it belongs to all levels of care; therefore, it should always be done.

After analysis of students’ narratives about what the PCC could be, all given examples of the PCC activities, we classify those considered as intangible (talking with the patient about the disease) and those tangible (providing comfortable bed, informed consent). When students were asked to define this activity in one word, their answers were quite different, defining as ’primary care’ (Student 10) or ’total care’ (Student 4), from ‘necessary’ (Student 5) to the form of ’personalization’ (Student 2) and ’innovation’ (Student 6). One student defines PCC activities as ’agreement’ (Student 7).

Students believe that the PCC begins with the consultation, firstly by the fact that the doctor comes to the consultation. After the doctor meets the patient, he must begin the interview with an anamnesis, allow the patient to talk, express symptoms, and what is bothering him. The way the patient expresses it determines how the doctor will treat him; therefore, the doctor should act to understand the expression, where the expression of the disease originates, and what is more important, to distinguish between the symptoms. After having a discussion with the patient about further activity and hearing the patient's response, the doctor must try to negotiate and define the best treatment option with the patient. Illustration of the answer of one student:

> “Well, the patient-centred care starts when we will look at the patient, we analyse some disease that he has in common with all the other patients, but we work from the characteristics only that patient has. […] that is the point when we analyse if he is going to take that antibiotic if he is going to show up for the consultation next week and we adapt the treatment according to those characteristics only that patient has. […] it is

> the agreement with the patient; he has to agree with what we are gonna do. **That is patient-centred**.” (Student 7, M)

Thus, accommodating the patient in a decent setting means a nice place where the patient finds himself to be physically, providing comfortable bed and bedclothes in hospital settings. If the doctor intends to make more personal contact with the patient, he or she must be seated when the patient is in bed. To provide the patient with privacy while talking to or examining the doctor, the doctor should close the curtain in the hospital bedroom. The doctors see people in many fragilities, and they receive patients in the worst of their times, so comforting the patient by holding his hands when he almost cries, because he is too nervous about undergoing surgery is to be seen as an activity that shows the doctor's sympathy with the patient. In the same token, students give an example of a doctor who goes outside the doctor's room every day during a period open to visits and tells the family how the patient is doing, how the situation is, what he plans to do that day and what the plan to achieve is. If the doctor has a patient with many health problems, the doctor should try to follow up and manage this patient (‘just talk to her and tell her what medicine she should take’ (Student 8)). Example of the student’s answer regarding the PCC activity:

> “A patient with many comorbidities...many medicines, he comes to an appointment with a doctor having one disease, for example, diabetes, and I have to give him medicine. So, I have to see all the medicines, try to see if there is an interaction with other medicines and try to give him the best medicine not to have a side effect, something like that, so try to choose the best medicine based on the comorbidities of the patient and the medicine that he already has.” (Student 9, F)

For some of the interviewed students, having patients updated medical records and keeping all information written is an example of PCC activity. This type of activity is vital to the achievement of the PCC, even though certain parts of the medical record may be subjective. For example, the patient sees the word 'obese' in the medical record, which might hurt him, but if the doctor examines the patient as obese, he needs to write it down, because ‘it is a medical fact that might be crucial for the treatment in the future’ (Student 3). For some of the students, informed consent is an important activity that promotes awareness of the doctor-patient relationship. The student argues that this is the most common way of doing the PCC, the most frequent and the easiest way to do it (‘the best activity that relates to patient-centred care, that we do on a regular basis and it has a bureaucratic translation even, is informed consent’ (Student 5)). The doctor spends a few minutes explaining the situation to the patient in an understandable way, which process, what surgery, anaesthesia entails, and making the patient aware of any risk of the procedure or possible complications. Taking this activity, the doctor should ask to obtain the consent of the patient regarding medical procedures and patient involvement in the treatment. Besides, the physician should offer the patient psychological assistance as an act of possible emotional support. Not all medical specialities are concerned about this role of treating a person in a kind of holistic way of seeing a person. PCC is not only the treatment of the disease, which is an important part of it, but also the ability to present humanity and to take into account what is around the patient that can contribute to the disease itself and introduce new things and give advice on having a specific behaviour. One illustration:

> "Talking about patient-centred care means to think about that thing that you cannot deal with all the patients in a single way and that you have to change the attitude even though if your patient has the similar problem; think about their feelings, let the patient talk during consultations and hearing their problems and their emotions also, giving space to the psychological impacts of their problem, health problems." (Student 4, F)

The PCC activities relate to setting frameworks where all the actors are directly involved in the patient's care that result in an established relationship within a team of actors and teamwork. The student also believes that behind the PCC activity is building a relationship of trust. Although it depends on the settings, the student gives an example of the situations from the emergency room where there is no time, no space, the doctor is either not prepared, or does not care to have or to maintain the relationship with a patient. In contrast, in the situation in general practice with family doctors, this relationship between doctor and patient is almost like a friendship relation. Regardless of whether the illness is severe or not, the patients would be more integrated from the side of the doctor.

The students argue that for them, the PCC should be defined as an abstract in patient-centric actions that are useful for operationalization and practical application. If doctors are forced to use them, they would have an impact on their competencies and work efficiency.

8.1.2. Category 2: Defining the PCC dimensions

Since it seemed difficult for students to define what the PCC is, we further offered in our interview the eight PCC domains of Picker and asked, in the same way as the previous question, how they would define each of the eight dimensions and what they would relate to. We present the results for each dimension, respectively: Information, Communication, and Education in Health Care (8.1.2.1), Respect for Patient Values (8.1.2.2), Coordination and Integration of Care (8.1.2.3), Physical Comfort (8.1.2.4), Emotional Support (8.1.2.5), Involvement of Family and Friends (8.1.2.6), Continuity and Transition (8.1.2.7), and Access to Care (8.1.2.8).

8.1.2.1. Information, Communication, and Education in Health Care

For the PCC Information, Communication and Education dimension category, we have identified the number of codes grouped into six subcategories based on their similarities (*Table 36*).

Table 36: Theme I Category 2: Information, Communication, and Education dimension and subcategories

THEME I/ Category 2 *Information, Communication, and Education Dimension*	Subcategory 1: Conceptualization Subcategory 2: Information management Subcategory 3: Doctor-patient relationship creation Subcategory 4: Communication Subcategory 5: Provision of written information Subcategory 6: Informed consent

The subcategory **Conceptualization** embraces two different students' perspectives on what the Information, Communication, and Education dimension comprise. Firstly, the dimension is perceived in the scope of a controlled form of behaviours relating to the student's perception of 'the power of information' and 'power of knowledge' in health care. For the student, this dimension appears to be a sort of a professional codex and the most common way of practising the PCC. Being the most directly connected to the patent, this dimension relates to empathy, and it goes along with the patient's preference dimension. Secondly, this dimension is perceived as the form of the practical application of more specific actions undertaken during doctor-patient interactions on a different level of care and should be part of every patient's visits. Subcategory ***Information management*** three segments connected with the patient. The first is *informing segment*. The students perceive the importance of doctor's information provided to the patient for their navigation through both the system and health improvement. (a) The importance of doctor in providing information related to the system means the doctor's information can take the patient to several parts through the health care system (from health care access to transition to other specialists) by navigating and redirecting the patient through the system and informing them how to access the information. (b) Further, students believe that information about lifestyle and prevention plays a significant role in health promotion ('Information and healthcare information is a big thing regarding prevention part of health' (Student 2)). This segment, according to medical students, involves informing the patient about his/her health status followed by disease management and homecare information about strategies to cope with the disease and resources and tools for a family member after a patient's discharge. The second segment of information management, *explaining to the patient* includes two different types of explanation. (a) Current health status- disease-related explanation means explanation to the patient about what is happening, what the current health/ disease situation is, reasons for disease occurring, the way disease interferes with patient's life, explaining more about the disease itself and possible disease prevention. (b) Diagnostic procedures, treatment and post-treatment related explanation means the doctors explain to the patient reasons for undertaking specific diagnostic procedures and treatments, the patient's treatment options, possible risks of the procedure and complications. Hence, explaining to the patient and making him understand the process of surgery, explaining how the transition of care during this time is going to be, explaining what long-term outcomes of patient's compliance with medication are, and in the end, preparing patients for life after discharge. As illustration:

> "To inform and educate our patients: why this is happening, why we were doing exams, why we are doing diagnostics, why we are doing certain treatments I think it is very important to educate them and to prepare them for a life out of the hospital, as well, when they leave, when they go home." (Student 1, F)

In the third segment of information management, the students believe that doctors are supposed to *educate the patients* in two directions. (a) One direction is towards educating patients about prevention, meaning that education should start before the disease occurred (‘promoting good eating habits, exercise lifestyle habits that improve your health’ (Student 2)). (b) Another direction is towards educating on chronic disease management meaning the doctor teaches the patient about his condition, symptoms, and prevention of the new ones, how to deal with symptoms and treatments (‘we are moving towards medicine that is dealing more and more with the prevention and not only to cure to solve the problems’ (Student 4)). Further, the students believe that Information, Communication, and Education dimension is the way of aligning the patient to the doctor, which leads to the **creation of doctor-patient relationships**. Although some students notice the stigma of involving the doctor with the patient, they believe in building the trustful relationship as a prerequisite not just for this dimension but for all other seven dimensions of the PCC ('it just opens the door to the other eight dimensions’ (Student 3)). The students recognized that establishing a confident relationship between both actors, the patient and the doctor, has contributions in their scope. Each patient has a personal story and the way he understands his disease and how he deals with the disease. The patient’s world is an endless source of information so that the patient behaviours appear as crucial in building the doctor-patient relationship. Firstly, students identify re-thinkers and non-thinkers among patients. Re-thinkers are those who are asking about the disease and seeking better information. The patient understands his health situation and the reason for a chosen treatment option which allows him to interfere in his/her treatment. Non-thinkers are avoiding asking questions about the disease. The contribution of confidence by the medical doctors in a doctor-patient relationship is based on the doctor’s ability to enter the patient’s inner world and to change the patient’s behaviour. As a tool, the doctor uses the action of asking the question that results in gaining information from the patient believing that ‘our patients are an endless source of information about them’ (Student 5). However, sometimes the doctors do what they think is best for the patient. The students recognize the role of the doctor as a teacher who is supposed to dedicate time to explain, because ‘he supposes not to expect that the patient knows what he is talking about’ (Student 3); therefore, the doctor must always make the patient understand the information. The trustful relationship is based on trustful data, and the doctors are only entitled to provide reliable and trustful information. In this context, students underline the risk of untruthful data that patients might encounter on the Internet or via other media; therefore, the students believe that trustful data reveals ‘the power of knowledge’ (‘You are dealing with the health of the person, so it is important that just someone specialized give some information to you’ (Student 4)). As illustration:

> “A lot of times I am looking at the patient and thinking ‘he does not understand anything; he has no idea what is going on’. […]. A lot of doctors do not explain things. I mean they try to explain the things what is happening, but I do not think they pay attention if the patient is understanding or not”. (Student 10, F)

In the core of **the communication**, the category involves information sharing from both actors, the patient and the doctor, and the importance of not being misunderstood. Information sharing means empowering the patient and his/her willingness to share information with doctors and other health care providers. In the same token, information sharing is related to the willingness with which doctor and health care providers share information with the patient. The students recognize the importance of existing communication between the different health care providers, transmitting the information between the doctors, and information transition and education from older to younger doctors ('get educated to inform other generations, and the younger ones that are coming' (Student 3)). The prerequisite of communication is the patient's health literacy and doctors' attitude in communication with the patient. When the patient requests information, the doctor should speak in such a way as to ensure the patient is well informed and understands, and that he provides an answer to the patient's question. This subcategory of communication is underpinned by the category of the **provision of written information** and **informed consent**. The students argue that it might be difficult for the patient to memorize oral information; therefore, the information should be provided in a written form that lets the patient check the information at any time ('Five hours after I spoke with someone, I remember maybe 10% of what I have spoken to them' (Student 2)). Informed consent is strongly linked to the informing part of this dimension. While some students perceive obtaining informed consent for treatment as a non-bureaucratic step, for others paperwork should be seen as a bureaucratic form, and essential (see Section 7.1.). However, most of the students are unanimous in considering the informed consent as pivotal since it forces communication between the doctor and the patient, allowing the doctor to explain the situation to the patient in a way that they can fully understand, and it allows for feedback. The doctors have to obtain at least oral consent from the patient.

8.1.2.2. Respect for Patient's Values and preferences

In the analysis, three subcategories are identified that determine the Respect for Patient Values dimension (*Table 37*).

Table 37. Theme I Category 2: Respect for Patient's Values and Preferences dimension and subcategories

THEME I Category 2 *Respect for Patient's Values*	Subcategory 1: Conceptualization Subcategory 2: Doctor-patient relationship creation Subcategory 3: Ethical implications

As attributes of this Respect for patient values dimension, the students highlight the importance to doctors and the patient's need for involvement in the decision-making process or personalized treatment ('Patient is looking for someone that pays attention to what he is really trying to convey, maybe not in words but in another choose' (Student 10); 'it is very important for getting the patients to take the treatment' (Student 7)). By involving the patients in the decision, students believe it helps the doctor to understand what they think about their illness and what they want to do because patients should ultimately be the ones who decide what concerns their own body and own dimension in life. Medical workers must pay attention to and take into account the patient's preferences and values behind preferences and respect them together with the patient's opinion because the patient is the protagonist and has higher importance over the doctor concerning patient preferences. Students believe that this dimension depends on the stage of the disease and medical speciality because some medical specialists spend more time with the patient. This dimension enters into the Access to Care, Information and Education and Emotional Support dimensions. For example, part of the sharing process in the dimension of Respecting patient's values relates to the patient's willingness to share the information with the doctor and hence avoidance of doctor's and patient's misunderstanding while also building up the patient's confidence and trust in the doctor. Most of the students believe this agreement between the doctor and patient about treatment procedures is formalized in the form of informed consent that we already talk about (Section 8.1.2.1). Informed consent serves to increase patient information and education on the procedure and lower the risk of unsafe sharing of information in this relation. The risk of not being informed by not reading informed consent always exists and, in this segment, the dimension of Respecting patient's values enters in the dimension of Information, education and communication. The second developed sub-category reflects students' beliefs that respect for patient's preferences helps in **establishing the doctor-patient relationship**. Both actors of this relationship have an impact on creation. The patient, as one of the actors of the doctor-patient relationship, within Respect for patient's values dimension, contributes in three segments. Firstly, the patient brings his **dimension of life**. He owns his body and inner world encompassing his beliefs, previous knowledge and assumptions that something has happened. Secondly, the segment that relates to the **patient's ability and right to have a wish**. It is essential that the patient conveys his wish and needs to the doctor. Equally important as knowing what the patient wants and needs, is to understand what the patient does not wish. The students especially emphasise the patient's right to have privacy respected, arguing that private space is respected ('They should create specific norms that allow patient not to take their decision in front of the doctor […] and give them time to think about them (alternatives)' (Student 2)). Also, the patient has the right to looking for a second opinion by asking other doctors about his concern towards anxiety right to address needs or will regarding medication, treatment or sharing information with the family. It also includes the patient's right to not be treated. Thirdly, in relationship creation, the patient brings **the right and ability to decide or choose**. Sometimes a patient will not be able to decide or does not want to decide, or the patient allows the doctor to take over complete care. This is because he does not want to feel responsible for his own health, meaning that responsibility is in other hands which opens the door for blaming others for the decision made. The doctor, as an actor in the creation of doctor-patient relationship, with respect for the patient's values contributes in four ways as follows: **by involving the patient**, **by providing consultation and advice, by letting the patient think** and **by respecting patient choice and decision.** The doctor needs to show 'a proactive attitude' (Student 1) when **involving the patient** by asking the patient more, letting him/her talk and listening to him. The doctor should understand the patient and his feelings and concerns, give feedback and talk with him about the next steps. The doctor ought to involve the patient in the decision-making process by trying to know the patient's opinion about the treatment, if he wants or not to do the treatment or to arrange an alternative for the patients, if possible. However, students believe that one segment of establishing the doctor-patient relationship is working in the doctor-patient-family alliance towards establishing communication and agreement. **Providing consultation and advice** means that the doctor explains the pros and cons of treatment options as in what the benefits and secondary effects of a treatment, possible risks and outcomes are, ensuring at the same time the patient understands the information. The doctor is supposed **to let the patient think,** giving him/her time to decide and to do it in privacy and must **respect the patient's choice and decision**. The doctor might assume that the patient will do what he says, or 'minimize the problem of the patient' (Student 10) by not caring what the patient wants, not taking into account patient's wishes and needs but relying on what is best for the patient, thinking the decision is solely in his hands. Conversely, if the patient does not give a possibility for the doctor to treat, there is not so much the doctor can do. The doctor is in charge of respecting values, even **respecting patient preference for the doctor,** or informing family and friends if the patient cannot decide. Students believe in the importance of a doctor respecting cultural values. The doctor should know the patient's cultural context and the patent's religious beliefs (without the intention and power to change, only to accept it) ('some people have the culture that is a woman should not be seen by a male doctor'; 'Jehovah Witnesses that refuse by the religious beliefs to have a blood transfer' (Student 2); 'we need to accept that; we do not have the power to force that change in the patient' (Student 3)). An independent category within this theme is an **ethical questioning** of respecting patient's values in different ways. The students express that some ethical dilemmas, ethical difference and challenges arise when practising this dimension and have implications in practice, such as privacy-related issues and the tricky question of giving the information to family and friends when it is not permitted by the patient. Also, one student highlights the importance of 'the length that the doctor wants to take respect for the patient values' (Student 2) as one of the ethical questions that every doctor has to consider. The students recognize the risk for the doctor to fall into the patient's manipulation while trying to respect the patient's values and preferences. However, the student emphasises the moments when a decision is not in the hands of the patient or when the preferences are not in the patient's best interests, arguing that in those cases there should be some sort of 'time window' for respecting the patient's values. Some illustration of the students' responses:

> "It is not only we are doing a personalized treatment for patients, but also trying to involve the patient in our decisions and doing something that they can understand and relate to, and even agree. I do think that our patients may not have our training or education, but they are entirely comprehending and understanding the situations and agreeing on suggestions on how they should and will be treated." (Student 5, M)

> "In geriatric patient, trying to understand there is still privacy, even though they are with dementia. There is still space, private space, that must be respected even if the patient cannot understand, even if patient is not helping because of the ages, just something about respect; so everyone, I think, in the team. I have to understand it and work in this way. It is not the person that has to do it." (Student 4, F)

8.1.2.3. Coordination and Integration of Care

It is interesting that for this dimension for several students, the difference between dimensions of Coordination and Integration of Care and dimension of continuity of care remains unclear. Nevertheless, four subcategories were identified to attribute to this dimension: (1) Conceptualization, (2) Coordination of disease, (3) Coordination among doctors and (4) Coordination between administration and hospitals (*Table 38*).

Table 38. Theme I Category 2: Coordination and Integration of Care dimension and subcategories

THEME I Category 2 *Coordination and Integration of Care*	Subcategory 1: Conceptualization Subcategory 2: Coordination of disease Subcategory 3: Coordination among doctors Subcategory 4: Coordination between administration and hospitals

Students believe that *Coordination and Integration of Care* dimension are about organizing and integrating all of the aspects and the elements during patient care from logistics to administration, to medical staff, nurses, and infrastructure. Students see working in a synergy and organizing elements of patient’s care among several specialities and services to direct the patient towards achieving better treatment and health benefits as attributes to this dimension. Coordinated and integrated care minimizes problems in the care process and the lack of patient’s trust in a doctor. **Coordination of disease** relates to the doctor’s way of involving the patient and along with coordinating the patient’s condition in the care process. The doctors propose different treatment options for different problems, helping patients to act appropriately with their current health state and directing the patient towards achieving health benefits. The family doctor acts as coordinator of patient’s care with a role in revising the therapy, avoiding adverse reactions on duplicate medications, building a trustful relationship with the patient. Multiple doctors might be involved in patient care; therefore, the dimension of Coordination and Integration of Care necessitates coordination **among doctors and specialities** subcategories. For example, in multidisciplinary meetings, each doctor is called upon by speciality using the best of their knowledge to help the patient. Coordination of transition between doctors and nurses in one service emphasises the importance that ‘everybody works as a team’ (Student 6). Once when the treatment or the best plan for the patient is chosen, doctors should coordinate with other specialities, and discuss with other health professionals. Some illustrations of student’s answers:

> “The patients have multiple doctors. We know that is a risk factor for developing polimedication and adverse reaction to the medication. A way to get around it is that every doctor that the patient meets should have the information of all the medication that the patient is taking, and we arrange it according to the specification of the patient's previous diseases.” (Student 10, F)
>
> “Coordination of care for me is between us, when the doctor does not have an answer, he will ask for someone's help. When the doctor has a doubt or does not understand something, he will ask for the test or a specialist opinion, and this needs coordination,

> and it also needs a relationship of trust between doctors, that is important, I think." (Student 10, F)

Nevertheless, some students believe that there should always be coordination between administration and hospitals and the community for better transfer of the patient.

8.1.2.4. Physical Comfort

After analysis of students' answers, four subcategories are identified as contributing attributes that explain the Physical Comfort dimension: (1) Conceptualization as 'hardware' side of the medicine, (2) Pain Management, (3) Physical space and (4) Doctor's attitude (*Table 39*).

Table 39. Theme I Category 2: Physical Comfort dimension and subcategories

THEME I Category 2 *Physical Comfort Dimension*	Subcategory 1: 'Hardware' side of the medicine Subcategory 2: Pain management Subcategory 3: Physical space Subcategory 4: Doctor's attitude

The students believe that physical comfort is one of the most important factors since everybody can suffer physical discomfort; therefore, students understand the Physical Comfort dimension as the 'hardware' side of the medicine (Student 10) and a visible measure. Students associate this dimension-with situations when people are at their worst time, which usually happens in hospital settings but also at appointments with the doctor. According to students' opinion, every patient needs to have physical comfort and doctors need to make the patient comfortable by being aware of the factors that cause discomfort, diminishing or changing uncomfortable conditions, eliminating unpleasant experience. Although doctors learned in basic science how to manage the patient and what is the best for the recovery, it still might differ from one centre to another. Students believe that **Pain management** is vital for physical comfort since the pain from physical discomfort might be greater than that than caused by disease. The patient's discomfort should be addressed immediately, and it is related to preventing pain even when there is no treatment or cure for the patient. This category refers to the absence of pain firstly by alleviation of symptoms but also it can relate to a patient's complaints about the activity that causes the pain. Pain management refers to the benefit of the treatment and pharmacology in removing symptoms. Physical comfort relates to material aspects that make surroundings familiar to the patient from providing clothes and their belongings, giving a bath to the patient by auxiliaries, to improving the devices for comfort as e.g., sensory stimulation for people with obstacles. One illustration:

> "Physical comfort, for instance, there is something unique to this, and it is really important because people do not think about it. […] If I have to be in the hospital for ten days because I got something, […] probably they will take out my glasses. If I would be really old, probably they would take my teeth, my watch and I won't be able to see what time it is; I won't be able to read because I have no glasses. So, those are really small details, but it is really important. People do want to know what time it is because it gives a sense of perception world around, the reality around. Because, if you do not

> know what time it is, if you are in the hospital for one month, in the middle you do not know what day it is, what time is it. Sometimes we think the people are not very well they have something neurological […] maybe it is Friday and actually, it is Monday, and then we think they have something that they do not have. No, that it is just because we take them the watch, the glasses. We suppress much information from them. We need that comfort.” (Student 8, F)

Physical comfort relates to **physical space** concerning how the patient is accommodated, what room conditions are, how many beds per room, but also the importance of number of rooms for each service, how many patients are in one hospital room, condition of beds, if the room has a comfortable chair to sit on, or has adequate and suitable light. Students believe that the hospital must have the necessary infrastructure and comfortable care units. If they do not have one, it is possible to overcome physical space shortage by building a functional network of hospitals and transforming hospitals to serve the purpose of community needs. Students emphasise the importance of **the doctor’s attitude** regarding the Physical Comfort dimension. For example, on every site visit, the doctor should introduce himself to the patient, addressing patients appropriately, asking the patient how he feels, what they need, holding the hand of a patient in times of fragility, giving a smile, telling a joke. Making a phone call to the patient is also a tool to deal with patient discomfort.

8.1.2.5. Emotional Support

In the dimension of Emotional Support, students’ answers were grouped into five subcategories: (1) Conceptual form, (2) Doctor-patient relationship creation from Doctor’s and (3) Patient’s perspective, (4) Family and friend support and (5) Powerful activities (*Table 40*).

Table 40. Theme I Category 2 Emotional Support dimension and subcategories

THEME I Category 2 *Emotional Support Dimension*	Subcategory 1: Conceptual form Subcategory 2: Doctor-patient relationship creation- Doctor’s perspective Subcategory 3: Doctor-patient relationship creation- Patient’s perspective Subcategory 4: Family and friend support Subcategory 5: Powerful activities

The students underline the importance of the Emotional Support dimension over Physical Comfort as an act of caring about the patient, which takes time and sensitivity that relates to everything, and it depends on many factors. Conceptually, the Emotional Support dimension is how the doctor relates to the patient, namely how the doctor is involved with the patients by emotional supporting him through the disease expression. Speaking with the patient, the doctor ‘establishes the space to open the problem and emotionally stabilize the patient’ (Student 7). Treating emotional aspects affect the entire treatment and help in in a beneficial way. In the same token, the importance of emotional support differs. It can be provided in primary care or hospital settings bearing in mind differences between specialities. For example, several students perceive surgeons as not offering much emotional support underpinning this with an explanation that ‘their intrinsic rule is to be more practical’ (Student 10); moreover, they are trained to be like that. In subcategory doctor-patient relationship creation, the contribution of both actors to the relationship creation is identified. **The patient’s contribution** involves the patient’s inner world of emotions that differs from patient to patient. It is essential to understand that patient finds himself in an unusual environment and an unpleasant situation, where he might feel scared for many reasons (e.g. lack of information). By having a chance to express himself through talking, the patient gets the feeling of being heard, expressing his doubts and fears. The patient’s emotions are part of disease expression and essential for addressing his disease and subsequent decisions. The different conditions require different time and support, but also some patients are emotionally weaker or in a greater need for emotional support. **The doctor’s contribution** to building the doctor-patient relationship in the context of the Emotional Support dimension is mutual. For instance, the doctor is perceived as a source of confidence supposedly to help to patient and family to deal better with the situation. The doctor must establish a relationship with the patient by giving the time for the person to be emotional in consultation, giving appropriate importance to all aspects of the patient. Students perceive providing emotional support as one form of how the doctor involves the patient in his care, for which the doctor has to show **ability, responsibility and empathy.** The doctor’s **ability** to engage the patient in emotional support involves the doctor’s conversation with the patient within his capacities. The doctor should let the patient talk, listening and talking with the patient about the patient’s feelings, thereby discovering what is troubling the patient. Taking more time with a patient, the doctor understands each problem better. This ability is valuable since the patient’s problems are various and from different areas while at the same time each patient expresses the syndrome differently from others. The doctors have a **responsibilit**y to the patient and his family, meaning he is responsible for hearing the patient and family members and for being present if they need to talk about alternatives. The doctor must refer to professionals if he assesses that the patient needs a psychologist’s or psychiatrist’s evaluation, and support the patient’s acceptance or refusal of the need for psychologist intervention. Some students believe that emotional support depends on the speciality of doctors rather than on the individual doctor’s characteristics. The students state that for emotional support it is essential is to have **empathy**. The doctor needs to empathize and be sympathetic toward those in need. While some students state that some doctors have difficulties empathizing and that empathy cannot be taught, others believe that education on being more empathetic helps and that some doctors are trained in empathy and establishing a good relationship. Being a human being before being a doctor means being able to understand someone’s problem. It is challenging to teach as it appears to be a natural thing, whereas the doctor’s previous experience with a similar situation helps in understanding someone’s problem. It is not that doctors are afraid of physical contact or being emotionally closer with the patient. In some cases, students witness that young doctors are trained by older ones not to be emotionally close with the patients. Younger doctors differ from the older doctors concerning this domain and are more likely to open themselves to emotional sensitivity. However, doctors are human too, so students emphasize the importance of **the doctor's emotional self-protection.** Medical professionals provide emotional support, but family and friends can make an impact on this dimension; therefore, teamwork between doctors and patient's family in providing psychological support is vital in healthcare. It is not just that family and friends provide emotional support, but also family and friends need assistance. The students believe that emotional support for carers is neglected when doctors are exposed to stress. As an independent sub-category, there is an illustration of emotional support through **powerful activities**. Power of physical touch as giving a hug to the patient (Student 2) or holding a patient's hand (Student 10).

> "I did part of my internship some months ago in Brazil where they have a different culture that then we do, and it is funny that they are trained to that the doctor hugs every patient." (Student 2, M)

Further, students recognize the power of music when 'listening to music brings an emotional therapy to the patient' (Student 6), power of humour when 'the doctor is making some jokes together with the patient' (Student 6) and the power of listening as it is 'listening to an old story about patient's life experience' (Student 10). It is crucial that in any of those activities, the doctor respects the patient's privacies and does not cross a harassment borderline (Student 10). Although it is challenging to learn emotional support through provision at University, students state that formal education helps in a way as well as learning by observing.

8.1.2.6. Involvement of Family and Friends

Five subcategories were identified as determinants to *Involvement of Family and Friends* dimension as follows: 1) holding family responsible for the care, 2) right to be informed, 3) factors of involvement, 4) approaching caregivers and 5) doctor's role (*Table 41*).

Table 41. Theme I Category 2: Involvement of Family and Friend Dimension and subcategories

THEME I Category 2 *Involvement of Family and Friend Dimension*	Subcategory 1: Holding family responsible for the care Subcategory 2: Right to be informed Subcategory 3: Factors of involvement Subcategory 4: Approaching caregivers Subcategory 5: Doctor's role

Students agree that the presence of families and friends is useful as part of the support system for patient care in primary and hospital care environments ('If they have the family member that is sitting in bad condition, I do think that it is their job to take care of them, that is a part of our culture to have this, to have his support' (Student 10)). Talking to a trustful friend can determine the future of a patient´s health problem, but students believe that friends support more at home than in an inpatient care context. When the doctor involves family and friends, students believe the doctor wants them to understand better some symptoms and **hold them responsible for the patient's care.** The doctor holds the family accountable in three ways: First, the family knows their relatives well, so their involvement is crucial in sharing information with the doctor since the information provided is a vital part of the care process. Second, participation of family and friends, as a part of the patient´s environment, means to maintain the familiar surroundings to the patient that is an unfamiliar situation. Third, the family is an ultimate provider after patient discharge, so they have a responsibility for the patient's recovery and the patient's health status improvement. The family has the **right to be informed** about the current patient's situation, a precaution they have to have and the measures they can do at home to support the loved one. Information provision might be tricky; therefore, by maintaining the privacy of sharing information and obtaining the patient´s agreement, the doctor maintains the patient´s right to privacy and avoids misunderstanding of information. Whether the family will be involved in the patient's care process or not, depends on **various factors** divided into four groups: (1) group of factors that **depends on the patient's values, wants and needs**. (2) group of factors that depends on: **the type of problem the patient has and the patient´s** capacity to provide information or to accept his problem. There are situations when the patient is unable to take care of himself or when the patient is not in a condition to make decisions ('The patient it is not able to provide the information; at some point, the family or caregiver is an important part of the care process' (Student 10)). (3) Group of factors that relate to a **family's willingness:** by showing an interest to be involved because it might happen that the family does not want to be involved; (4) Group of factors that are related to the existing **difference among specialities:** sometimes the importance of involving the patient's family and friends comes as a first or second plan. **Approaching the caregivers** appears to be an independent sub-category. Caregivers are approached in two domains. Firstly, understanding caregivers are essential for the process of the patient's healing because the family supports the patient physically, psychologically, emotionally and in material means. The doctor needs to assess, in the first place, the family's willingness to be involved, then their socio-economic aspect if treatment requires family support in everyday activities (e.g. giving medicine at the right time, bringing the patient to the appointment). Secondly, the family often can experience burnout, suffer emotional stress, develop a psychological illness; therefore, part of the treatment process is to support caregivers ('A lot of people with good care for someone for a long time and they eventually die, may experience some psychological moment like depression' (Student 8)). The student believes that the **cognitive part of the doctor** plays a significant role when it comes to the patient's family involvement. Firstly, the doctor has to do an assessment of the need for family involvement and understand how it is vital for both patient and family to be involved ('if that patient needs to be followed by the family or if he has the strength to deal with the problem by own' (Student 4)). Secondly, the doctor must understand the patient's family environment and their emotions, understand the patient context in which he will be treated, what the relationship between the patient and his/her family is if the patient has the support of the family member. Thirdly, the doctor involves the family in several ways: by giving a call to family or calling them for the site visit, talking with them, helping the family understand the disease better, convening clinical information about the patient and his progress, educating how to treat the disease, the importance of treatment, treatment plans, treatment goals and possible limitations, explaining what to do, how to do medication management and teach them how to provide support to their loved one. Fourthly, besides giving all the information to the family and teaching them strategies to cope with the disease of a beloved one, the doctor provides emotional support to family and patient by offering psychological help to the family and patient or directing the family and the patient towards associations by explaining the role of associations to support families. The doctor might or might not have in mind this dimension during his practice; however, the doctor should be trained to know how to involve a family of the patient and empower the family to spend more time with the patient.

> "It is impossible to deal with a psychiatric patient without dealing with the family because talking with the psychiatric patient; you can't say if they are telling the truth." (Student 4, F)
>
> "In the Pediatrics, we have the patient who is a child, and we also need to access the parents, caregivers, which might not be the parents, the parents are just a general rule. We need to be able to understand if the caregivers are essential for the process of healing, or whatever disease that the patient has, or they will be kind of difficult to handle and difficult to the whole process, I mean disease and later health of the small patient." (Student 10, F)

8.1.2.7. Continuity and Transition of Care

While some students state that they have never heard about this dimension, for others, the difference between continuity and transition is not clear. Several four subcategories were identified as attributes of the dimension of Continuity *and Transition* as follows: 1) conceptualization, 2) follow the patient, 3) educate the patient and 4) teamwork (*Table 42*).

Table 42. Theme I Category 2: Continuity and Transition of Care Dimension and subcategories

THEME I Category 2 *Continuity and Transition Dimension*	Subcategory 1: Conceptualization Subcategory 2: Follow the patient Subcategory 3: Educate the patient Subcategory 4: Teamwork

The students believe that the Continuity and Transition dimension involves the patient being able 'to continue his healing process towards better health' (Student 10). It is about following and orientating the patient for the specialities within a well-developed integrated network. All elements are integrated: from various teams who provide patient care to all different steps of patient's continuous care. Students believe that everybody is part of the important patient's team where the knowledge is pivotal in providing continuity. Continuity and Transition dimension depends on the speciality, and it is about the Information and Education dimension. The subcategory **Follow the patient** appears to be dominant among students' responses emphasising the difference among specialities and public and private practice ('I see that in the hospital, they let the patient go and it is for the GP to take care of him' (Student 6); 'You choose a private doctor […] to be always followed by the same doctor' (Student 4)). On the primary level, the family doctor follows the patient and his healing process but also directs the patient through the health system and facility of the doctor of making an appointment for the patient. Since that treatment might be conducted in stages, there must be one doctor who will follow the patient's care. One doctor is seeing one specific patient, ensuring that there is one doctor who knows all the dimensions of the problem that the patient has. Changing the doctor should not affect the patient's clinical path. Continuity of the treatment in surgery is specific due to the possibility of the patient being followed in ambulatory settings. However, a doctor may be afraid of caring for another doctor's patient because the former is not familiar with the work of another doctor. Students highlight the doctor's potential question of benefit of transferring to another doctor. The doctor looks for continuity when they believe that is important for the patent and transit the patient only when they think they should, ensuring that the safe and the same amount of care will be provided when transferred. Illustration of student's answers:

> "If you go to the emergency or if you go into the hospital just for a reason you cannot choose the doctor. So, there is a lack of continuity, and it is difficult to solve it because of course, you cannot expect that when you are at the hospital, you cannot expect that there is always that is the doctor that follows you." (Student 4, F)

Educating the patient is essential, meaning the patient gets provided with information and explanations regarding every step of his care process after which (s)he can demonstrate a willingness to be transferred. The patient has to be prepared for life after discharge outside of the hospital and able to continue his healing process (e.g. continue to take certain medication, certain measures, lifestyle changes at home). **Teamwork,** in this dimension, encompasses the importance of all entities in the care process of patient working as a team. Student beliefs are that the doctors in the process of patient's care are talking, exchanging information and communicating between different professions. It is essential that that information passing between doctors is relevant and confidential. Information shared between doctors is often in a written and accessible form.

8.1.2.8. Access to Care

Within the dimension of Access to Care it is possible to distinguish five subcategories as follows: (1) Conceptualization, (2) territorial access, (3) socio-financial access, (4) timely access to specialized and qualified care and (5) access to information and medical record (*Table 43*).

Table 43. Theme I Category 2: Access to Care and subcategories

THEME I Category 2 *Access to Care Dimension*	Subcategory 1: Conceptualization Subcategory 2: Territorial access Subcategory 3: Socio- Financial access Subcategory 4: Timely access to specialized and qualified care Subcategory 5: Access to information and medical record

Students believe that the Access to care dimension is how the health care system takes care of the people meaning that care should be universal; everybody should have access to care, not be barred, with no exclusion for any reason on gender or social status. The patient is a human; therefore, regardless of any patient´s condition and health status, he should have equal access to care. Access to care appears to be a systematic question and a precondition for the other seven dimensions. While some students recognize this as a method of intervention in the political aspect, others underline the existing difference in this domain between the private and public sector. One illustration:

> “If the person does not have first access to care, the remaining seven can be perfect, but if the patient does not come to us, it is wasted, they do not benefit from it.” (Student 5, F)

Students believe that access to care exists in four different forms. Firstly, **territorial access to care** is seen through the prism of territorial and spatial access to care, meaning everybody should have physical access to a health institution and access to care no matter where the patient lives. It should be equal between the several different geographical locations and rural vs urban area. Secondly, the students believe that access to care could be seen through the prism of socio-financial access, meaning that financial status and position in society can affect patient’s access to care. The patient has different opportunities depending on financial means, meaning that some patients can have access to the private healthcare sector while others not (‘People who have money can go there and people who do not have, have to wait and then maybe not have the same opportunities than the other people’ (Student 9)). Students believe that the patient should have **timely access to specialized and qualified care** meaning the patient assumes easily achieved specialized and qualified consultations and having access to medical procedures and treatment independently of the disease and condition in an appropriate or reasonable amount of time. Following the patient’s needs for health care does not mean just easy access to consultation but also referring the patient, a rapid transfer to other hospitals, and specialized and qualified care for treatment. **Access to information and medical record** is essential to the segment of access to care that we presented earlier in this chapter (Section 8.1.2.1.). Access to Care dimension appears to be related to Information, Communication and Education dimension and Coordination of Care. Thus, some students believe that it is a precondition that the patient benefits from the other seven dimensions; therefore, it is essential to guarantee this dimension.

8.2. THEME II: PCC AS PROCESS

INTRODUCTION

Students' beliefs about the PCC as a process have been divided into four groups (*Table 44*). At first glance, students were faced with difficulties in finding answers to the identification of parts of the PCC process. To facilitate the interview, we asked students to identify the actors in the PCC process (8.2.1) and how each of the actors benefited from the PCC (8.2.2). Further, the students rated the eight Picker’s dimensions explaining how each dimension is important for the process of the PCC based on their beliefs (8.2.3). Finally, students share with us an example of the PCC process (8.2.4).

Table 44. Theme II: PCC as process and categories of students' interviews data

THEME II PCC AS PROCESS	Category 1: Actors Category 2: Benefits/advantages of implementation Category 3: Ranking of the PCC domains based on the importance Category 4: Examples of the PCC as a process

Each of these four distinguished categories and subcategories is further discussed in detail.

8.2.1. Category 1: ACTORS IN THE PROCESS OF PCC

We asked students to identify the actors in the PCC. Students believe that everyone who surrounds the patient, those who interact during patient’s illness and disease, all sorts of professionals who work in the healthcare environment, are the actors of the PCC process. The students universally agree that the first actor is a patient in the PCC since (s)he is in the centre of every care process. Further, the actors are medical professionals - those who directly or indirectly provide care to the patient, namely: doctors, nurses, service chiefs and service directors, professors, acknowledging the importance of health technicians and social assistants in this context. Hence, the actors of the PCC are functionaries who are not in charge of direct care but are very important in this chain of patient’s care provision like individuals that are members of the administration on a different level, hospital managers, various health providers and politicians but also family members, directly or indirectly involved. All these actors, according to students’ beliefs, should be in a network, forming a team for patient’s care.

8.2.2. Category 2: BENEFITS/ADVANTAGES OF IMPLEMENTATION OF PCC

The students expressed beliefs about benefits of the implementation of the PCC in practice for each of the actors, respectively: patient, patient’s family and friends, doctor, medical organizations, state and society.

8.2.2.1. Benefits for Patients

In general, students believe that patient is the one who benefits the most, more than a doctor because it relates directly to his/her health, health status and outcomes of treatment. We could distinguish the number of nine subcategories that explain how the patient is involved in his care and how it is beneficial for him/her. Firstly, the patient benefits from **personal reflection on disease and symptoms in the PCC care process** because the patient can provide better information about the disease and symptoms and express them. By taking into account the patient´s personality and information about symptoms, the doctor can better analyse the individual aspects of disease expression. The patient provides information that guides the doctor during his/her care process. Secondly, the patient benefits from a **better understanding of the situation in the PCC process**. By helping the patient to understand better what his treatment options are, the patient accepts the treatment option easier. The patient involved in decision making becomes involved in his treatment and gets the opportunity to agree with the treatment. Thirdly, the PCC brings a benefit for the patient in terms of **better care provision**. Based on the patient's reflection on disease and symptoms, the doctor can treat better by alleviating symptoms and adapting treatment to the patient's needs.

Patient benefits of the personalized treatment determined by his/her needs lead to better care provision, treatment outcomes and patient's satisfaction. The patient's benefit is also reflected through his adherence to medical therapy and treatment measures, even surgery. It means that administering therapeutics is done in a better way; the patient adheres to and follows therapeutics better. Fourthly, the **patient´s family environment** is taken into account and well understood by care providers. The patient gets an advantage that if it is his wish, his family gets involved in his care. Better relationship with family leads to that the patient becoming supported during the process of care. Fifth, the PCC gives the patient a **feeling of being important.** When the patient feels that doctor has more time for communication, the doctor is attentive, that his problem is treated as unique, that he/she is not one of the others then the patient starts feeling to be important and being in the centre of care. Sixth, patient's benefits from a double gain in confidence: in medical professionals and in the health system. Higher confidence in medical professionals means that patient improves his/her trust in doctors, building a trustful doctor-patient relationship. The patient becomes confident to agree with a doctor, and is less likely to look for a second opinion. Seventh, an advantage for the patient is that the PCC diminishes the number of medical errors and secondary effects of the treatment, adverse events and avoidance of adverse events. Eighth, the patient benefits from **reduced cost**. The patient´s financial perspective is to be considered as an advantage when the patient reduces the extra costs of looking for a second opinion because he does not trust the first one. Ninth, students believe that with the PCC, patient benefits in **affective outcomes** as it improves the quality of life, reduces the anxiety and stress related to the disease and treatment; also it can increase a patient's feeling of being motivated to adhere to therapy since that happy patient is a satisfied patient.

8.2.2.2. Benefits for the Patient's Family

All students believe that the PCC has a positive impact on the family, and some believe that they benefit even more as health care provision goes more towards the PCC. Benefits for the patient's family is dual. Firstly, family benefit from being involved in treatment and being integrated into the care process of their beloved one. For example, when the **family provides support for the patient,** the doctor gets the chance to understand the patient's family environment so subsequently he provides the information that helps the family further to provide better support or better orientation of the patient's care process. The family benefit from being educated by the doctor, knowing the disease better, getting treatment adapted to the patient's needs and better results from personalized care.

> “If the treatment is adapted, I think the patient will feel better, so maybe the family will feel better too because the patient is treated well.” (Student 8, F)

Secondly, in the care process that is patient-centred, family benefit from **receiving support during the process of care**. Family needs support during a complex process of care that, in some cases, might lead to burnout. Students argue that helping family members and caring for a family member as well, reduce for a family the burden that comes from the patient’s illness itself but also the anxiety and stress related with the disease. Students believe that supporting the family can reduce the psychological and emotional burden on the family making the family feel better and relieved (‘get more free time for doing other things’ (Student 10).

8.2.2.3. Benefits for Doctors

While some students believe there are more advantages for a patient than for doctor, and that it is harder to identify how the doctor benefits from the PCC, others think there is mutual benefit and usefulness. The students believe that the PCC helps the whole process of care and it appears to be rewarding for the doctor in several aspects: the doctor’s relation with the patient, the doctor’s relation with the team and the doctor’s relationship with himself. Firstly, the doctor **facilitates the patient’s trust**. The doctors might have a different perspective on the treatment’s outcomes and benefits. Nevertheless, the students believe that during the PCC process, the doctor would be able to obtain more relevant information, grasp knowledge related to the patient, understand different dimensions affected by the disease, increase analytical skills of individual patient’s disease expressions, improve understanding of recognizing signs and improve own ability to identify the root of the disease. After this, the doctor can provide useful advice for patient care, better therapeutics and to provide better treatment. PCC care is the way the doctor becomes involved in patient care which leads to better treatment, efficiency to transmit, and the ability to direct the treatment. Hence, the doctor’s patient-centric attitude increases the trust of the patient and improves the patient’s confidence in the doctor. The students believe that not only the doctor’s involvement is sufficient for the treatment in the PCC process but the fact of knowing the patient’s commitment too. In the PCC process, the doctor gains a patient who accepts treatment options aligned to his/her therapeutics and treatment more easily. Knowing that the patient will commit to the procedure, helps in the whole process for the doctor. The rewarding outcome for the doctor is the achievement of better patient’s results and prognosis (‘for the doctors that see the outcome not as only mortality but more as quality, quality of life’ (Student 6)). The process of patient’s care that is patient-centric helps the doctor in increased awareness of the patient’s financial burden when it comes to financial choices and helps the patient to make a cost-effective decision based on mutual trust. Secondly, the doctor benefits from the PCC in terms of **facilitating teamwork**. The students believe that in the PCC process, the doctor’s work appears to be more efficient once when the PCC actions are defined. It relates to avoidance of adverse events and reduction of errors, facilitates practice and teamwork, increases work efficiency and reduces tension. In the same token, PCC facilitates and enhances communication and doctor's possibility of conveying a different set of messages. Well-established communication between teams reduces time spent in miscommunication and in problem-solving and improves patient's coordination and transfer of care. Thirdly, students believe that the doctor benefits from the PCC at an **increased level of happiness about either professional or personal satisfaction** arguing for the PCC as a matter of prestige. The doctor gets the chance of professional growth, gaining experience through the PCC and improving skills and capabilities. In a way, the doctor becomes forced to use PCC actions to improve competencies and efficiency. The rewarding outcome for the doctor is professional satisfaction from a trustful relationship and successful patient's treatment ('the doctor has gained the trust of the patients […] I think it's fulfilling' (Student 10)). Also, PCC helps a doctor to reduce tensions related to workload and burnout, which makes him feel relieved and happier. Some illustrations of student's answers:

> "If the patient understands the doctor is working that way with the patient-centred attitude, I think the patient trusts more. […] If the patient follows his therapy better, you can do your work better. You do not always have to tell him to do this, to check the pill, it is just everything goes better and, yeah, if the patient is going well, also doctor and team they benefit from it." (Student 4, F)
>
> "The professionals will grow, will have better skills, more experience. They will be able to identify the cases in which they are doing something wrong, and they will try to resort more to the patient." (Student 5, M)
>
> "One factor that favours, that helps to deal with, that is the satisfaction from the treatment we get with the patients. So, if we get more involved, we can treat better, and then when you treat better, if you feel more personal with the patient when he gets better, we are happy about it. If you do not look at the patient, we will not be affected by if he gets better or not." (Student 7, M)

8.2.2.4. Benefits for Medical Organizations

Medical organizations benefit in several ways according to what students believe. Firstly, the benefit of the PCC is **communication improvement** within a medical organisation. The PCC promotes teamwork among employees of medical organizations and more communication among various teams. More discussion and communication mean less miscommunication and less time to resolve misunderstanding and less possibility that the patient will look for a second opinion. Secondly, the organisation profits from a **better work environment.** For example**,** avoiding a significant turnover creates a better work environment in which stress level among employees is reduced, and work motivation is at a high level. A positive work environment is essential for a good work relationship and improved work efficiency. Thirdly, a medical organization benefits in terms of **improving service provision**. Improved service provision relates to efficient resource management and optimized resource allocation. With increases in the availability of facilities (e.g. making more physical space, increased number of available beds) and a reduction in unnecessary diagnostic exams and procedures, the organisation provides equally good or better quality of service to the patient. The PCC appears to be an instrument for efficient time and resource management. For example, a medical organisation can benefit from “outsourcing” patient’s family for service providers which in both cases can bring better outcomes of treatments with fewer costs. Fourthly, in the same token, students believe that medical organizations benefit from the PCC in the financial aspect of **efficient expenditure**. In economic terms, efficient expenditure means less cost for patient and in total, less money spent on unnecessary things, and more money in the budget for other activities and investments. The PCC has an economic value that is less expensive, and less money spent in the long run.

8.2.2.5. Benefits for State and Society

Students believe that the state and society benefit from the PCC, firstly, by **improving the health of the population** and having more healthy people in society. State and society should deal with the health of the population by putting more attention on improving the prevention of illness and minimizing the number of ill people and the PCC appears as a suitable tool. Secondly, students believe that society benefits from the PCC in the way that the population **recuperates and empowers trust in a doctor as a social class** (‘society would trust more the doctors and what doctors say’ (Student 4); ‘If we are going to patient-centred care direction, we can recuperate the trusting in the doctors […] if the patient does not like one doctor or the treatment that one doctor gives to him, they just changed the doctor because they do not trust him’ (Student 4)). Thirdly, the entire society benefits from the PCC through universal coverage and social security since everybody should feel more secure. **Balanced social care provision** means prevention of exclusion of a sick person from society, involving the patient in the community and the more significant role of patient’s association in the patient’s care process. Also, students state that coordination in care and communication between teams helps in the provision of care and in minimizing patient’s problems. Fourthly, **cost-benefit expenditure** is a matter of concern of any state. According to students beliefs, by implementing the PCC, the state would benefit through reducing costs. For instance, reduced time of hospitalization means reduced costs for the country and society, and prevention is less costly than treatment. Shortage of money affects the citizens; therefore, money distribution within national funds should be rational and distributed among the patients in need that relate to balanced social care (‘If we can distribute the money for the patients that they are in needed, and make a plan for this kind of treatment, probably in the future we are going to have more balanced social care’ (Student 8)). Teamwork surrounding the patient is not expensive in the long run; consequently, the PCC, according to what students believe, is less costly for the long term for the state and society.

8.2.3. RANKING DIMENSION BASED ON IMPORTANCE IN THE PCC PROCESS

The students ranked the eight Picker dimensions according to their beliefs in the importance of each of the dimensions in the process of the PCC. For most of the students, in first place is positioned the dimension of *Information, Communication and Education*, and in second it is *Access to Care*. Dimensions *Emotional Support* and *Respect for Patient’s Values* share the third place. Results show of the dimensions mentioned above, all students put them among the top three most important for the PCC process. *Physical Comfort* and *Coordination and Integration of Care* follow with very similar ratings. At the bottom are *Continuity and Transition* and *Involvement of Family and Friends*, also very similarly ranked. The reasons the students choose one dimension over others are because of using as a criterion how much it is directly connected to the patients or how much they need to do it in everyday practice. These dimensions at the bottom of the list are those that in the process of the PCC provision are directed to the support systems of patients (e.g. Involvement of the Family and Friends) or appear as less important for their everyday work (e.g. Continuity and Transition). Nevertheless, some students believe it still depends on the moment, and the type of illness the patient has.

8.2.4. EXAMPLES OF PCC AS A PROCESS

The focus in this category was the students' beliefs about what are integral parts of the PCC process and possibly to provide an example. Grouping student answers, we distinguish four dominant groups of the PCC process parts. For one group of students, the PCC process relates **to building a trustful and long-term relationship,** for other groups it relates **to exploring and understanding patient relations with the environment**, for the third **to multidisciplinary team working** and for the fourth to **data-management process.** Among those who think that the PCC is a process, they believe it is a process specifically in primary care where for the long-term relationship with patients to exist, students argue there should be a high level of trust in the relationship behind any PCC process. The trust in the relationship depends on three factors - the doctor's speciality, the doctor's ability to empathize with the patients and the ability of both the doctor and the patient to communicate. Long term relationship is a characteristic of family doctors who build something almost like a friendship relationship with their patients. The example below illustrates an experience one student had and their belief on what the PCC should be:

> "I thought it a lot in a family doctor when the patient comes with a wife or husband, and they have a friendly integration, interaction with the doctor, where the doctor explains what is going on, explains, for example, the results of the tests from the other specialities. The doctor gives a more or less informed opinion, and if the doctor does not understand completely or fully what is happening, the doctor will transfer the patient care to the speciality-specific for whatever the patient has. The patient is much more willing to comply with the treatment, to comply with the things that will help him in the future. This is not the hundred per cent always and for all the patients. Even when you analyse the situation by always having the same doctor in the room and the different patients, most of them will be complying or not all of them. But **I do think that this is what patient-centred care should be**. Should be a relationship of trust where the doctor takes his or her time to explain what is happening, explaining in what way does this interfere with the patient's life and example if it is a chronic disease of any illness like diabetes or some sort of cardiac disease, or even arteriosclerosis, something that is chronic, did the patient does not see the results of the illness, but also he has complied with medication or else, he will have consequences in the future […] it is very important or much more likely for the patient to understand why he has to do this medication despite the fact he does not feel the disease yet himself or the consequences of the disease. (Student 10, F)

For some students, exploring and understanding patient relations with the environment towards achieving responsible treatment and healing processes appears to be an essential component in the process of patient care. At least three participants indicated this sort of belief:

> “The process I think will be really analysing the social extract from which the patient drives from, the family or not that is integrated, all those social aspects, and how the patient feels really about the disease, how he is going to take it. That is related to the insight of the disease he has, and it is going to influence the treatment. I think that is the process of responsible treatments.” (Student 7, M)
>
> “We should be able to perceive not only the patient, but his relations with the environment, with family, his surrounding, family and environment and it means that we really should try to give our best to acknowledge that the patient has a disease or condition that has to be treated, but also has beliefs, has ideas on his own right to intervene in his own process of healing.” (Student 10, F)
>
> “In the Paediatrics we have the patient who is a child, and we also need to access, to be able to approach the parents, caregivers, which might not be the parents […]. We need to be able to understand if the caregivers are essential for the process of healing, or whatever disease that the patient has, or they will be kind of difficult to handle and difficult to the whole process, the disease and later health of the small patient.” (Student 10, F)

According to the beliefs of some students, the process of the PCC includes accessibility to professionals from various areas of care who should be active in multidisciplinary teamwork. Three illustrative examples:

> “I think that the equip it is very important to work, thinking about in the group, I mean not the idea of the doctor that does everything it is passed. It is important to work in a group, so the nurses, the doctors, they need to work in that way. In the geriatric patient, trying to understand there is still privacy, even though there are with dementia, there is still space, private space, that must be respected even if the patient cannot understand, even if it is the patient is not helping because of the ages, just something about respect. So, everyone, I think, in the team has to understand it and to work in this way. It is not the person that has to do it.” (Student 4, F)
>
> “If we try to work with all the patients or is the patients try to get their treatment without involving the doctor, sometimes it has also happened, sometimes, for example, patients are very forward in what they want, being them exams, being the treatment, the medication, that sometimes they cannot even manipulate the medical professionals into giving them what they want. This might resolve their problems, but it is not the patient care and might have other problems later on the line. In the same way that medical professionals who are from a variety of specialities are doctors or nurses, the auxiliary staff, they cannot work separately. that is something that, I think, could be improved in a lot of hospitals and a lot of services that the medical professionals treated them medical conditions; the nurses do their nursing care. Sometimes it lacks communication; it lacks the kind of mesh that would really benefit the patient. It would be really what I do believe to be patient-centred care. I do not think that there can be actions. I consider being patient-centred that simply eliminate one of these pieces. I think they need to be all together to form what we really need.” (Student 5, M)
>
> “If the patient agrees with the treatment, maybe, for instance, sawing a prescription, a big problem in our clinics, they forget this is normal, there are plenty of prescriptions,

> and there is no doctor that can tell him or her to adjust, to tell her that she has duplicate or prescriptions, pills that she was taking twice ...well the same medicine that is from another brand. So, if she has a doctor and she has a person who epicure with all other doctors, speciality doctors, if she has a heart problem, it is a heart doctor; if she has any problem there is someone that can epicure, it will be great for her, she would not have to spend a lot of money on medicine. She spent a lot of money on medicine. She has a box full of medicine for two years or something like that, plenty of stuff she is not taking. She goes to one doctor: "no… she is not taking this well take this one". **This is a good example of what patient-centred care is not** because she is not in the centre of all the physicians and all the nurses, and all the people that contact her. She is a citizen, and she has no place. So, she is following the rules, and she is following prescription, and doing exams that are the part of the treatment." (Student 8, F)

> "We need to evaluate the reason why the patient is ill or why he is searching for help. If I am a doctor and have a patient coming to me, I need to evaluate what is the objective of his or her visit for my consultation. After that, I need to evaluate, to understand all the aspect that may contribute to their illness or may have an impact on the outcome. So, I need to know if the person had some life event that is important to the process; if a person had been familiar before, his or her family would be there to help. Also, another action in patient-centred care is related to the family because they will need help from the family. I need to evaluate this aspect because if the family is able to help, I need to evaluate their life. After that, I need to establish with a patient, that is an important part, a plan for coming for the treatment. So, I need to be anticipated if he or she is in accordance with what needs to be done and to arrange a way of... well, just to help... but what I want to say is to try to negotiate with the patients the best way, the best possible way to make the treatment. That may involve discussing with other professions, with other people that will help, it will help a multidisciplinary approach, and the patient should, in the first moment she might not be there, but after discussing with the multidisciplinary team, the patient should know what might happen, what he or she would do, and which people will contact to take the treatment and to be able to improve. So, the process will be to identify needs within that multidisciplinary team and come with the patient a plan for dealing." (Student 8, F)

For one student, it appears that **data management** is a part of the patient-centred process of care (Student 6). Moreover, in the final instance, the PCC process includes dealing with numbers. Although in practice, doctors usually do not deal with the numbers and statistical data because the majority of doctors perceive it as something bureaucratic, health institutions and administration should possibly change this attitude among doctors.

8.3. THEME III: EXPERIENCE WITH PCC PRACTICE

INTRODUCTION

In the theme Experience with the PCC practice, students shared their experience of the PCC practice in Portugal and assessed the existence of the PCC phenomena in hospitals where they have, or previously had, clinical practice (8.3.1). Each of Picker's eight dimensions were assessed within a scale ranging from 1 to 10, students giving a possible explanation for giving that mark (*Table 45*).

Table 45. Theme III: Experience with the PCC practice and categories of students' interviews data

THEME III: EXPERIENCE WITH PCC PRACTICE	Category 1: Existence of the PCC in practice Category 2: Identified barriers for PCC in practice Category 3: PCC improvement

Furthermore, students identify possible barriers in practice (8.3.2) and possibilities for improvement for each of the eight dimensions (8.3.3).

8.3.1. Category 1: EXISTENCE OF PCC PHENOMENA IN PRACTICE

Students believe that the PCC exists to some extent in Portugal arguing that the PCC in practice differs if it is in primary care or at hospital level, but also it is very different from hospital to hospital in Portugal. However, they experienced that even in the same hospital, the PCC practice varies from service to service and from team to team. In general, the students believe that most of those eight dimensions exist in everyday clinical practice in Portugal in that some of the students have never witnessed all those dimensions in action or care organized in this particular way as is presented through the eight Picker principles. Consequently, when the students were assessing the existence of each of those dimensions, the students were stressing often that their marks were based on a mean mark because they had had quite different experience concerning the same dimension. For example, almost all students emphasize they had experience with hospitals to whom would give a maximum mark because in those hospitals students were taught about the importance of the PCC, while other times the students were in a hospital where they did not talk at all about it so that students assessed with minimum mark. Concerning the PCC dimensions' assessment, the students appraise the weakest dimensions as being **Access to Care and Coordination of Care.** Argumentation for this lies in students' beliefs that those are two dimensions that are not as strong or not as involved as the other dimension in practice, and they differ slightly in hospital and family care practice. Further, we explain students' experiences with each of the eight dimensions of the PCC in practice.

8.3.1.1. Information, Education and Communication

According to students, there are not usually many problems with the information and education dimension on the part of Portuguese doctors who are well-educated and possess relevant information; but they claim this dimension is not always observed in Portugal. Firstly, the problem appears in transmitting that information to the patient. Students saw doctors and nurses trying their best to explain the situation to the patient, but frequently they had the experience where doctors were not informing the patient in a good manner ('I do not think we educate; I do not think we inform the patients well enough' (Student 5); 'there are surgeons that believe in not talking to the patient before the surgery and I see surgeons that believe we need to talk to the patient before surgery […] that is very variable' (Student 3)). They believe it happened because it appears that for doctors it is easier just to understand the symptoms, give the diagnosis, and prescribe the treatment for that kind of disease. In this kind of situation, they did not witness the doctor trying to explain more about the health condition and the risks of not doing the treatment, or how to prevent some disease. Secondly, the students believe that in Portugal, much investing is done in the later stages when people are already sick, not at the beginning of the disease. In the late stage of the disease, the patients have that education about the symptoms, disease, and treatment, but the patients do not have that information and education when they are not sick. Students acknowledge that some improvement has been made in Portugal recently, especially in metabolic syndrome disease management where the nurses do very well on that part because almost every chronic disease has an educational program. Illustration of a student's narrative:

> "I have heard about it, about one project on TV where are they, patients that will do a surgical procedure or they have and the people that will take care of them have a class where doctors explain to them the procedures, they tell them what can happen, what are the possible complications what they should do to prevent them. I thought it was very interesting because I think that in Portugal there is still a big problem regarding the communication between health providers and patients." (Student 2, M)

Thirdly, the student reports that sometimes the doctor does not pay attention if the patient is well informed or if the patient comprehends what he is supposed to do, for example, regarding his medication. Moreover, the doctor sometimes does not share information in a written form, and the patient does not write either, so the treatment is not well done. One of the strategies for coping with this problem that the student witnesses the doctor writing the patient instructions.

8.3.1.2. Respect for patient's values and preferences

The students have a different experience in practice concerning the organization trying to meet patient's needs and values. Within the same hospital, some students had an impression of respecting patient preference in one department, but they did not have the same impression being in another one. However, some students did not see a lot of those examples of conversation where the doctor involved a patient's preference in the hospital settings and believes it differs among specialities. For instance, in a surgical speciality, students believe that sometimes doctors will not have enough patience for the patient. They prescribe medication and say to the patient what to do to be prepared for the surgery and to sign an informed consent, and the students believe that is because the doctors do not have time, so they do not spend time explaining to the patient the benefits and the secondary effects of treatment. However, in other medical specialities, the students believe the doctors spend more time with the patient, taking the patient's preferences into account. Some of the students observed that sometimes patient's preference was not respected since the patient did not have information or did not know so much about the disease; therefore, the patient was not able to decide or debate with the doctor. Based on the current system of Portuguese health care, according to students' beliefs, it is sometimes impossible to do education and information of patients as the precondition of patient preferences because there is no time for it, but it also happens that the doctors do not care about what the patient wants. One of the student's illustrations:

> “Sometimes, the patients do not want surgery or do not want some kind of treatment because they are 80, 90 years old, and they do not want to. They just want to go home, and sometimes we do not understand that. Maybe, it is the lack of emotional support, maybe is the lack of conversation with them, with confidence in transition, and they just say, ‘I do not want to be in the hospital, I want to go home’. Sometimes we do not ask them, we just say ok you are going to do this exam, we need informed consent, and you need to sign a consent, and that is an exam to do this. Ok, then they say ‘yes, of course, doctor’, the doctor knows the best. I think that happens more with elderly patients than with younger patients because nowadays information is a lot more. Yes, I really do not think that patient's preferences are taken into account probably in a lot of the elderly population.” (Student 3, F)

Students also believe that this dimension has to do with the culture and values of the country; thus, the majority of students claim that this happens because medicine in Portugal is still paternalistic and that doctors are more concerned in getting the patient well than giving him quite enough space to decide. (‘they sometimes do not care about what people want; they just rely on what they think is the best’ (Student 8)).

8.3.1.3. Coordination and Integration of Care

For the students experienced in emergencies in hospitals, there is less coordination and integration of care than is some specialities. In emergency care, students often experience a lack of time and space and encountered doctors who are either not prepared or do not care to have or to maintain their relationship with a patient. However, all students argue there is coordination and integration of care in Portugal, giving an example of oncology care, the speciality that has multidisciplinary approaches and multidisciplinary meetings to process the care of the patient. One illustration of the student’s answer:

> “I see that in oncology, where is staff meeting with the oncologist, radiologists, pathologist, and they all talk about the patient, all that dimension. Every doctor is called upon by his speciality of interest regarding that patient, and the coordination drives a special treatment. We know that that is the better they have could ever be done because it is coordinated instead of an oncologist working […].” (Student 7, M)

8.3.1.4. Emotional Support

The dimension of Emotional Support is assessed with a high mark. The students argue that medical professionals in Portugal are fairly sympathetic and try to give emotional support to the patients in need because most of them believe the doctors are trained to be empathetic and establish a good patient-doctor relation. The doctors taught students to be empathetic, but it also happened that students witnessed doctors who would be everything but empathetic towards the patient. One of the biggest criticisms nowadays in Portugal, according to students’ beliefs, is not giving the time or establishing a place for the patient to be emotional in the consultation. With the reduction of consultation time and space to discuss the problem, the doctors do not have time to have very close contact with their patient, which influences the patient’s treatment. As an illustration of the student’s answer:

> "I think it is the lack of a proper and established place to hear the patient and to accept if he needed to hear or not because there is a lot of patients, they do not have a problem. They just like to talk, and that is also important but not as much as the people who talk to say something important, establishing their own space to open the problem. It works with a patient that comes from the hospital with a manic disease, but they have a manic disease, and they will not want to talk about it until they feel safe. That is very important, but that's emotional support and can influence the treatment." (Student 7, M)

Nevertheless, students said there is no specialized psychology support in a hospital for the patient and their families, except in one or two hospitals. They believe some psychologists are working in psychiatry wards, doing psychotherapy cosultations, but when the patient needs psychology support, doctors call psychiatry, but the thing is they do not always come. The students believe there is a cultural difference, comparing their knowledge about other countries on this matter. What students stress as positive in this domain is the nurses' important role and impact in the provision of emotional support in hospital settings in Portugal.

8.3.1.5. Physical Comfort

Some of the students claim the doctors provide physical comfort to the patient, but some argue they did not see that example a lot. Those students who assessed physical comfort with a high mark argue good development of this dimension in Portugal ('we do good, we do great in providing comfort measures during the disease' (Student 5)). Firstly, some students witnessed that whenever the medical professional could make a patient comfortable, they would solve factors that caused a patient's discomfort, either to diminish or to change the condition that made them feel uncomfortable ('nurses that they do a good job' (Student 6)). Secondly, physical comfort was always addressed in any place the best medical professionals had. For instance, the students believe that the hospitals had what is essential in terms of material resources and usually, they did not experience patients complaining about how bad the room is or how bad the bed in the hospital is. Almost all students experienced a situation where there were not enough beds for everybody in the hospital, or that many patients had been placed in the same room in hospitals with old infrastructures ('usually happens is that we have an influx of admitted patient greater than our ability to provide beds' (Student 5); 'at the hospital of Santa Maria, the biggest barrier is the space because there's no space; the patients cannot walk in the corridor, because there is no space in the corridor' (Student 6)). The best situation in terms of conditions for physical comfort were witnessed in intensive care units. Some of the student's answers:

> "I do think there are some out layers on this more common than I would like. Our services in the hospital have several rooms, each room has one, two, three, four beds, and a patient is a sign to one of those beds […] So sometimes they say, they have their own bed, but they stay in the hallways. Obviously, it is less comforting for the patient, especially those patients who have some form of physical disability and cannot use hygiene, they cannot perform the hygiene themselves, so it's a lot of exposure when it is happening even if we do our best to try to avoid it. It diminishes the way of care.

> I do not think that anybody has started, I think it's interesting to see if patients admitted in this bed in the hallways, do have more complications, more morbidity more mortality, more days of admittance." (Student 5, M)

> "The places that I've seen people more comfortable are intensive care units. It's known that the variation of light and sensory stimulation should be present for the person with obstacles […] they are good in that. Besides, all the people in intensive care units are really few […] the rest […], in medical wards, it's awful, for instance, six people in one room, it's huge. In the hospital Sao Domingos, when I did internal medicine, eight people were in one room, people were on the corridor." (Student 8, F)

The student believes that medical professionals do a good job in this dimension, however the situation is difficult due to the lack of space where the patients cannot walk in the corridor because there is no space even to move around a little.

8.3.1.6. Family and Friends' Involvement

Presence of this dimension students perceived dually. Some students believe that family and friends' involvement is a weakness of the health care system in Portugal and argue for improvement ('in Santa Maria, I almost never saw a doctor speaking to the family. […] and maybe they speak when I'm not seeing them' (Student 6)) since they witnessed that if the family does not come to doctors, doctors do not go to them to talk. However, there are specialities where students see the doctors talking with the family and explaining to the family what to do with a patient, giving them resources and tools for treating the patient at home or it may just happen in the case of severely ill patients. However, some students believe that family and friends' involvement is a strong point of the Portuguese health care system arguing for the family culture as a united and entirely Portuguese characteristic. Portuguese go to the hospital to visit their family members, and there is the visit schedule so that the presence of the family in the hospital has limits while friends visit preferably when family return home. Hence, some students believe involvement depends on the family, so there is not a problem when family and friends show interest and willingness to help. Usually, in these cases, the medical or nursing staff try hard to include and incorporate them within the possibilities. Students witness doctors doing it as a part of everyday practice. Their answers are as follows:

> "I did an internship at the beginning of my clinical years in internal medicine. Actually, the doctor I was with, would go every day in visitation time, she would come outside of the doctor's room, and tell the family how the patient is doing, how it is, what you want to do that day, what she wants to achieve, the treatment actually, and nowadays in the Hospital and department I am, I do not see that at all." (Student 3, F)

> "The patients are admitted to the hospital, and they have visitation hours, and that is something very, I will say a routine, it's something I would expect a patient to do or have. We aren't usually the people who invite. When we talk to a wife of the patient that is admitted, we usually convey information, clinical information about the patient, and how he's progressing and all. However, I do not think we say things like why you do not come to visit this afternoon, why you do not come to participate in the care of your husband, why you do not help us giving his lunch, or eating this

> afternoon his dinner, why you do not help us providing him with his hygiene care, why you do not help us shave him." (Student 5, M)

An important segment of this dimension is students' perceptions of Portugal as being very family and friends - oriented so the patient might rely really on them in many eventualities and argue that if it was not a family-oriented culture, Portugal would fail in the health care system.

8.3.1.7. Continuity and Transition

For some students, this dimension is assessed as a strong point of the Portuguese health care system, underlining existing differences between hospitals and specialities ('I do think despite some of the slams, some of the missteps along the way, our care it is very coordinated during the several specialities and several services that we can provide' (Student 5)). Firstly, students believe that the Portuguese health system is organized well, considering the continuity of the treatment and the following of the patient because the Portuguese health systems have a primary care doctor that does this and who can orientate the patient to the specialities if needed. Secondly, the students witnessed the considerable effort that medical professionals put into explaining and preparing the patient for life after discharge from the hospital. The patient in the Portuguese health system many times is followed in ambulatory care after discharge, and this gives an insight into well-developed continuity and transition of patient care. On the other hand, some students believe continuity and transition of care exists, but it does not work very well, and it differs among hospitals across the country and specialities.

> "It's an integration between different steps of care from public house to primary care to hospital, and I guess it's not well done yet because we do not have access from one to another. We are still paternalistic." (Student 6, F)

Students give an example of the existing differences in this regard of an obstetrician gynaecologist and a gynaecologist arguing that an obstetrician has more continuity with the patients than a gynaecologist. Another example students give is that they witnessed doctors and hospital staff having so many problems with many people that go to the hospital to be treated, but who then cannot be discharged, because either they cannot walk, do not have anyone that goes to pick them up from the hospital, cannot live alone, or they do not have anywhere to go. In such situations, these people become exposed to a lot of risks and infections ('you should not be in a hospital more time than you need to' (Student 2)). Nevertheless, in some cases, continuity and transition are well done so that the care is transferred well within the hospital (e.g. social cases patients) or to the home of patients who might receive support from the community ('maybe Lisbon and Porto, I think there are special associations to involve the patient in the community' (Student 7)). Thus, they notice a lack of a central database with all medical information about the patient (e.g. an allergy to a specific drug, blood type) because they experience how it is not efficient to have doctors frequently surrounding a patient asking if he has an allergy to the drug or similar question.

> "In the hospital that I am currently we have, we call it 'enfermeiras' in Portuguese, nursing roles, something like that, like blocks, and one of these blocks is only for social

> cases. We have them like I do not know 20 or 25 people there that they have not exited the hospital because they do not have access to this continued care when they are discharged. I think it's getting better because we are building this network but still, there is a high prevalence of the situations." (Student 2, M)

> "The hospital in Portugal Lisbon area … they enter some patients in their homes. They bring their equipment, and they go there. I mean, daily or not, to do the treatment in their home and the results are shown to be better […] yes, I saw a doctor that put a patient home and stuff like this to give him some care." (Student 7, M)

> "[…] even though it happens in specialised areas, the most of them I do not think they really know it what each doctor is doing […]. I often see that is the doctor questioning why was that exam prescribed, why the patient is taking this treatment as it does not do anything, or am I not seeing something." (Student 7, M)

On the positive side of the continuity and transition of care, the students see the facilitated possibility to make an appointment and examination, which is suitable for the PCC. On the other side, the continuity of following the patient and his treatment becomes difficult and for many patients the ability to afford health care service in private practice remains a question.

8.3.1.8. Access to Care

The students believe that in Portugal, it is easy to access care in primary care centres (Centro de Saúde). However, students notice some people do not have a family doctor even though every inhabitant in Portugal is supposed to have one, and students consider that to be one of the reasons why people when they are sick, go to hospital instead of to the family doctor. It often produces long waiting time in emergency rooms in the hospital. Sometimes Portuguese citizens need to wait a long time either in the waiting room or on the waiting lists to access care. Still, there are some examples of good practice on how Portuguese deal with waiting time in practice using the advantages of the internet and technology ('[…] this website SNS (Servicio Nacional do Saude) […} to see the queues that were in the emergency department of the several hospitals' (Student 2); 'Healthline that people call this phone number and they are given information about health' (Student 2)). Students witness that access to care is a topic of discussion in Portugal arguing that Portuguese citizens do not have the same access to care in cities versus villages, mainly interior parts of Portugal ('I think that outside of the big centres, Lisbon and Porto, access to health is, access to care is much worse then in the big centres' (Student 2)). More distant regions in the interior of the country might be marginalized in terms of access to care, and something should be arranged to diminish those problems. Some students relativized access to care because it is not easy to have every single type of care available within walking range of a person's house arguing that Portugal is quite a small and developed country to have a problem with access to care. One student gives an example of a hospital in the northern part of Portugal that is not central, does not have all the specialities, but has excellent access in the area it serves. ('it is very easy to achieve a consultation there, to be transitioned there, the care is in a very good care facility, […] the patient is rapidly transferred to the central hospital in Porto' (Student 3)). Some illustrations of students' answers:

> "I have seen various places across the country, small towns, cities, and it's a difference in the way that it is catastrophic. I mean, people still die from a disease that if you get to Lisbon, you will get treatment, but we do not have the equipment, the hospital does not have drugs in a small hospital area." (Student 7, M)
>
> "In the interior, we do not have a big hospital like in Porto or Lisbon or Coimbra, and people suffer from less care, but I do not think that is all true in Portugal. We are a small country, we do not have that much often extends, so I do not think that is really true. Well, when you are comparing between first world country and second world country, yes, of course, we have access to medication and diagnosis and so on, but it is obviously different. In Portugal, I do not believe that is quite true." (Student 3, F)

8.3.2. Category 2: IDENTIFIED BARRIERS FOR PCC IN PRACTICE

While students were sharing experience about the PCC in Portugal, they identify barriers to implementation of the PCC in practice for each of the eight domains. On all eight of Picker's domains, students were able to identify specific factors that influence the situation and appear to be barriers for the PCC provision in practice. Students believe that sometimes it is not possible to coordinate all of the elements of healthcare in an optimal way because of the limitation that comes from the system but sometimes there is not much openness to thinking about the PCC ('[…] people are way more involved in the disease-centred approach, and we do not have many skills to work for that practice' (Student 7)). In the following sections, we systematize these factors that appear to be barriers to PCC practice and further discuss barriers in each of the eight domains.

8.3.2.1. Information, Education and Communication

Students identify many barriers in this domain that possibly come from three sources: the system, doctor and patient. Firstly, obstacles that come from the **system's side**, almost unanimously, students agree on lack of time as a barrier in practice regarding this domain. **Time constraint** reflects a lack of time in care provisions and time-limited consultation. Time-limited consultations narrow the area of patient's education, and the patients lack that time to ask questions or to provide feedback on their condition in practice. Almost all of the students believe that when there is more time to talk to the patient, doctors perform better in this dimension. A lack of consultation time reduces the doctor's possibility for conversational involvement ('the doctor and all the staff do not have the conditions to be involved, we do not have the opportunity to talk with the patients and explain the disease for him' (Student 7)). Secondly, students identified barriers on the **doctor's side**. It is not about the capability of the doctor, but rather a lack of interest in explaining in another way, low information in treatment alternatives, lack of information, and education on medication consumption. The doctor does not spend time educating the patient ('I do think that doctors do not talk enough to their patients' (Student 5)), or the patient has so many questions that the doctor thinks that the patient is annoying. Thus, some students believe there are stigmas about involving doctors and patients. Thirdly, barriers identified on the **side of the patient** relate to the segment of importance concerning the patient's health literacy. Lack of health literacy among patients means that the patient might be incapable of understanding either due to his health condition or because the patient does not want to understand information because he does not want to feel responsible for his health (‘people need to be more health literal; I see on a daily basis, there are the doctors and nurses concerned to inform the people […], but sometimes I do not see the flow of information on the other side’ (Student 8)). As an illustration:

> “I think that doctors are either minimized or divinized, it is very polarized, either some patients would take everything that we say just because it's the doctor saying might be right, must be perfect, must be what I need, and they do not even care or have any intent to learn about their conditions because I am with the doctor and I'm in the right hands. There is also where they doubt everything we do, try to demystify information about health care and disease all by themselves, and usually they fail. Sometimes that can lead to severe complications, and I think that is the biggest barrier I can find to information and education dimension.” (Student 5, M)

Students consider a lack of information and education in practice as a barrier to access to care (‘some patients even do not have the conditions to hear, they are not well in health, they cannot hear or understand the information that is said so it enters to the access to care’ (Student 7)).

8.3.2.2. Respect for Patient Preferences

Students notice that in the dimension of Respect for patient’s values and preferences, there is still a paternalistic approach to the patient, almost forcing the patient to accept what the doctor thinks is better; therefore, they perceive the patient’s opposing position as a reason for refusing. First, the students believe that there are omissions regarding this dimension coming from the **system side**. Lack of or a limited amount of time leaves a short time for an appointment which, in practice, ends up running out of time. Second, barriers are on the **doctor’s side**. The doctor might lack patience for the patient’s involvement in clinical practice so that he/she does not open a space for a conversation with a patient and does not leave space for the patient to ask a question and to decide. Third, the students believe there are barriers on the **patient side** concerning their health literacy that appears as a particular problem in practice when it comes to expressing their preferences. Due to that, the patient might not feel confident to ask questions, to express his preference, which consequently leads to a lack of conversation with the doctor. On the other hand, some students note that the patients can be quite forward in what they want concerning the exams, the treatment or the medication (‘sometimes they can even manipulate the medical professionals into giving them what they want’ (Student 5)) so that sometimes they can even manipulate the medical professionals into giving them what they want.

8.3.2.3. Coordination and Integration of Care

Medical students perceive this dimension as the weakest dimension since it is not involved in the practice. They attribute Identified barriers to the system and the doctors. First, concerning the obstacles coming from **the system**, the students argue the policy regulation does not determine specific speciality to coordination of care, meaning no speciality deals solely with the coordination of care. A lack of communication between all caregiving players is seen as a barrier to proper and timely coordination of care. Second, the students observed that the doctor's characteristics could be barriers in professional practice. The **doctor's personal bias** can affect the continuity of work and usually, the patients are the ones who suffer from it the most ('sometimes ego comes along the way: being a doctor, feeling better than the nurse, or being at the administration of the hospital, feeling better than that administration of the district hospital'(Student 5); 'there is a feeling of unappreciation when talking to the patient […] patients in general, they complain about psychiatrist they look like' (Student 7)). One student observed that the doctors do not communicate because of being afraid of what other doctors will say about their work. Sometimes the doctor might be lacking knowledge in providing the outpatient option.

8.3.2.4. Physical Comfort

Although students claim they do not see so much physical comfort dimension in practice, they argue that it depends on the condition of the environment. Firstly, barriers are identified in the domain of **infrastructure.** Several students witnessed a problem regarding physical comfort as a lack of or limited space in Portuguese hospitals. Many patients are hospitalized in the same room and sometimes it happens that there is no bed for everyone so that Portuguese patients are admitted to the hospital's corridors. Hospital conditions sometimes are not good, and moreover, hospital infrastructure and the installations often can be old, and it can cause obstacles for the patient in terms of hygiene. Secondly, the limit in physical comfort provision is the **patient's physical condition** due to the patient's fragile condition. Students notice that patients often do not complain about what they do not have and what kind of problem they have. Thirdly, **technology factors and money** appear to be a major barrier in the provision of physical comfort. Physical comfort might depend on the wealth of the patient to pay for better care and readiness of an organisation to invest in higher technology that supports this dimension.

8.3.2.5. Emotional Support

The barriers in the dimension of Emotional Support are identified as coming either from the system, doctors, or the patient. Firstly, the **system** sets obstacles in terms of time-limited consultations and the number of employed doctors. The time factor is a major problem because there is not enough time for a consultation, and also a lack of psychologist support in Portuguese hospitals. Secondly, the students notice that the Emotional Support dimension is lacking in practice, addressing that Portuguese **doctors** are more formal in the provision of emotional support. Doctors lack time for a consultation, they do not give time to the patients and do not spend so much time speaking; therefore, there is a lack of a proper and established place for the patient to be heard. Emotional support provision might be affected by the stress that the doctor is exposed to at work. Thirdly, some students believe **that patients** might not understand what emotional support involves, and might withhold expression of emotions because either they do not know how or feel unwilling to speak with a psychiatrist or psychologist, with the result that doctors' emotional support is replaced with medication.

8.3.2.6. Family and Friends Involvement

Students witness a lack of encouragement of family and friends' involvement in the hospital setting in Portugal. Portuguese doctors barely engage the family while friends' involvement is more reserved for home care. The reason for such practice is found in **lacking initiatives from both sides**. On the one hand, the doctor lacks initiative to involve the family in the care of the patient, while on the other, family and friends lack the incentive to participate in the care process of beloved ones. The patient's family might be **scared of information** on home care and tools for homecare provision so that students witness situations when the family obtains all information through the patients, rather than through communication with the doctor.

8.3.2.7. Continuity and Transition of Care

Students believe there is a need for better management of the public hospitals in Portugal, better community involvement in the caring process, and better integration with the private practice since there is a long waiting time for the patient to get consultation/treatment. Barriers in the domain of Continuity and Transition appear to come from the system, technology, and doctors. Firstly, the national health system's objective is to have a family doctor, but in practice, students notice that many people do not have one. Hence, the problem in this dimension appears when the doctor does not know the patient because more doctors are involved in the care process of one patient, and consequently, it causes a lack of following the patient. Many doctors involved in the care of one patient might produce a problem in the continuity of the treatment process ('[…] every time that doctor changes, you talk about another time of the problems that might be difficult to talk about' (Student 4)). Thus, students notice from practice, that there is a lack of communication among providers in primary, secondary, and tertiary care that, together with some territorial constraints, affects the patient's transition between specialities. Secondly, a barrier in practice is the **doctor's behaviour** when he does not give importance to the patient or the doctor lacks communication skills. However, the students believe that doctors behave either with a 'too persuasive and too defensive' (Student 5) attitude with a certain level of insecurity that might affect the patient's entire care process. By way of illustration:

> "I think the biggest barrier here is how persuasive we are of our patients. Sometimes, I think we are too persuasive and too defensive because we are very afraid of caring for another doctor's patient because we do not know everything, we were not present for the evaluations, we are very afraid of caring for that patient. In the same way, we are very afraid of letting him go, of passing our patient to another doctor with other training with other specialized care, because we're afraid it won't be beneficial. We are afraid that other doctors will not be able to care as well as us. I think that's the biggest barrier." (Student 5, M)

Thirdly, **technology** plays a great role in practice concerning this dimension. Students witness that when the operating system fails to work in the hospitals, the request for the consultation does not arrive, yet medical professionals get around these kinds of problems. Students explain these barriers as being due to fast technological progress and quite expensive investments that require efforts from the system but also from the medical professionals to learn how to use it.

8.3.2.8. Access to Care

Limitations that students identified in the dimension of Access to Care tend to come from **the system**. Firstly, a barrier in practising this dimension is **limited space** because there is limited space in Portuguese public hospitals (see 7.3.2.4) while the community care system is still underdeveloped. Secondly, there is a **socio-economic bias**. Students give an example of the distant regions in Portugal that are marginalized. For the small hospital in the interior of Portugal, it is hard to have every type of care available; therefore, those patients need to travel to distant hospitals which is affected by their financial means among many other factors. Thirdly, students notice a **lack of doctors** across the county, particularly the lack of primary care doctors so that many patients in Portugal still do not have a family doctor assigned. Fourthly, the bias of access to care lies in **access to data**. Unifying the data through a central database does not exist; therefore, not only patients but also health providers still cannot access the patient's medical record online or easily exchange the data.

8.3.3. Category 3: PCC IMPROVEMENT

In this segment, we analyzed students' beliefs concerning the PCC Picker domains that deserve improvement to get a higher score. Students identified possibilities for overcoming these barriers and actors that likely have a greater role in the PCC improvement in practice. Although students believe that it is quite challenging to achieve conditions for patient-centredness in some of the PCC dimensions, they hope for a more patient-centred environment in the future ("[…] it must be a goal for everyone, but I also think that it is something difficult to achieve, not impossible of course" (Student 4)). For each of the eight dimensions, students were able to identify the key actors and several measures for improvement.

8.3.3.1. Information, Education, and Communication

Although students believe that this dimension is the biggest weakness of current care, they also think that it is quite easy to change and improve. Firstly, the doctor can improve this dimension at low cost together with nurses' help, emphasizing the education of doctors as a starting point of improvement in this dimension. The doctor's role in the improvement of this dimension begins from the university. They should get an education on this issue through formal curricula (part of family medicine). Secondly, along with formal education, students argue for a greater role of patient's association in doctor's education. Although students notice that the situation in Portugal has improved, there is still a problem for doctors to practice what they have learned. Thirdly, students see training as a tool for improving this dimension with a greater role of educator. Fourthly, the dimension can be enhanced by improving access to the information on the internet and usage of social media as tools in the dissemination of information, so there should be a more considerable role assumed by politicians. One illustration for improvement in this dimension:

> “I have already seen a doctor that […] had the most common diseases, and for each of them he heads like a little text where he has explained the disease, what we should do to treat, and he gave that to the patient. It's always but especially when the patients were concerned, and I think about doing that, having a small file, that I can just print and give to the patient. I do not need to spend 10 minutes explaining because then the patient will not remember, so I give them the paper, and I think it's better.” (Student 6, F)

Students believe they have a limited role in this dimension, but if doctors lack time to talk with the patient, they could have a greater role within a given authorization (see 8.4.2.).

8.3.3.2. Respect for Patient’s Preferences and Values

All actors and every team member can improve *Respect for the patient’s preferences* dimension, according to students' beliefs. Doctors, particularly younger doctors, can improve this dimension by the introduction of communication with the patient based on respecting his preferences and choices (‘communication is a pretty important thing in this aspect […] we have to have a more active approach as far as patient preferences go […], be more active, more proactive, ask more’ (Student 1)). Students recognize politicians as being actors of improvement by enhancing the time framework and defining extended time for consultation. Students think that some change in the mentality of society based on people’s education towards improvement would be valuable.

8.3.3.3. Coordination and Integration of Care

Students believe that the doctor as an actor of improvement who is responsible for the patient’s coordination of care is supposed to improve the *Coordination and Integration of Care* dimension through personal and professional education on ethical and moral postulates. However, hospital managers and primary care management together with chiefs, directors, and service directors can improve this dimension if they introduce more meetings and debates on different approaches regarding better coordination of patient care. The role of the government and medical chamber together with other systems of organization is to improve a channel of communication between doctors but also doctor’s communication skills because students believe that improved communication between doctors supposedly reduces the number of unnecessary diagnostic exams.

8.3.3.4. Physical Comfort

According to student beliefs, health care providers are in charge of the improvement of the patient’s physical comfort, meaning it is the responsibility of everyone who provides care to hear the patient about his physical needs. The doctor and nurse should have an obligation to provide comfort to the patient according to their needs, by providing better conditions or the best possible place for the patient and by thinking about alternatives. Students believe that the role of politicians is reflected in the need for political measures to empower primary care by employing more doctors and decreasing the number of hospitalizations. Hence, politicians could improve this dimension if they decide to reallocate more financial support for hospitals to improve old infrastructure and solve the problem of lack of space in public hospitals. An illustration:

> "In Portugal and I saw some healthcare models like in England where they are improving the primary care, I think the best way to do it is not building more hospitals, it is avoiding people going to the hospitals post-op. For me, I would not build more hospitals because hospitals do not have more space; I would give more support to primary care to have more people in primary care instead of the hospitals. Like this, we would have more space." (Student 6, F)

8.3.3.5. Emotional Support

Students believe that improvement in the Emotional Support dimension of inpatient care is required and supposed to be speciality driven. Firstly, according to students' beliefs, the actor of improvement is the doctor. He should have closer contact with the patient, to spend more time with the patient, and open the opportunity for the patient to share more information of importance ('the staff takes more time to be with the patient, understand each individual problem that he presents, that are various and from different areas, and he should be treated not saying that is for the psychiatry, I do not want to hear it, no, all is integrated […]' (Student 7)). Students argue for rating a doctor after the consultation and evaluation of the doctor's work could be a measure for improvement in this regard and serve as motivation for a doctor's kindness. Secondly, the role of government, politicians, organizations, and associations in enhancing the Emotional Support dimension in practice is perceived as monetary support and reorganizational measures. Some of the students believe this dimension is the question of money investment and government's or hospital management's willingness to spend on employing more psychologists in the community centre or hospital ('[…] to have more psychologists in the community centres; Portugal is the European country with the highest consummation of diazepam, twice then the second […] and this happened because the doctors do not have the possibility to treat depression, insomnia, with other things than the drugs […].' (Student 8)). However, for most of the students, readiness of policy and decision-makers to spend resources on overcoming cultural differences and changing society or organizational culture is questionable. Third, some students believe that the voluntary work of different actors (volunteers, nurses, medical students) can bring an impact on the improvement of this dimension at a low cost. Being aware of the real difference in emotional support provision between students and doctors, students believe that their contribution could be more exceptional in this domain.

8.3.3.6. Involvement of Family and Friends

All students agree upon the need for more improvement measures in the dimension regarding involvement of family and friends in the care process of their beloved ones. A change should be initiated by learning through a formal medical curriculum about how doctors could involve family and friends more in patient care. Moreover, this dimension can be improved through the other dimensions of Information, education, and communication by learning how to provide information to the family and how to educate them to take care of their family member. Some of the students, for example, give preference to a greater role of nurses over doctors in the involvement of family and friends.

8.3.3.7. Continuity and Transition of Care

Results about the improvement of these dimensions appear to be split. While some students do not assess Continuity and Transition dimension as a strong point in the Portuguese health care system, others believe it has just started to exist, or it exists sometimes already but does not work, so therefore, must be improved. Firstly, Government, hospital management, and organizations should be in charge of making more physical space available for the patient to be transitioned when they are in need. According to students, this is possible by making places available for the public health system or building up public-private partnership organizations. Secondly, the doctor, particularly the family doctor, and directors can improve this dimension together with an empowered nursing role in this dimension supported by the Government, hospital management, and organizations. Students witnessed that care is usually delivered by a large number of different professionals, (not just doctors) therefore enhanced communication between them could be strengthened by utilizing the advantages of technology, or by improving the skills and abilities of all health professionals to pass on valuable information to other professionals ('It would be easy for Primary Care doctor to send an email or just to contact tertiary care doctor [...] and I still think they are writing letters to one to another and we are living in a time where mail is so already obsolete; we now use WhatsApp and things like this.' (Student 2)). Improvement through communication with colleagues and enhanced communication requires informatics and technology network improvement and advances in the usage of the Internet that the government can expose to providers and administration. An organization should make things easier for the health carers so that they can focus more on their work instead of trying to interconnect things ('they try to connect to the stuff instead of thinking that should be connected' (Student 6)). Having integrated computer programs in a sort of network could be an expensive option, but students believe in the advantage of the unique medical record in an electronic card as a more comfortable option. The student gives one example of possible improvement experienced in another EU country, as an illustration:

> "In France, I saw a patient have already a small carriage, the identity card, and there are a chip and your code over the clinical information, so I think that will be a nice way assuring continuity and transition because if you can put the data in that card, we could like … I go to the primary care and then to the hospital, and that's everything in that card." (Student 6, F)

8.3.3.8. Access to Care

Students believe that the situation with Access to Care dimension is getting better and that individual characteristics are not a bias for its improvement. Instead, students perceive that improvement requires health system reorganization ('to build to more facilities, to employ more medical staff, to help to improve clinical access to people who maybe cannot get there, do not have conditions' (Student 1); 'the money and funds that health system has, should be organized in a different way' (Student 1)). It is supposed to make equality between the several different geographical places and increase territorial access to care by building the network of the hospital that follows the rule or involving private care in the national health system. Students are aware of how hard it is to have every single type of care available within walking range of a person's house, so people who live in more excluded areas have to expect a bit of travel time to the nearest care. However, providing transportation and house visits are some of the examples of what has to be done more or to be done better to meet territorial access to care. Besides, reforms should include the employment of extra medical staff because students believe it will increase clinical access. Access to information should be improved with organizational innovation, such as the introduction of e-medical records. Doctors and nurses can improve by talking understandably and fostering open discussion between patient and doctor. The role of medical professionals and doctors' associations is recognized as necessary because it is an actor in health system planning and the health policy decision-making process. Enhancing this dimension requires investments of money that can be provided by government and politicians through various mechanisms of financing or reorganization and money reallocation as well as working on legislation ('a lot should be done in terms of the legislation' (Student 1)). Small organizational changes can increase patient access to care.

8.4. THEME IV: ROLES IN PCC PROCESS

INTRODUCTION

In this part, we aim to discover the student's perception of their role as medical students in the process of PCC (8.4.1.). We ask students what is and how they perceive the role of medical doctors in the PCC process (8.4.2.) and whether they consider themselves as being an agent of change in the future as a medical doctor (8.4.3.). Based on these questions, we distinguish three categories (*Table 46*).

Table 46. Theme IV: Roles in the PCC process and categories of students' interviews data

THEME IV: ROLES IN THE PCC PROCESS	Category 1: Role of medical student Category 2: Role of the medical doctor Category 3: Student as an agent of change

8.4.1. Category 1: ROLE OF MEDICAL STUDENT

We asked students to choose among those eight dimensions (it can be more than one) where they perceive themselves contributing the most in providing the PCC while currently being a medical student and explain their argumentation. Interviewed students were unified in answers, so all of them chose the Information, Education, and Communication and Emotional Support dimensions as where they see themselves having this role, and it is mostly because of the direct daily contact with the patient. Students recognize themselves as not participating in the following dimensions: Continuity and Transition, Access to Care, Coordination and Continuity arguing that those dimensions do not depend on medical students in practice because students do not take any part and do not get involved in the patient’s treatment (‘I do not get contribute a lot, most of the times at all, except when I'm asked to be a practitioner’ (Student 10)). Some students argue their limited role in some domains due to legal constraints given the fact they are still students (‘as a student, you are a bit more an observer, your role is more passive which is normal because you are not autonomous yet’ (Student 1)). This limitation that comes from the legal aspect means it is not permissible that students provide physical comfort and information that might be sensitive for the patient. Students are not even allowed to talk to the patients as if they were the doctors. Some of them see being a student as an advantage, as they recognize they have more time for a patient that they will never get as a doctor.

Information, Communication, and Education. Students believe that one of their most important roles already as a student, and then later as doctors, is to inform and educate their patients (‘well-deserved place to work because of the patient changes before and after knowing what is that’ (Student 7)). In the segment of communication, if the patient is not given much time to talk with the doctor, because the doctor makes many appointments during working hours, Portuguese students sometimes offer themselves to the patient to talk about the other areas of the disease and to answer some questions that patient might have. Not all the time, but in some cases, it happens that doctors involve students in patient care and allow students to speak with the patient. Either in the emergency or regular appointments, some students are given a certain level of independence, such as forcing the appointment meaning that the doctor might ask students to start the appointment. Students start the appointment by asking questions to the patient about the disease, listening to the patient explaining symptoms, and what occurred so that students can explain what is happening and what kind of disease it might be. As students talk to the patients, they might figure out that the patient sometimes does not know how to talk about the disease, how to explain symptoms, and does not understand what and why is happening to him. What they observe is that lack of information affects a patient’s behaviour and affects doctor-patient relationship and cooperation. Illustrations of student’s answers:

> “The patient will tell me I have this, or I have that, and I would tell him ok you have this, what happened so I make a patient think, how did you get it, where did you get it, so I ask questions, and by asking questions, I gain information what is happening. If the patient has the questions, I can give them whatever I have inside me that has the information about that given disease […] what the patient will tell me I think I have a cold, what I should do, I would tell him you're supposed to go home and rest... you know this kind of information and education... you should drink more fluids, it is a very strict example of course.” (Student 10, F)

Further, students see their role in explaining to the patient the need for doing specific exams, diagnostics, and treatments and educating them to prepare them for a life out of the hospital, when they go home. Providing some information, for example, on chronic disease where the patient has to continue to do certain medication, certain measures and lifestyle changes at home, or writing information for other doctors, but on behalf of a tutor, is where the role of students enters in the domain of Continuity and

Transition. Students are not allowed to communicate with the patients by giving a piece of written information, and this is because they are not still entitled and certified to deal with the health or illness of the patients. Almost all students express concern that at this position, they are not prepared to deal with certain aspects of the process of the patient's treatment. Some students see their role not just to teach the patient what they learn and provide information on how to get better but also in the professional training of getting educated to inform other generations on how to talk to the patient. Students' contribution is in learning about the PCC and applying it even if they see doctors doing it wrong, not letting themselves be influenced by that wrong practice ('even though, I see people doing it wrong, not getting influenced by that and keep my grounds' (Student 3)). However, they need to show humility and respect while under supervision and being assessed in a work environment.

Emotional Support. Portuguese students believe they should help in the patient emotional support provision because they have direct contact with the patients and have fewer responsibilities compared to doctors ('It's very bad when I see someone crying, and I do not do... nothing' (Student 6); 'I do this because I have a lot of time in my hands because I do not have all those patients waiting for me' (Student 10); 'I know I can give, and I am very open or willing to do it so in many different situations' (Student 10)). For some of the Portuguese students, emotional support is perceived as a family relationship with the patient and a sort of voluntary work beneficial for all ('If I want to stay and speak with a patient after my internship hours, I can stay and speak two hours to person' (Student 8); 'we can be less likely as doctors treating patients but more like a family member treating their sick uncle, sister, parents, friends or grandfather at home' (Student 5)). Students frequently experience that, patients perceive them as the ones of confidence, so they talk with students to ask or to express their fears, anxiety, and doubts. On the other hand, almost all students perceive themselves to be in the position to provide direct or at least indirect support by referring the patient to a professional of that area, or a person who has more experience. Almost all students believe that sometimes actions like just talking to the patient or 'making a few jokes', 'listening to one old story about their life' or making physical contact can make quite a difference supportively. In the following lines, we provide an example of a student providing emotional support from their experience in practice:

> "There was one old man, he was confused for two weeks, he didn't really know what was going on, and then he came back. He was one old fado singer, and he didn't have much family, and I ask to put music playing in his room, yeah, and he was happy. At least, he was happy for the entire day." (Student 6, F)
>
> "I remember this one situation when I was in the emergency room of surgery and the trauma patient came in. It was a polytraumatized patient. He has an accident […]. There was a collapsed lung, and they were doing thoracentesis to remove the fluid from the thorax, for the lung to be able to extend. So, what I did was, without anyone asking me, I held the patient's hand because he was in a lot of pain. It's pretty painful to do thoracentesis, and I knew that he was in a lot of pain. So, I gave him my hand, and I told him you could squeeze it, as much as you want, and I'm here. So, this is one example of emotional support." (Student 10, F)

> “Holding hands someone that is almost crying because it's too nervous about going in surgery, […] giving a smile or saying a joke or grabbing their hands. We see people in a lot of fragilities, received the people in the worst of their times.” (Student 3, F)
>
> “I will be in the waiting room and comforting people saying that the doctor will be right back, so please do not be frustrated, stressed so on... there will be some answers soon, or they are waiting for the results so I will convey information and support to that person. If a person gets more anxious, it's harder for them to understand the situation so you can calm them down in any way. […] I have the luxury of talking and looking at the patient and seeing if the patient is in pain, and saying are you okay what is going on, do you want me to call someone, is there anything that I can do. So, I do this willingly, and I know I can do this because I do have some free time, and I know how vulnerable as I said especially in emergency situations, they are not imposed, they discovered could not do everything, discover suddenly that they need someone's help and for a lot of people that's disturbing” (Student 10, F)

Although students underline that they rarely see family and friends in clinical settings, still some students provide support to a family member when their beloved dies although all of them state they do not know very well what to do in those situations and had a feeling of lacking ‘the responses to push that situation away’. This position appears to be hard for students since they lack education on how to provide emotional support to family members. Students believe that medical students are not that strong as medical professionals because of the distance, a certain level of technical posture that doctors have, and since they are still in training, they are not allowed to be more caring or more personal with the patient (‘we cannot do something that the old doctors do not want us to do’ (Student 6)). Regarding the difference between students’ and doctors’ positions in practising the PCC, we talk more about it in the following section.

8.4.2. Category 2: ROLE OF MEDICAL DOCTOR

In this segment, students identify the dimension to which the doctors contribute the most in the PCC process by choosing one or more dimensions among the eight dimensions offered. While some students believe that the PCC for some doctors might be a bureaucratic thing or just a belief in medicine, for others it is a matter of prestige or when doctors care about the PCC for material and reputation reasons. Although students underline that the PCC depends on the doctor’s speciality and patient’s specificity of type of illness, most of the doctors that students meet daily include those eight dimensions, and they try their best to integrate them in practice. A few students believe that medical doctors contribute to the same dimensions as medical students in Information, Education and Communication, and Emotional Support (Section 8.4.1.), while still emphasizing the doctor’s role in other dimensions (‘as a medical doctor, I will want to contribute to the same dimensions. I want to be a doctor that cares, being able to understand what the patient is going through, and I want to be able to give him more than what I can give him now’ (Student 10)). We start by explaining students’ perception of the doctor’s role in these two dimensions in which some students perceive the student’s role (Information, Communication and Education and Emotional Support dimension), and then another three that students perceived as being exclusively the doctor’s role (Physical Comfort, Respect for Patient’s Preferences and Coordination and Transition of Care).

Information, Communication and Education. Almost all students agree that medical doctors should give attention to all dimensions and should have a more significant role in information and education because doctors are allowed to be more caring and use their technical posture (‘the doctor must not only treat the patient's problems but also inform the patient’ (Student 4)). Some students believe that if a doctor does not show empathy, it can be replaced by the doctor's skillful practise of sharing information with the patient. Most students assume that not all patients are familiar with the medicine or able to memorize all the details; therefore, the doctor must give information to the patient using all the tools at his disposal, preferably in a written form, so patients can consult at any time (‘I think about doing that having a little file, that I can just print and give to the patient’ (Student 6)). Authorization for the provision of written information tends to be a benefit for a physician compared to students who are not permitted to provide a piece of written information to a patient (e.g. a medical report) because only doctors or even a nurse can do it because of the authorization (‘If the doctor does not want to do, it can be done by a nurse’ (Student 4)). Students are aware that dealing with the health of the patient is a serious issue, so it is essential that just someone specialized provides information to the patient, therefore, the doctor is kept accountable for the information he shares.

Emotional Support. Portuguese students believe emotional support takes time and sensitivity, but doctors often are affected by work stress, so unlike students, they cannot spend time with the patient who gives a picture of doctors as distant, not emotionally close to the patient. Also, students think that the difference between doctor’s and student’s contributions in this dimension is not so much a question of attitude, but just a limitation in the legal aspect. Being a doctor removes limitations and gives autonomy and authorization so that the doctor can do more things. Compared to the medical student, the doctor is prepared to deal with certain aspects of the process of the patient’s treatment, has other possibilities, networks and abilities to be more active as he is autonomous in his work. This dimension might differ between the generations of doctors in that younger doctors can have a passive role and behave less emotionally towards the patients because that is the advice from older doctors (‘A lot of times the young doctors are not emotionally closer because the all the doctors said to us not to be like that’ (Student 6)).

Physical comfort. For students, the Physical Comfort dimension appears to be the most important when it comes to the medical doctor’s role in dealing with pain and deprivation. Most of the students believe that they will be involved in this aspect as medical doctors because the doctor has more access to means to control physical comfort. Some students recognize the role of the nurses to deal with this dimension together with doctors and their limited role (‘in my position I cannot say to the nurses or the doctor, please, see his or her blood is gone, please, give her watch again... I can’t. I have my own place there’ (Student 8)).

Respect for Patient's Preferences. Regarding patient preferences, students perceive the medical doctor's role as discussing the best treatment with a patient based on what the patient prefers and in asking the patient for informed consent. The doctor has a role in providing consultation and in advising the patient, but the final decision should be the patient's decision concerning some situations. When respecting patient preferences, the doctor has set the boundaries that are in the interest of the patient.

Coordination and Transition of Care. Some students see that the doctor's role in the PCC through coordination on patient care might differ depending on the speciality and type of illness. Coordination of care, its continuity and transition are the roles of doctors who should encourage smooth communication with each other. However, some students argue that the role of the general doctor should be more pronounced, particularly in coordination of patient's care (e.g. chronic disease). Some students argue the doctor should not only be a good educator in health but also an excellent educator of students who are going to be doctors and younger generations of doctors, educating them on how to deal with this aspect of care.

8.4.3. Category 3: STUDENT AS AGENT OF CHANGE

We asked students if they considered themselves as agents of change, and if so, what the explanation for that would be. All students appear to be unpretentious in this regard, seeing themselves to be agents of change in their work towards the PCC in their practice in the future, stating as the main reason an altruistic-noble wish to help people. They see themselves working toward changes in everyday practice with patients and collages in all dimensions, emphasizing particularly the Information, Communication and Education, coordination of care and continuity and translation dimensions. While some students express their eagerness to be an agent of change, others show more restraint in expressing their hope to be able to change some things in their future career as the doctor. Together with hope, students express their need to try to act for things to work better, underlining the importance of giving their best in practice ('I do not think I will be good all the time, but I will try my best […] I do not have the pretension to be the best doctor ever […] I just want to be able to help whoever come to me with a problem or with a doubt' (Student 10)). Analyzing students' narratives, we distinguish two directions in which they could undertake direct action as agents of change: 1) related to the patient and 2) related to the colleagues. Some of the students believe that their direct actions towards patients would firstly relate to their increased compassion ('maybe the sensitivity to work with the patients I will do better' (Student 7)). By giving time to understand the patient's context, students think that they would become more sensitive to the patient's disease expression and would go 'one extra mile' to scope more than disease symptoms. Second, students state that they would work on the improvement of the information and education domain by providing sources of information to their future patients in a written form so that they can check for themselves in their time. Third, together with the patient, they would be looking for the best treatment option and would try to organize patient care more efficiently while avoiding possible errors at the same time. Related to the colleagues, students claim that, firstly, they would try to be a better team member by acting towards better communication with co-workers and avoiding errors (‘It is an error, yes, but I comprehend where it is coming from’ (Student 7)). Secondly, being good at communication with colleagues, they will serve as an example and a role model for people in the entire work environment. Thirdly, students see themselves to be introducing novelties in the working environment, helping colleagues to understand while at the same time, inspire colleagues to move in the same direction. Some of the illustrations:

> “There are bad doctors, the doctors who do not take into account all the dimensions of the patients, which does not necessarily make them bad doctors. They are just doctors who put the disease first, and not the patient first. I want in my future, I see myself as being a doctor that takes time to understand more than just the disease.” (Student 10, F)
>
> “What I want to do as the doctor in the future is never to forget all the dimensions of the patients, not necessarily the patient-centred care but the patients, to see the person.” (Student 10, F)
>
> “If they have doubts and questions, that maybe I will be able to answer maybe I won’t, but I will listen and will try to direct to someone if I think that he will benefit from that.” (Student 10, F)
>
> “I will also try, I know it's difficult, to approach someone and to say ‘oh you didn't handle this correctly, you were not thinking about your patient, it's something that should be handled very carefully.” (Student 5, M)

It is clear that personal experience and background are an advantage for the doctor who wishes to be an agent of change. In addition to this, some students express their wish to learn more by trying to follow notifications and updated information about the PCC. Some students argue for the patient-evaluating their work in the future, believing in the premise ‘*what gets measured, gets done’* hoping for the system to recognize a successful doctor’s work. Students’ real concern about being an agent of change in the future is reflected through dilemmas raised during interviews as being aware of personal limitations and abilities in the future, given by the fact that doctors are also humans and whether they will be able to convince others in the team (‘I mean, I'm talking as a student; I really hope I will also demonstrate as a professionist’ (Student 4); ‘I really hope not to be absorbed by the system’ (Student 4); ‘we are still human’ (Student 7); ‘in my mind, I will do better […] I do not know how I'm going to do, to deal with all those dimensions, with all those conditions’ (Student 7)).

8.5. THEME V: PCC CORE COMPETENCIES

INTRODUCTION

In this part, we present students’ beliefs about the PCC competencies (Section 8.5.1.), and doctor’s personal characteristics (Section 8.5.2.) essential for practising PCC and whether some differences exist among medical students/doctors based on gender (Section 8.5.3.), age (Section 8.5.4.), and earlier work experience (Section 8.5.5.) (*Table 47*).

Table 47. Theme V: PCC competencies and categories of students' interviews data

THEME V: PCC COMPETENCIES	Category 1: PCC competencies Category 2: Personal characteristics Category 3: Gender differences Category 4: Age difference Category 5: Work experience

Each of these five categories is discussed further.

8.5.1. Category 1: PCC COMPETENCIES

In the first place, most of the students believe the doctor has to be competent in what he is doing. Therefore, the doctor has to possess **medical knowledge competencies**, meaning he understands the different scopes of disease, understands the differences between symptoms, taking into account every possibility of the treatment, and showing alternatives to the patient. With medical knowledge, the doctor becomes competent in the health care area and becomes ‘competent in what he is doing’. Some students believe the doctor that does not take into account all the dimensions of the patients should not be necessarily considered as a bad doctor but rather a doctor who put the disease first over the patient. Nevertheless, doctors are supposed to know that it is not just the medicine he has to know because there are other sets of competencies valuable for professional work. **Cultural competencies** are considered as important for practising the PCC and include the doctor’s knowledge of the patient’s cultural context, respect for different beliefs, and customs of the patient coming from all kinds of different cultures. Some of the students acknowledge unfeasibility for the doctor to know and understand all the cultures in such a diverse world, but argue for the doctor to-make an effort to understand and respect patient belief and faiths of all kinds (‘It is impossible for you to understand all the cultures [..] if you know a lot about different cultures then maybe you do not know a lot about diseases’ (Student 2); ‘[...] that the gives more than 50% of respect because […] if you know, you understand, at least respect’ (Student 3)). For good coordination of patient care, which requires work with the team and their coordination, several students identify that the doctor has to possess **leadership competencies**. The doctor appears to students to be a proactive and resilient person, a leader with organizational skills who does not mind doing a little extra task or work when necessary. Working with the team and the patient requires doctors to have **communicational competencies,** and it is essential according to the majority of students. Students believe that the doctors should talk with each other and be good at information provision and communication with patients and co-workers, establishing a good channel of communication and relationships. For all students, manner of communication is important; letting the patient talk and having a capacity to be able to explain things simply by using terms that every person, even without any medical knowledge, can understand, were identified as particular skills of communicational competencies (‘brings the information in a way that the person in front of him understands’ (Student 10)). Students identify that different ways and styles of communication exist, and it might depend on doctor’s communication skills.

Besides, to be a good communicator, the doctor has to possess a certain level of **empathy,** as a doctor having the ability 'to put themselves in someone else's shoes'. The doctor should be focused on the living person that is in front of him, not only on the disease, being able to see the patient behind his illness in all his multiple dimensions. In a way, the doctor has to show he is concerned about his patient, demonstrating compassion, and that he cares for him/her, and he is not just doing a medical part of the treatment. The doctor that cannot empathize, for some students, is not to be considered as a bad doctor but they believe if the doctor has **empathy**, it is an advantage for a caring process. However, if the doctor has no empathy, it is a little bit difficult to force them to be empathetic. Some students believe the doctor has to create an environment that the patient can trust, showing that doctors deserve the trust of the patient. By having a confident professional posture, a doctor shows that he deserves the confidence of and transmits confidence to the patient. Empathy without competence is not enough *per sé*; therefore, unlike the previously mentioned groups of students, some students argue for empathy as a trainable competence. Students believe that doctors in Portugal are trained to a certain extent to be empathetic and to establish a good patient-doctor relation. Finally, students believe that doctors in the PCC process have to be **attentive and observant,** to pay attention to everything that surrounds the patient or, in the case of comorbidity, to pay attention to any other disease the patient may have ('the ability to train yourself to understand the person's way of conveying information […] attentiveness will be a competence that someone should require' (Student 10)). However, it can be stressful for the doctor because of many restrictions, since he needs to pay attention to subtle hints and non-verbal patient expressions as it may reveal a lot about the patient. Students believe the doctor is an intelligent observer who can see beyond the medical books, not just focusing on therapeutics but being able to observe what is happening in front of him. However, the doctor should also understand the context and environment from where his patient is coming from because it might be a valuable segment of the patient's treatment and help in his reasoning about the patient's life. He ought to have a sense of humanity and to see things from a community perspective ('if we think that we are all from the same boat, we care more about the one which is next to us' (Student 6)). Most of the students believe that young doctors possess developed soft skills, and they do their best to integrate competencies; nevertheless, doctors should remain upright despite their age and keep caring about professional competencies in their work.

8.5.2. Category 2: PERSONAL CHARACTERISTICS

Similar to the previous question, we asked each student to identify three personal characteristics that a doctor has to possess in practising the PCC. To speak about the medical doctor's personal characteristics for a student means to speak about many qualities that a person has to possess as features that go along with professional competencies. All students are aware of existing personal differences among doctors; therefore, the PCC depends on the person that is working and who patients are encountering. Based on students' narratives analysis, we distinguished the following four personal characteristics: (1) being a human, (2) being empathetic, (3) awareness of being a role model, and (4) holding a proactive personality. Being human, students relate to the doctor’s way of dealing with people. The doctor does not need to be a good person. However, he needs to be a human, meaning that besides being a medical professional, everyone should be a nice person and demonstrate the intelligence of a reasonable observer and listener, a humble person with patience (‘the importance of the person behind the professions (Student 4); ‘need to be nice, just kind, just nice to people, that is a lot of different from empathy’ (Student 3)). Students stress a human part of the doctor who possesses a sense of humanity (‘to be selfless’, ‘to demonstrate humility’, ‘free from his ego, especially when it comes to teamwork’ (Student 5)). How much importance will be given to the PCC depends on the doctor as a person who is working. Students have experience with doctors who have their manner of dealing with the people, caring about the patient as a human, but also with some doctors that do not give importance to this human aspect, ignoring even the patient’s need to talk (‘do not let the patient talk, because if you let the patient talk it is the end, you can do nothing’ (Student 4)). Having a more caring personality helps doctors do things differently, not because anyone is forcing them to do so, but because they are like that in their nature. Some illustrations of student’s answers:

> “When we join this degree, we know that it's not from 9 am to 5 pm, we have our work hours, we are paid according to those work hours, but sometimes we have to do some extra mile for the patient. It is like I'm in the middle of observing the patient okay it's 4 o'clock, my work hours are finished; I leave this patient for tomorrow. This time I have time to check up on your right leg and tomorrow left leg […]. We have to be selfless, but not selfless to the point we completely sacrifice ourselves. In the long run, it could lead to exhaustion, burnout, mental problems; it will jeopardize care in the long run. So, we could be selfless would be able to accept the boundaries.” (Student 5, M)

Students recognize the necessity of **a doctor’s empathy** and ability to empathize with patients. Unlike the group of students that believe that empathy can be taught as a professional competence in the PCC, there is a group of students that believe that empathy is a personal characteristic, and every doctor should possess a certain level of empathy; however, it might be sometimes difficult to empathize. A doctor’s sensitivity and empathy are the basis of the doctor’s compassion, and it goes together with competencies. The student believes that personal ability to express empathy comes before any experience, but doctors might have a life-changing experience that could change doctors for the best towards being more compassionate. For example, the doctor might have experienced the same problem as his patient, and it can help the doctor to empathize with the patient more easily, being able to imagine himself in the “patient’s shoes”. In the same token, it does not mean that if the doctor has never experienced the same problem as his patient, he cannot be able to empathize; however, a student believes that it makes it easier for the doctor. Hence, the doctor’s compassion does not replace studying and the doctor’s knowledge, but it appears to be a valuable supplement towards achieving the PCC. **Proactive personality** is a personal characteristic of doctors vital for expressing his curiosity about the surroundings, to be going beyond any limitations. Besides, the doctor has to possess an **awareness of being a role model**, meaning the doctor should be aware that his behaviour is a role model to younger colleagues and serves as a personal example to others.

8.5.3. Category 3: GENDER DIFFERENCES

Answering the questions of whether students perceive gender difference about what the PCC is and the ability to behave toward the PCC provision, some students believe that it is not that 'black or white' even though society is moving towards less sexism. In some interior areas with 'small town' cultures, it is possible to consider the existence of gender difference similar to the situation in Portugal 50 years ago, but the general picture, to the students, is not like that. Some students believe there is no gender difference in terms of sensitivity, meaning it is not a question of gender since a person is a person and they are equal, but it is rather a question of personal characteristics and a person's merits. On the contrary, some students believe that differences between male and female students exist, arguing that it is possible to identify gender characteristics usually more prevalent for a male group and some more in female students' group. How people process their thoughts are typically different between male and female (Student 5). While some students believe there is a gender difference in terms of reasoning, others believe that there is no difference in reasoning but in their behaviour ('how you reason is not necessarily impairing in the way you treat people' (Student 10)). Some differences are in favour of the female gender. Some students perceive females as showing a more complaisant posture and are better at personal communication. For some students, females are perceived as more competitive, liking to challenge themselves more, so students notice that female teams sometimes tend not to work well (Student 5). Female students tend to be more empathic and more sensitive, so they are more effective at the emotional support part of the PCC. Males are a somewhat less empathetic than females. Although male gender can have the same empathy as female, sometimes males tend to underestimate suffering and do not appreciate the impact of it ('the advantage of being less empathetic, I think we are more pragmatic' (Student 5)). Male posture differs from the posture of females ('we still see male doctors working with that stand-off posture, that's from dictatorship we had in Portugal, with the culture of machismo' (Student 7)). Males are pragmatic with the tendency to conform and usually handle well working in teams. Concerning abilities to practice the PCC, students believe that, on average, females and males are equally capable and equal in their ability to behave patient-centric, but still point out that training of students should be slightly different between genders. One illustration:

> "We can learn a lot from each other. On average I will say that we are equally capable of being patient-centred, but I do think that our training could be slightly different." (Student 5, M)

Students express that females are stronger in some concerns while males are in others, so, the teacher is the one who could identify students' characteristics and perceive ones that students lack and try to train them towards skills improvement. For some students, the important question regarding gender difference is the question of patient's preferences for the doctor gender. Students give an example of gynaecology. Dealing with an intimate sphere, some women prefer a female gynaecologist, so the doctor has to accept there are some preferences just because of gender, not because of his ability or knowledge. The doctor has to accept that in this case, his gender was a bias for the PCC provision so that there is nothing left to do or to change to make a patient feel good and comfortable.

8.5.4. Category 4: AGE DIFFERENCE

While some students believe that age is the most important reason behind the existing difference between younger and older doctors in terms of attitude, others argue the age is not as crucial as having an education in PCC. Students perceive that doctors who belong to the younger generation show more enthusiasm in their work with the patient and put more emphasis on the PCC in all of the dimensions compared to the older generation of doctors. Firstly, this happens because of the young doctors' enthusiasm ('younger doctors are fresher, full of energy, and with hope to change the things for the better' (Student 1)). Secondly, the younger generation of doctors gets emotionally closer to the patient than older doctors because they are taught to be like that, but in practice, they might step back from being so close to the patient because the older doctors advise them not to be. Students believe that despite older doctors' advice for keeping an emotional distance, it does not cost a lot to be a bit closer to a patient. While the younger generations are taught about the PCC, this phenomenon was not part of the curriculum of doctors of the old generation. When older generation doctors were studying or starting their career, a patient-centred approach was considered not that important, and maybe sometimes, older doctors do not have that much patience for this aspect of the work. Thirdly, students notice a lack of patience for this aspect of work among older doctors. With age, doctors get tired of fighting against the systemic barriers. The student believes that with the limited resources of time, the doctor simply maybe tries to focus more on the technical or the professional part of the whole process rather than other, more personal, aspects. Regardless, students argue for the importance of inner growth before starting medical school and that entering studies a bit later might give a better perspective to medical studies and practice.

8.5.5. Category 5: WORK EXPERIENCE

For students, previous work experience appears to be a significant factor. Students believe that they learn from different experiences and that every experience changes them for the best. Most of the students reported not having any previous work experience. Those students with previous work experience claimed that this kind of experience was applicable and helped them in their medical studies and encounters with patients and colleagues. It does not, however, substitute studies and expertise of medicine, but helps to improve competencies ('knowing people, working with people that are different from us, listen to their opinions, respect what they want and what they need' (Student 9); 'it gives you some insights or gives you some experience in taking into account patients' preferences' (Student 1); 'going that extra mile or trying to please somebody, you can have positive feedback as well, which helps in a relationship with the person' (Student 1)). Students claim to have had various types of work experience, mostly in human science (from low-level management jobs, work in tourism and hospitality, (in)formal education of young people) to "hard" science, such as in civil engineering. This kind of work with different people every day provided them with valuable insight and experience mostly in communication and management-related issues. Almost all students believe that every type of work with people brings young and inexperienced individuals the possibility of a better understanding of the relationships between people, opening the opportunity for the person to put himself in the position of others. The students could identify three PCC dimensions where previous work experience helps, and it relates **to the aspect of coordination of care, patient preferences, and information, communication, and education.** One example:

> "[…] working in tourism […] it gives you some insights to or gives you some experience in taking into account the patient's preferences. It is not the same thing; it is a completely different situation, but still, you can understand. You can sometimes be going that extra mile or trying to please somebody, and you can have positive feedback as well, which helps in a relationship with the person." (Student 1, F)

Believing that *any* kind of experience is the best way to learn how to be patient-centric, some students consider personal life experience and personal ability as advantages before any work experience. ('your person is made of all your life that gives you, all of your experiences' (Student 4)). Nevertheless, previous work experience of any kind appears to be a good incentive in developing a different set of professional competencies and personal abilities among doctors. Firstly, it **contributes to the development of a person's sensitivity for recognizing signs and emotions** of others, for learning how to empathize more easily and become more sensitive to opinions that others express. Secondly, it helps in learning and **improving the ability towards better understanding** of various aspects: situation, people, and respecting the needs of others. Thirdly, **it enhances the doctor's capacity to address a different group of people in a different way** which influences the approach the doctor has with the patient and his attitude. Fourthly, it helps in **improving communication skills** and raises the capacity of being able to explain things in a simple way or terms that patients without medical knowledge can understand. Fifth, doctors **learn about patience**. Sixth, being exposed to various and numerous situations, doctors get the possibility **to learn from mistakes and to avoid repetition** of the same mistake in the future. Seventh, having some experience before starting medical studies **gives a better perspective on all courses at the university**, so that students could identify barriers to gaining more work experience. For a medical student in Portugal, it is not only challenging to work in the medical field, but also to study and do other graduate kinds of jobs so they believe that more internships would be helpful during studies to gain more work experience.

8.6. THEME VI: THE WAY TO GET ACQUAINTED WITH THE PCC PHENOMENA

INTRODUCTION

In this segment, we aim to discover the way the Portuguese get acquainted with the PCC phenomena, if it was part of the formal medical curriculum and if they experienced dissonance between learning and practice (Section 8.6.1.) (*Table 48*).

Table 48. Theme VI: The way to get acquainted with the PCC phenomenon and categories of students' interviews data

THEME VI: THE WAY TO GET ACQUAINTED WITH THE PCC PHENOMENON	Category 1: The way to get acquainted with PCC Category 2: Barriers in learning about PCC Category 3: Motivation for learning about PCC Category 4: Improvement in the learning process about PCC

Further, the students identify the motivation for learning about the PCC (8.6.3.), barriers (8.6.2.) and possible improvement measures in the learning process (8.6.4.)

8.6.1. Category 1: THE WAY TO GET ACQUAINTED WITH THE PCC PHENOMENA

Two ways of how students become acquainted with the PCC phenomena in Portugal are distinguished, and it is formal and informal.

*Formal learning. S*tudents state that the PCC phenomenon *per sé* was not part of formal education at the University they attended in Portugal, so they did not learn formally through the curriculum, and they never had any subject or did not experience those kinds of courses and seminars. However, some students mentioned that their professors talked about some theories and the existence of two types of patient care ('we are moving from more doctor know- it- alls to the patient-centred care' (Student 3)). Besides, all students were able to identify that their curriculum had information about the PCC, meaning that the medical curriculum had different disciplines and subjects dealing with some of the PCC dimensions, but the learning was not structured, being somewhat fragmented ('I cannot remember ever talking a lot about PCC in this form, in structured nice form' (Student 1)). For instance, in the course where they gained some information about the PCC through formal education, students, identified as follows: *Family Medicine, Internal Medicine, Psychology, Palliative care, and Primary care* classes. Moreover, some students were able to identify some specific modules at the beginning of the course "T*he doctor, the family and the patients*", "*Introduction to clinical practice*". At the same time, some aspects of PCC are learnt during a clinical rotation in presentations of surgery and the family medicine internship. Speaking through the prism of Picker's eight dimensions, students identify curricula units that taught them about Information and Education, Patient's Preferences, Physical Comfort, and Emotional Support dimensions ('I studied psychology last year and […] I've learned a lot how family and friends should be supported when someone is ill' (Student 8); 'I was taught how to be kind and empathetic with the patients in my 4th year, in neurology […] he taught us that the patient is the centre, that the patient needs to maintain his dignity, we need to educate that to the patient and talk with them' (Student 3)). In contrast, the students identify dimensions they never talked about during their education, as follows: Access to Care, Coordination of Care, and Continuity and Transition while the Involvement of Family and Friends was not particularly considered. Some students believe that education helps in the domain of Emotional Support and Family and Friends' Involvement.

Informal learning. Besides formal, the students had experience in an informal, more as a subliminal way of learning the PCC, through multidisciplinary meetings, in the conversation with the doctors and teachers, and learning by doing. It appears that the majority of students get the most out of working with doctors during rotations, by watching and interacting with senior colleagues or observing them interacting with the patient, even if It might sometimes turn into 'listen time' with absence of discussion of the situation that they had previously with the patient ('always came along with the rest of medical training' (Student 5)). Some students believe that in practice, the range of types of care that doctors have towards a patient is quite remarkable ('If you are lucky enough and you can work with a doctor that loves to put the patients in the centre of his work' (Student 4)). We distinguish the four most common ways of informal learning as following: (1) by observing, (2) by doing, (3) by learning from other's experience, and (4) by (re)searching for knowledge.

Learning by observing for Portuguese students means learning from the sidelines by watching the doctors' practice, the doctors' appointments, emergencies, observing the behaviour of different doctors and senior colleagues while interacting with the patient but observing this lack of independence of the patient as well. Students like watching the doctor in action because they claim it helps in formulating their own thoughts about what is happening. Still, for some of the students, the observation appears to be more useful than discussion in learning about PCC because the doctor can expose his opinion ('the doctor can give you a valuable opinion, but it is still his opinion' (Student 10)). Some of the students believe they also learn about the PCC from observing their own or someone else's mistakes in practice and for those students this is the argument for placing more emphasis on observing behaviour rather than on opinions and discussions ('more useful is the observation, actually, more than discuss' (Student 10)).

> "By observing… observing different doctors, how different professors were approaching each situation. The approach was slightly different, and the result was slightly different. I'm thinking about that and comparing it, I can say: this doctor did well, and I will follow his example, and this one could do better. By going back, I can say this one was patient-centric, this one was less patient-centric so that I will follow his example and I will try to do as he does." (Student 5, M)

> "You can theorize about it, and you can exemplify, you can give a million of examples, but […] if they do not see this happening, for some students […] it's easier to understand when they're facing an example of a doctor that he is good, concerned, patient-centred practitioner." (Student 10, F)

Further, some students believe in the importance of practice; the best way to learn about PCC for most of the students is **learning-by-doing** ('one thing is reading about them in the book, and […] a completely different thing is doing them specifically in the health area' (Student 2)). They think that the PCC must be learned in training, through examples, gaining experience on the ground. For example, they learn in the hospital environment how to attend to the patient, to address him by title and surname and if the patient is a believer and wants privacy, doctors should respect that (‘[…] I was taught patient it's not name and surname, it is Senora professor and engineer […] if the patient does not want students… if the patient wants privacy if the patient is a believer’ (Student 3); ‘we sit if the patient is in bed, just to make contact more personal with the patient […] I was really taught to be educated with patients, to be kind’ (Student 3)). Giving bad news to the patient appears to be very difficult for students since all students state they did not have experience of doing it alone, and they do not feel prepared. Usually, when they had to give bad news, the senior doctors would have to solve this part of the training. Some students observed how doctors did it, which might be followed by discussion afterwards, but they had never done it themselves (‘I never learn how to give bad news, and I do not think I will ever learn […] because I never saw that ever in this almost four years of clinical training’ (Student 3); ‘to observe my older colleagues give bad news than to discuss it’ (Student 1); ‘it is a thing that you learn by doing, you have to do it a number of times before you really can feel more confident’ (Student 1)). For this kind of learning, all students are unanimous concerning the importance of receiving feedback on taken action or particular behaviour which enriches their confidence. Some students say it is not a common practice, but still, they have the experience of working with senior doctors who already helped them a lot by pointing out students’ good behaviour towards patients, and complimenting students’ ability to be empathetic with the patient. Feedback for students appears to be a way of doctors’ teaching method, which measures a student’s confidence to approach the patient based on what the doctor has taught them. Some students said they learn about the PCC from the experience of others. **Learning from the experience of others** occurs in multidisciplinary meetings and working or interacting with doctors or senior colleagues during rotations when students learn from older doctors’ practice. It is not just about listening to someone's experience, but also discussing when in doubt before the situation occurs. In addition to multidisciplinary meetings, students found it helpful to have a short discussion afterwards, although it is not common practice to have the educator involved. Hence, so most of the students have a feeling of there was a lack of discussion during study years due to time constraints or some personal bias. However, students emphasize the importance of learning within student groups of colleagues. In this segment, some students find a helpful discussion with age peers (friends and colleagues) because they feel comfortable with people with whom they trust. One illustration:

> “[…] I like to confront my thoughts with other people's thoughts, but I found it more useful to confront the people that are at myself same level of observations, not with a tutor because I do not think that they will take it a wrong way (the doctors), that's not at all what I'm saying. I'm saying that it's more useful for me to discuss a certain opinion with the people that I trust or with the people that I know.” (Student 10, F)

Learning by (re)searching appears to be an entirely conscious way of learning about the PCC beyond the curriculum. Students learn from books outside of the curriculum that they searched for either by themselves initially or because of the professor’s recommendation. Personal student initiative sparked their desire to research, read and learn about, doctors' attitudes, how to give support, and how to communicate. Literature available on the Internet, particularly on YouTube channels, and attending congresses are handy tools in the learning process ('I think that medical course nowadays is a lot of our work and not so much what we are taught' (Student 3); 'I have searched how to give supports, how to teach new ways, how to speak even words that are normal, that people know' (Student 3); 'It happened to me that the professor recommends me books which the author was talking about his experience in the hospitals, and [...]and see how the doctor can be important and how some attitudes that we are just even doing, we are just acting like it is normal, see what is the impression in the patients' (Student 4); 'I would do that all by myself actually' (Student 3)). All students express they have never done any additional seminar or course about the PCC phenomena, nor did they look for them actively or did not come across those kinds of courses and workshops; however, all of them express willingness to attend such courses if they open because they believe it might be very useful for their future career.

The dissonance between ideals and practice: We asked the students if they notice an existing discrepancy between professional ideals and reality in practice and to give us an example. All students experienced many times, dissonance between what they had learned and what was going on in practice. Students argue they have never seen all eight dimensions in action. There is a lack of transmitting knowledge into action, meaning transferral of this abstract concept into action. One student gives an example of dissonance related to the Physical Comfort dimension. Students learn in neurology and the basic sciences how to comfort patients, how to take care of the patients, and what is best for the recovery process, but not everybody does that in practice. Another example of dissonance relates to the Emotional Support dimension. For example, all the doctors say they must be empathetic, but the student was witnessing consultations where the doctor was everything but the least empathetic. Students saw a lack of optimal conditions that would allow them, as doctors, to do what is expected of them as professionals. Also, given the fact that doctors are human, things do not always go as doctors planned or as expected, or that doctors care more about reputation and monetary rewards than to care for the patients, therefore, this might change doctor's work attitude and behaviour. Thus, Portuguese students feel that sometimes medical students fail to do in practice what they learned about in the course, and in those cases, they feel it is crucial to receive feedback from-the educator.

8.6.2. Category 2: BARRIERS IN LEARNING ABOUT THE PCC

For learning about the PCC, along with the knowledge and medical skills, most of the students emphasize the importance of multidisciplinary learning and life-long soft skills improvement. They believe it is challenging to teach because it is not simple to make someone understand how PCC is essential, and therefore it should be taught. Although students identify many barriers, they claim not to be rejected by tutors when looking for any kind of information.

Based on students' beliefs, we discover the existence of obstacles in learning about PCC on two levels: **the system and the human**. The system-level involves the following six barriers: (1) lack of curriculum units on the PCC, (2) lack of practice and formal training, (3) large study groups, (4) lack of time for the doctor to dedicate to teaching, (5) not being introduced to the service team, and (6) the selection process of a medical student neglects the importance of social skills. While some classes are not even compulsory in curricula, students argue that education on PCC as an integral concept does not exist even as an optional module. According to students' experience, there are **no curricula units** that explore all these concepts/dimensions of the PCC discipline on how to be patient-centric. Most of the students recognized curriculum units that deal more with emotional support, family and friends' support, but none of the courses teach these eight dimensions (Section 8.6.1.). Thus, students argue that in the existing formal curriculum, the absence of information, explanations, and education on three of Picker's PCC domains is noticeable, namely: Continuity and Transition, Coordination of Care, and Access to Care. Hence, the students express their wish to be more informed and educated about the health system in Portugal and how the system works.

In the same token, students believe that it is hard to train people if there is a lack of measurement and examination of PCC action. **Lack of practice and formal training** in a PCC area is considered a barrier resulting from the system as it means that most of the students could not identify specific aspects or parts in training preparing students to be patient-centric. Further, lack of practice and formal training is considered a barrier originating from organization of work because several students experience a lack of concrete examples on the PCC in practice and miss seeing how doctors transfer an abstract concept into reality. In this regard, they emphasize the importance of student-patient reaction because the patient is a source of education for students as they learn not just from tutor and doctors but from patients as well. While students acknowledge difficulties in establishing guidelines for dealing with the patient, they still do not sometimes understand how to deal with the patient. This kind of situation makes students feel unprepared for some situations because of a lack of explanation of how to deal with the most challenging and most common ones in practice. Although some students think there is no correct way of giving bad news, they believe that it would be helpful if some of the clinical teachers pointed out what incorrect behaviour is, which would decrease their insecurities in doing their future job. Students are aware of their position in which they are still not authorized to do some things without a tutor, which further explains their lack of taking some action regarding the patient in practice (Section 8.4.). Some students experience learning about PCC in the final 6th year for which they believe it is not the best year because of not being hundred per cent immersed in the clinical internship program due to their preparation for the final exam and the reduction in students' clinical training time (Student 4). Furthermore, Students experience the organizational problem of **big study groups**. Students' on-site visits groups are often big, so it affects the learning process. For example, students in some cases are taught in classes of between 8-12 students per doctor, who surround one single patient asking questions. Clinical training in a large group reduces the patient’s privacy and the possibility of doing a physical examination, and consequently, students have fewer chances to learn in such a big group in practice (‘It is impossible because 12 people are not going to palpate your abdomen […] that's quite painful’ (Student 3)). A similar barrier happens in learning about providing emotional support to the patient. One illustration:

> “It is impossible, how do you give emotional support when you have 12 people watching the person crying, how do you give ...that's why I never saw giving bad news to someone. It is not like I am enjoying giving bad news, […] but yes, I have never seen it because we were 12 […] behind the doctor. Well, the doctor won’t say ‘oh, well you have gastric cancer, that's it’ and 12 people looking at you and you are crying because you have just found out that you have gastric cancer. That is impossible, just impossible really! that is ridiculous!” (Student 3, F)

In the same token, another organizational problem is a **lack of time for the doctor to dedicate to the teaching part**. It is impossible to find a time slot to teach all of the students surrounding the patient. However, doctors teach students while doing their hospital work, for which sometimes they do not get financially rewarded. For example, doctors dedicate two hours of their time in the hospital to teach students, but then they need to stay an extra two hours after regular work time to finish work they did not complete just because they had to teach (‘practical classes In Internal medicine four hours per week […] I was learning through lectures, I wasn't learning through practice’ (Student 3)). In addition to this, students state that tutors might lack time to listen, explain, and to ~~put~~ give attention to students, while the students also lack time to ask more questions and to talk about the PCC practice with them because they are exposed possibly to burn-out (‘understanding the stress they go through, the condition they work in; in those cases, they have been slaves’ (Student 7)). Thus, some students notice as a time goes by, the doctors unfortunately adopt wrong behavioural patterns and practices toward patients. Instead of being corrected or correcting themselves towards more caring practices it is much easier for them to just carry on with little care for patient’s needs. Some students complain about **not being introduced to the service team** once when they arrive, so they are not familiar with the team, rules, and tasks’ division which affects their learning process. Similarly, some restrictions come from the position of being a student and an existing hierarchy between younger and older doctors. Students sometimes cannot learn by doing because of existing procedures in the patient care for which they are not authorised yet. One student expresses the following:

> “We arrive in service, and they do not present us to the nurses neither to the staff networking that service. They do not present us the minimum of the rules of the service so we kind of discover then, but they are step by step, but then also the nurses do not know us, so they do not teach us the things, so it's kind of complicated. For me it is for them to say, oh, in this service we do it like this, nurses care about this, doctors care about that, we care about teaching the young doctors to do it like this.” (Student 6, F)

One of the barriers in the learning process students notice is **the selection process of a medical student that neglects the importance of social skills**. One student believes that the profession of a medical doctor requires people with great studying skill, great learning skills, but sometimes those people might lack social skills and social manners. Since this selection of people who are able to attend medical school is through grades, the University might inadvertently choose individuals who have difficulties in these particular aspects of the PCC (‘most are used to being people who have a great studying skill, great learning skills, but sometimes they lack social skills in the social aspect’(Student 5)).

The human level is related to doctor and patient and includes the following four barriers: (1) A tutor-student relationship, (2) human characteristics of the doctor, (3) student´s active approach, (4) lack of time and opportunities to gain medical-related work experience during study time. Some students believe that barriers are not in the system but in doctors. According to their beliefs, **a tutor-student relationship** is meaningful because the doctor’s ethical obligation is to teach students and to serve as a role model for students and a young doctor, but PCC teaching is not compulsory. Students have divided educators into those who are hesitant to work on PCC teaching and those who encourage learning about such phenomena (‘it depends a lot on the doctor that speaks to you, on the professor that speaks to you, because it's not mandatory to talk about patient-centred care’ (Student 4); ‘it happened to me that talk about for an hour with the doctor about how it was important to care about patients’ (Student 4); ‘professors that give you a ‘stimuli’ read that book because it's taught about this’ (Student 4); ‘we do not discuss that much between classes, except with some of them’ (Student 6)). Most students believe that it depends on the attitude of the single doctor and professor if they will speak about PCC and if they are tied to this way of thinking they work. Some students feel that sometimes they fail to do in practice what was learned in the course and in those cases, they feel it is crucial to get feedback that might be lacking on the side of the educator. Talking about the human side of the patient/medicine is a matter of choice; therefore, the **human characteristics of doctor** matters from the students’ point of view. Students argue it might depend on doctors’ characteristics, and it is a matter of luck to encounter educators willing to teach about PCC. They have experienced that some doctors talk, others not, some tutors do not explain, sometimes students are not involved by doctors or doctors impose their opinion (‘If you are lucky enough and you can work with a doctor that loves to put the patients in the centre of his work’ (Student 4); ‘it depends a lot on the attitude of the individual doctor, of the individual professor if they are really talking about it, if they are really tied to this way of thinking when they work’ (Student 4); ‘there is always the importance of the person behind if you have the time to talk about something, but you do not want to’ (Student 4)).

Students believe that learning is a matter of **student´s active approach** to ask and look for PCC knowledge. Some students believe they lack a critical approach or encouragement to have a critical approach in the learning process. Learning limitations are based on student position that depends on the relationship that student creates with the tutors because barriers are high between the doctors and younger doctors (‘in Portugal, the barriers are high between the doctors and ‘the small doctors’ (Student 6)). However, the students feel incompetent to criticize doctors’ way of taking care of the patient, or the way the doctor is interacting with a patient. Students lack confidence to have a discussion between classes with their tutors, so they talk about it within their group of colleagues. In peer consultations, students might complain about doctors' and tutors' actions between themselves. Students experience a **lack of time and opportunities to gain medical-related work experience during study time**. One student assumes that a fifth-grade medical student in Portugal, following examples from other countries, could work in a hospital or geriatric care ('they do not accept me to do one thing which is called 'Help 24', […] like a line where people call, they say the symptoms, and we do like a triage […] they do not accept me, you know in geriatric care because they say I'm just a graduate' (Student 6)).

8.6.3. Category 3: MOTIVATION FOR LEARNING ABOUT PCC

While some students state that motivation for learning about the PCC comes as a natural thing, others argue that they got motivated after learning at school, or encountering an empathetic kind of doctor, so learning about the PCC in school went a lot into the image of a doctor. However, all interviewed students state their willingness and wish to learn more about this topic.

> "I went into medicine to be a doctor as I usually saw how to be a doctor, that kind of empathic kind of doctor and that is what motivated me to learn more about patient-centred care, after I was taught in school, and then it goes a lot into that image I have." (Student 3, F)

We identify six motivators for learning about PCC: (1) personal experience, (2) being a complete professional, (3) fear of failure, (4) personal satisfaction and happiness, (5) being a perfectionist, and (6) being critical. **Personal experience** from being a patient, not just a medical student, appears as a great motivator for some students to learn about PCC. Through also having been a patient, a medical student gains experience that makes them aware and attentive because the student had an experience of illness that needed someone that pays attention to details, including disease interpretation. Avoidance of unpleasant situations experienced in personal life motivates students to learn more about how to be more patient-centric in behaviour towards future patients ('I am also a patient, not just a medical student; as a patient, I have been through some situations that I do not want anyone else to go through' (Student 10)). Some students believe that learning about PCC is essential for medical professionals who aim **to be completely professional**. For students, practising PCC appears as the only way to be professional in the care process and to be a complete professional towards a patient in several ways. (a) Being professional does not require being a good person, but it is essential to demonstrate a professional appearance in front of the patient so that patients get an impression of the doctor as a professional. (b) An everyday experience that students have with patients and their reactions motivates them to learn more about a caring attitude. Sensitivity of interactions with the patient is essential for the patient because it might improve care for the patient process. Students explain that if the doctor does not treat the patient well with a caring attitude, for example, when deciding which drug to prescribe or where to put the patient to comfort him, the patient will lack a lot in treatment. (c) In addition to this, if the PCC is not just a bureaucratic thing, it allows the doctor to provide better care for the patients, from the way of diagnosis to being more effective in treating the patient and achieving better work results. (d) Being professional means the doctor being more modest towards the patient and being cautious about the patient's rights. Students are aware that if the doctor does not treat the patient well, the patient can make complaints about the doctors in court ('[…] patients making complaints about the doctors in court […] and I think there is much more caution about how we treat the patients because of that' (Student 3)). Students express **fear of failure**, unknown situations, and losses that act as a driver of motivation in the learning process. For example, one student is afraid of the situations of failure as a professional in cases when they cannot demonstrate competencies due to the lack of time or the system. Analysing students' narratives, we could identify **personal satisfaction and happiness** as the category playing a significant role as motivating factors. Being satisfied and happy with their own reactions, behaviour, accomplishment, and success, the students see as an inner motivation to learn about PCC. Students think the patient should be happy, and it is possible to achieve quickly in that the patient gets even happier when doctors care about minor details in the care process. Most students believe that if the doctor gets more involved in the treatment process, he can treat better, and when he treats better, the doctor starts to feel more personal satisfaction. Once the patient gets better, doctors become happier too because he is affected by a caring attitude, otherwise, if the doctor does not look at the patient as a person, he will not be affected if the patient gets better or not. Hence, one student expresses the motivation of living in a happy community from where personal happiness is derived from shaping one's own behaviours to treat patients well ('when you treat them better, you are more happy' (Student 7); 'I like to live in a happy community, so, if I treat others well, I will have happy community' (Student 6)). Led by the intrinsic characteristic of **being a perfectionist**, students try to pay attention to individual details, to do things the best way, and the best they can, which can reduce burn-out. The feeling of doing the right thing and feeling of doing excellent work appears to be a factor for inner motivation in the learning process about PCC ('If I'm not giving the right importance to it, I just feel that I'm not doing my work well'(Student 4); 'it's just something that deals with feeling in the right place seeing that you are doing your work well' (Student 4)). **Being critical** towards changes in the organization is possible when a person knows what PCC embraces. Students show awareness of trends in applying quality improvement measures in the quality management process and believe that if younger generations do not like how some things that are done, should criticize and give another approach believing 'if change comes, it comes from us' (Student 3). Learning about PCC for the students is not perceived to be driven by financial aspects ('it is not something the deals with money, you are not paid more if you do it' (Student 4)).

8.6.4. Category 4: IMPROVEMENT IN THE LEARNING PROCESS ABOUT PCC

Students consider medicine as life-long learning and education on PCC as an investment in inner growth and useful for their future career. All students state they could learn more on this issue during their studies; however, they perceived the PCC as challenging to teach. Having more knowledge about some clinical experience should come before learning about a phenomenon. All students believe it is possible to overcome these barriers and quite easy to improve once when it is acknowledged that ‘education is behind the people’. Hence, they see potential changes in practice as in the following four groups: (1) introduction of the PCC through curricula units during years of training, (2) training improvement, (3) the introduction of measures for doctor’s motivation to teach, and (4) changing the cultural ethos.

Firstly, improvement should start with the **introduction of the PCC through curricula units during years of training**, so for some students it should be done not just in medical but nursing universities as well. Entering into a system that is already organized, does not give so much time to students to think about it, so students just do what is expected from them. However, all students express a need and willingness to attend a theoretical course on this issue (‘in normal class or short courses’). Although it might appear to be challenging to teach in classes, it is still better to have some classes at school to learn a bit more before entering the system. The main three dimensions would be **Continuity and Transition, Coordination of Care, and Access to Care**. The timepoint of education on the PCC is the key to improvement. In the early years, it is important to have some notions about the PCC phenomena, but training on being patient-centric should start after having medical knowledge. All students argue It should come in the final years because they become aware more of this concept once when they find themselves in the clinical context, and the clinical part is a precondition for doing PCC. Although, some of them believe the final sixth year is not suitable for learning about the PCC as they have a final exam (‘it will be better in the last years to be able to see the big picture’ (Student 1); ‘having curricula units of patient-centred care in the last year, that will be very important’ (Student 8)). Secondly, the students believe that learning about PCC would be easier by **improving training**. They see doctors as the key to training improvement because the role of teachers is to enhance students‘ skills. The doctor- teacher can foster student improvement by letting the student practice more. If there is no right way, doctor’s pointing out the wrong ways is also a way of learning for the student during training. Hence, talking with doctors about their approach and experience during training would be helpful for students to do things in practice because they obtain some information or insights into the situation (‘just to explain how they deal with that […] to hear the best experience of our colleague advice I think it would be very helpful how to deal with different types of people, how to explain the same things to different people or different things, it would be a welcome thing’ (Student 1); ‘If I could talk with some people about their approach, about their experience, it would be a lot easier for me to actually do it’ (Student 1)). As the best way to feel prepared to understand all those dimensions and increase the students’ possibility of observing doctors in practice, some students argue for increasing time dedicated to training during internship practice and introducing role playing, similar to their Swedish colleagues. One student mentions the effort of Portuguese students’ associations to reduce the class number and to double or triple the time of practical, clinical practice. Additionally, students believe that guidelines on how to behave with patients or some rules that are a bit looser regarding behaviour in service are necessary and universally applicable to all people. One illustration of the student’s answer:

> “I think we could benefit from something around the lines of that they will present us scenarios of medical activity and they would ask us to say: what would you say, how would you approach this, imagine […] you have to do a medical exam a CT scan, how would you say to the patient, how would you explain that he needs this exam for diagnosis, for evaluation, and then having someone evaluate how we handle this scenario and say do you think your patient was, do you think they're just more than a smile, does he understand about what you say, do you think they understand the meaning of this exam, do you think you transmit it this good? **Something that tells us you are patient-centred, but you could be more patient-centred, something more defined**. As long as concept remains a bit abstract, that we can't pinpoint exactly if it was or wasn't a patient-centric, it will be hard to train the people to be that way.” (Student 5, M)

Thirdly, **the system and organizations should find motivation for doctors to teach,** either by paying the doctors appropriately or reorganizing clinical teaching time (‘another slot of time for teaching or time dedicated to teaching students to be discounted from their clinical work’ (Student 3). Finally, students argue for changing **the cultural ethos**. There should be an ethical and moral education of medical doctors so as to remove barriers in the PCC. Some students believe that formal education should be supplemented by informal training. According to them, informal training should contain courses created to involve patients and doctors together. It would help doctors to think more respectfully about other people's actions, and the concept of teamwork. Indirectly and in the final instance, this kind of training would possibly change the mentality of society (‘I think there is an education behind the people that is the one that makes you act in one way or in another […] going towards a more respectful way of thinking about decisions of the other people’ (Student 4)).

8.7. THEME VII: IMPROVEMENT OF THE PCC ON THE NATIONAL LEVEL

INTRODUCTION

In this segment, we discover students’ beliefs about what the state/government could do to improve PCC, meaning what policymakers and decision-makers should pay special attention to regarding the PCC in Portugal.

8.7.1. IMPROVEMENT ON THE NATIONAL LEVEL

Most of the students believe that the Government should intervene in the Access to Care domain. However, some of the students recognize the importance of more significant governmental intervention in the domain of coordination of care, the transitional care system and continuity of care, patient preferences, and emotional support. After analysis of students’ narratives, we identified seven specific areas of interventions for government and politicians: (1) health prevention policy, (2) the legal aspect, (3) organizational restructuring, (4) improving infrastructural capacities, (5) enhancing communication between providers, (6) quality service improvement and quality control and (7) education program on the PCC. Firstly, seeing the PCC in the prism of prevention, students believe that more financial investment should be dedicated to the prevention programs. It is the government's responsibility to take care of the health of their population and to create a **health prevention policy** enabling a considerably higher number of inhabitants to access care. Secondly, students perceive **the legal aspect** as a precondition of the PCC, meaning the government should create specific norms concerning the PCC practice. For example, the government and policymakers should regulate the way that consent is given, allowing the patient not to take their decision in front of the doctor, assuring the patient's rights and privacy. Legal regulation should promote the explanation of different alternatives to the patient, the doctor giving time to the patient to think before making a final decision about his further treatment. According to students' beliefs, this would be the way to enhance a patient's preferences domain in practice. Thirdly, students believe that some aspects at structural and organizational level should be improved because **organizational restructuring** effectively enhances transition and continuity of care and access to care. One illustration as follows:

> "The largest cause of death in Portugal is a stroke, and we have those specific centres that are called '*Stroke Green Freeways*', something like that, it is called '*Via Verde'* in Portugal. If you go to see a map, you have two in the Lisbon region, two in the Porto region, one in Coimbra and I think one in Braga. If you live in Vila Real Santo Antonio in Algarve, you are five hours by car from the nearest stroke specialized Centre. In Porto, you have two that are 5 minutes from each other, so this does not make sense." (Student 2, M)

According to some students' beliefs, organizational restructuring should include the introduction of voluntary services in the hospital and empower the population to participate in this kind of program. Involving voluntary service in the patient's care process appears to improve different dimensions of PCC, from Emotional Support to Continuity of Care. For example, in cases when patients are alone in the hospital, volunteers could go there and speak with the patients. Some students view the role of volunteers in the caring process as a matter of organization rather than financial expenditure. Considering reorganization, some students believe that the Government and politicians should empower community centres by giving them a more significant role in the patients' care process. For example, students are familiar with some effort of employing more psychologists in the community centre, although they are not certain about the realization of those efforts in practice. In the same token, some students believe that Portugal should give more importance to home hospitalizations and that the government should be improving home care policies and practice because this measure is entirely dependent upon their decision. Hence, organizational restructuring might have an impact on human resource restructuring. For example, some students believe the Government firstly should map affected areas in the care process and then increase the number of open positions for doctors to work in those affected areas. Students believe that the health system in Portugal should increase the number of doctors employed because one doctor sometimes has to do work that should be done by several of them. An augmented number of doctors leave more time for consultation per patient and reduce work stress, so students, overall, believe there is a chance for the Government to change this in health care system organization. Fourthly, they believe that the government should be **improving infrastructural capacities** because they witness hospitals in Portugal, particularly in the Lisbon region, requiring spatial improvement. The need for proper medical services requires better treatment facilities, and the government should solve this problem by investing money in infrastructure, either building new hospitals or re-establishing current ones or abandoned facilities (‘let's think about what we have and some abandoned places, they are not used for anything, so let's see to use them for this’ (Student 8)). Students argue for these kinds of governmental measures because it can enhance access to care and transition of care across Portugal. As illustration, students give an example of the most differentiated hospitals in terms of speciality- the Santa Maria hospital and the central Lisbon hospitals, São José, and Santa Marta. Those hospitals, from their experience, are inadequate, with far fewer available rooms for ill patients so, despite all organizational efforts, a patient may stay in a corridor or emergency room for a day. Also, many patients are staying in the hospitals because carers cannot be put anywhere else or the family does not want them, or there is no place in the transitional care system. Students believe that this problem could be improved with improved continuity. A specific group of patients should be able to move to places where they can regain their function and get well with the help of doctors, nurses and other actors (‘I would improve the other, the hospitals that can just be for the recovery process. […] because, third line hospitals, the most differentiated also, should only treat acute illnesses’ (Student 8)). Political measures can affect the creation of better conditions for providing more comfort to the patient. For example, carers in some public hospitals do not give a bath to the patient because they do not have conditions for that, unlike private hospitals where carers even have the assistance of the auxiliaries. This kind of intervention in the domain of Physical Comfort is what students believe the government can do. Fifth, students perceive that the Government should play a greater role in **enhancing communication between providers** not just on a national but also on a supranational, European Union, level. For instance, one student believes there should be a European program on health information sharing, which should make it easy for a doctor or patient that goes to the doctor in any EU member country to see health information, replacing shared oral information. Health information accessibility among providers is possible to improve in quite an easy way with the informatic measures, developing substantial intra and internetworks. Various electronic networks supposedly facilitate communication and information exchange between providers but also the patient’s access to information regarding his care. However, one student witnessed in practice an example of an application used for the communication among doctors that are involved in the patient’s care process, to which the student believes the doctors did not give adequate importance to use it right or to import all the information that is needed. In those cases, hospital management appears as a stakeholder to the Government towards the full application of the project. Health providers and doctors should think about the way that the patient accesses the information considering there are frequent changes in this area. Students believe that access to care is a political aspect because they perceive its complexity in terms of involving and organization of various elements. Students believe the introduction of health identity cards (sort of e-record) could be useful but still doubting its realization as it is challenging due to many limitations. Further, the introduction of some speciality to coordinate the care appears to be vital, according to students' beliefs. Apart from internal medicine, none of the students can identify a speciality or subspecialty that would be in charge of the coordination of care and continuity and transition. They believe that the Government with the medical chamber should train professionals specifically to do coordination, continuity and transition of care. Sixth, students identify the need for the government to intervene in the domain of quality improvement and quality control. As a precondition for quality service, students assume there must be more time for consultation with the patient (‘It is a big criticism that we are making to the health minister and […] If he has the time to talk to them, it would be much better, more time for consultations’ (Student 3)). Thus, professionals should be more aware of their mistakes and shortcomings. The decision-makers and the people who are in charge of the organization for the health care system should use numbers to show pictorially where the problem appears to be in ‘less guided care’ as there are ‘excessive numbers of medical exams, excessive requests for medication and speciality controls’ (‘you have sent 100 patients to vein vascular appointments; out of these 100, 30 of them really didn't need it, and if you were more attentive, you should have come to this conclusion yourself’ (Student 5)). Students believe that the Government and the organizations could employ various sets of measures to improve healthcare, and they give an example of quality improvement based on the introduction of the rating system.

> “I already know of the existence of some private centres, they're not public centres, in which already the rating system is going on. So, you can go on the internet site and see how that doctor is rated by the other patients, the patient that says: ‘okay that doctor was very kind to me’. So, I think that is something important that can also force the doctors to care about all of those aspects. I think that with this system, they are motivated to be more patient-centred.” (Student 4, F)

Seven, an education program on PCC appears to students as an important measure, so the Government could play a greater role in helping to inform health professionals and educate them formally or informally about the concept of PCC. Moreover, most students believe the Government should give more time and more possibilities to all human resources in the healthcare sector to focus on the aspect of patient care.

8.8. SUMMARY

In this chapter, we present qualitative study results from Portuguese medical students’ interviews that show their beliefs about the PCC as an idea, process, and practice. We have obtained results about a self-perceived role in the PCC process as medical students and in the future as medical doctors. Hence, medical students revealed their beliefs about health policy and medical education policy in Portugal concerning the PCC phenomena emphasizing the areas for improvement. Results are summarized and discussed in detail in Section 9.2.

Chapter 9

SUMMARY OF THE FINDINGS FROM QUANTITATIVE AND QUALITATIVE RESEARCH AND DISCUSSION

INTRODUCTION

In this chapter, we summarize findings from quantitative (Section 9.1.) and qualitative research (Section 9.2.) and discuss in light of results from the previous studies.

9.1. SUMMARY OF THE FINDINGS FROM QUANTITATIVE RESEARCH

In this segment, we summarize the results obtained from quantitative analysis, starting with the correlation between the PPOS (measure beliefs and attitudes) and the SEPCQ-27 (measure self-efficacy in the ability to practice PCC). Further, we discuss findings obtained from intercorrelation results for each of the questionnaires. Lastly, we discuss the effects of medical students' gender, age, previous work experience, and parents' level of education on medical students' beliefs and attitudes as well as self-perception of the ability to practice PCC.

9.1.1. PPOS and SEPCQ-27 Correlation

Concerning our objective of identifying, assessing and examining the association between medical students' beliefs and attitudes to PCC phenomena and their self-reported competencies to PCC, our results indicate that there is no significant correlation between the Patient-practitioner orientations scale and the Self-efficacy in Patient-centeredness Questionnaire. It means that in general medical students' beliefs and attitudes to PCC phenomena have no statistically significant effect on self-reported competencies to PCC, except in Swedish contexts, where this effect is significant and low. To some extent, as Swedish medical students have stronger beliefs and attitudes about a patient-doctor relationship, they feel more secure in the ability to act in a patient-centered way. To our knowledge, the questionnaire correlation used in this study is the first that measures the correlation between patient-centred beliefs and attitudes and self-efficacy in patient-centredness, since in the literature we do not find results that could support our findings.

9.1.2. PPOS Intercorrelation

Within PPOS, two PPOS subscales, Caring and Sharing, appears to be in a strong positive correlation in all samples. It means that if students show a more Caring attitude towards PPC, they will also show a more Sharing attitude. In general, students had higher scores on caring subscales than on sharing meaning that medical students show more caring than sharing attitude in PCC. Comparing Portugal and Sweden, our results reveal a significant difference between the Caring but not Sharing subscale. It means that Portuguese students' attitudes and beliefs about PCC do not differ from the total sample size and that they are more Caring oriented in PCC than their colleagues in Sweden. Further, our results reveal a weak positive correlation between the Caring and Sharing subscale, meaning that as students show a more caring attitude, they might also show a sharing attitude. Nevertheless, two items on the Caring subscale appear to reflect more diverse attitudes among medical students: physical examination as the most important part of a routine medical visit and humour as a major ingredient in the doctor's treatment of the patient.

8.1.3. SEPCQ intercorrelation

Although at first glance, differences in the SEPCQ-27 exist between samples, our further analysis shows that a significant difference is only on Factor 3. It appears that Portuguese student differs from their colleagues in Sweden only in the way how they deal with communicative challenges. Our further analysis shows a high and strong positive relation between Factors and total SEPCQ as well as between factors on all samples. The strongest intercorrelation appears to be between "Exploring the patient perspective" and "Sharing information and power" among medical profession students reflecting that students who perceived themselves as more capable of exploring the patient perspective also perceive themselves as more able to share information and power with the patient.

9.1.4. Effect of medical student's gender

As a result, we found that gender differences can explain some discrepancies between students. Considering the gender of a medical student in general as well as Portugal and Sweden, our results reveal that the difference between male and female medical students exists on the PPOS total. It means, that when we speak about a medical student and their beliefs towards PCC, we have to bear in mind that gender affects in that female students are showing more PCC attitudes from their male colleagues. It appears that female medical students are more patient-oriented across different cultural contexts. In line with our results is the finding from Sweden where female students showed a higher PPOS total score in comparison with their male colleagues (male MS=4.20, SD= .46, female MS=4.36 SD=.36, *p*= .0001 logistic regression), while study analysis on the level of subscales was not performed (Wahlqvist et al. 2010); therefore, we could not make a similar comparison on this subsequent level of analysis. Considering the level of the PPOS subscales analysis, female students had higher scores on PPOS subscales, meaning they show a more caring and sharing attitude toward patients in comparison with medical students of the male gender. In Portugal, results should be evaluated with caution because the values of significance for males and females on the Sharing and Caring subscale were on the margin (slightly above .05). At the same time, in Sweden, gender affects only the PPOS Sharing subscale. These findings for Sweden are in line with the study conducted by Krupat et al., 1999, that shows that gender difference was found on Sharing but not on Caring domain, meaning that female students were more patient-centred oriented in Sharing domain of patient-centredness. In the literature, we found argumentation that female medical students show greater humanism in their encounter with patients that have been supported by findings that more patient-centred attitudes and communication behaviours have been found among female physicians (Haidet et al., 2001). In general, these results suggest that female medical students in their final years of studying have a more positive attitude towards the patient-doctor relationship in comparison with their male colleagues. The study from Brazil shows similar results where significant predictors of patient-centred attitudes among medical students were being a woman and going to public medical school (Pereira, Bernardes, Minari, Silva, & Paro, 2019).

Concerning the Self-efficacy in Patient-centredness Questionnaire, our findings reveal there is no significant mean difference between male and female medical students meaning that gender does not affect the SEPCQ-27 total score nor any of SEPCQ-27 factors. Our results differ from the study of Zachariae et al. (2015) who found that women scored slightly higher than men on SEPCQ-27 Total ($p< 0.05$). Unlike Zachariae et al. (2015) who found that Factor 3 does not correlate with gender, we have found low differences between male and female students on Factor 3, but the value is marginal. Differences of means are not found on Factor 2, meaning that medical students do not differ in their self-perceived competence in sharing information and power with the patient. Results on the country level of analysis, reveal quite similar results obtained from total medical students' samples. In Portugal and Sweden, there are no significant differences based on the gender of total and factor SEPCQ level. Nevertheless, in Sweden, female medical students show significant, positive, and weak correlation with Factor 1, meaning that to some extent, female students are more capable of exploring what patients perceive than their male colleagues. The result for the Swedish group is in line with findings from Denmark, where women scored slightly higher than men on Factor 1 (mean $p<0.02$) (Zachariae et al., 2015). Our results show that the association between medical student's gender and the SEPCQ-27 is significant on Factor 3 where gender has a significant, positive, but weak effect on student's ability to deal with communication challenges. Male and female students perceive themselves, with a small difference between genders, as capable of dealing with challenges in communication with the patient. It appears that gender plays an important role when it comes to PCC attitudes and Self-Reported competencies. Gender is an essential factor to be considered in assessing medical students' attitudes because our results show that gender has the main effect on both subscales of the patient-practitioner orientation scale.

9.1.5. Effect of medical student's age

When looking at the division by the age of PPOS total, comparing 'younger' and 'older' medical students in the total sample, existing differences in means of PPOS total and subscales are not to be considered as significant. On the country level of analysis, the only difference between these two student age groups appears to be significant on the Caring subscale for the Portuguese sample. It means, the more caring attitude among Portuguese medical students is evident in the group of 'older' students, although it is not possible to conclude for the total sample. Similar to our study, previous studies conducted in Sweden show the median age of admission to undergraduate medical school in Sweden is 22 years because many medical students work or study at other universities for a few years beforehand (Wahlqvist et al., 2010). Our research did not find any significant differences for Swedish context, neither in total nor subscales level of analysis; therefore, our results reveal that medical students in Sweden do not differ in their beliefs and PCC attitudes based on the age category. Our results appear to be in contrast with the findings from Sweden (Wahlqvist et al., 2010) that demonstrate a positive association between PPOS total score and age in both genders (male p=.009, female p=.030, multiple linear regression). Nevertheless, in Portuguese contexts, medical students differ, meaning that older medical students are more prone to a caring attitude than their younger colleagues. Results on SEPCQ-27 show that two student age groups differ only on Factor 3, meaning that medical students perceive themselves as more competent in dealing with communicative challenges as they get older over time. Similar to our results, Zachariae et al. (2015), show that a small and positive correlation exists between the age of students and Factor 3. As in the total sample, in Portugal, a significant difference between means on Factor 3 is apparent, and this correlation is stronger than in the total sample. We did not find statistically significant differences in Sweden, meaning that “younger” and “older” medical students perceive themselves equally capable of performing PCC in all three domains during their life. Our results did not confirm that age affects SEPCQ-27 total scores and Factor 1 as is found for Denmark contexts (statistical significance $p<0.05$ (Zachariae et al., 2015). Nevertheless, we found that medical students decrease their ability to keep being professional with age, except for the Swedish context where it appears to be the same regardless of age.

9.1.6. Effect of the education level of parents of medical students

Our results show that parents’ education level does not affect medical students’ beliefs towards PCC. The only significant difference exists in Portugal, where there appears to be a difference between medical students based on the education level of the father. Those medical students who reported that the highest level of father’s education is a master's degree scored lower on the PPOS caring dimension than those who reported lower education levels. When we consider SEPCQ -27, it appears that the level of the mother’s education has an impact on the student’s confidence in the ability to deal with communicative challenges, while the father’s level of education does not have that effect. It would mean that with a higher level of mother’s education, confidence in self-perception to be able to practice PCC is increased. The significant difference appears to be between Portuguese and Swedish medical students in Exploring the patient perspective depending on the level of education of the mother, meaning that Portuguese students scored better on Factor 1 and they are better than their colleagues in Sweden. Also, considering a father’s level of education on Factor 3, it appears that Portugal and Sweden differ in favour of the Portuguese student groups. Moreover, we found that a mother’s education and the country affects Factor 3, but without interaction, meaning that a mother’s education has the same effect in both countries.

9.1.7. Effect of medical student's previous work experience

Results obtained in the total sample show that difference among medical students affects the Sharing domain of PPOS but not Caring and PPOS in total. Unlike total sample results, Portuguese results revealed opposite results meaning that work experience among medical students affects Caring and total PPOS, but not Sharing. Nevertheless, in both cases, these results should be considered in light of the fact that the scores were on the borderline of significance. In Sweden, differences between groups of students based on their earlier work experience towards PPOS appear not to be significant, meaning that early work experience does not affect medical student's attitudes towards patient-centredness. Our result differs from the study that was earlier done in Sweden by Wahlqvist et al. (2010), who revealed that more work experience among medical students in Gothenburg has more female students, and there is an existing correlation between expanded work experience and higher PPOS among female students. Work experience seems to be considered as an essential factor for students in perceiving themselves as competent in PCC. Our results on means show significant differences between groups of students with and without work experience on SEPCQ-27 total and Factor 2 and Factor 3 in favour of students with prior work experience. Our results support earlier findings from Zachariae et al. (2015) that age and experience are strongly associated with Factor 3. On the other hand, a study from Denmark (Zacharie et al.2015) found a significant weak association of experience and Factor 1, but our results on total and counties samples do not support this finding. The effect of age is found for the Portuguese context on total SEPCQ-27 and Factor 3, while in Sweden, there is no evident difference between factors based on student's previous work experience. In general, our results of strong association suggest the following: if medical students had some previous work experience, their confidence in the ability to deal with a possible conflict situation and to separate personal views from their approach in the professional situation would rise. Therefore, earlier work experience affects self-efficacy to practice PCC among medical students. In addition to this, Zachariae et al., (2015), for example, suggest that a positive association between years of experience and higher patient-centredness self-efficacy among students exists independent of their age.

9.2. SUMMARY OF THE FINDINGS FROM THE QUALITATIVE RESEARCH

Firstly, the results obtained in comparative medical curriculum analysis are summarized. Secondly, we summarize the results of qualitative analysis (student interviews) through the key topics of our work-PCC as an idea, process and practice. We aim to show how our respondents viewed PCC as a phenomenon, the importance they attached to the different dimensions of PCC, how they viewed themselves in the context of the PCC in terms of education and motivation for learning, and in particular as agents of change. We also outline their perspectives on practice by highlighting the personal and professional characteristics that a doctor needs to be patient-centric. Finally, we look at the results of the proposals they have made, which they believe can advance health and education policies.

9.2.1 Findings from Medical Curriculums

Our study results from both countries show that there are no courses that cover the education of the PCC phenomenon in a comprehensive manner, or any course named in that way, but most of the PCC phenomenon teaching takes place during sessions and practice at Family Medicine. In Sweden, all PCC-related courses are predominantly part of the compulsory curriculum, while in Portugal, 60 % of PCC-related courses are compulsory and 40 % of the optional medical curriculum. Approximately 65 % of compulsory courses deal with the PCC level, and medical students from both countries are taught them in the first three years of medical education (1st, 2nd, and 3rd), while the remainder of optional courses in Portugal are taught in the 2nd,3rd and 4th years. Students in both countries learn about the PCC phenomenon primarily as a methodology linked to patient experience but also as part of the interview process. In most cases, learning about the PCC phenomenon in the context of carrying out patient-centred consultation seems to be compulsory education in medical curricula, whereas, in the case of the Portuguese faculty, the training of patient-centred interviewing skills is often part of optional courses.

The dimensions of Information, communication, and education (with dominant attributes doctor-patient relationship, conducting interviews and (non)verbal communication), Respect for Patients' Values and Preferences with dominant attributes of learning about the biopsychosocial model and integrated approach to the patient), and Coordination and Integration of Care (teamwork, interprofessional collaboration and the role of different professionals) are the most present in medical curriculums in both countries. Medical students in Portugal and Sweden mainly learn about these three dimensions in the compulsory curriculum. Speaking of other dimensions, the Transition of Care dimension is almost non-existent in teaching programs or as learning objectives, except in some optional courses in Portugal. The dimension of access to treatment is less present in the medical curriculum comparing to other dimensions, somewhat in Portugal's favour. Various elements of the Emotional Support component are taught in many compulsory training courses but mainly in the field of Medical/Clinical Psychology and Professional Development. Psychosocial elements of medical approach and empathy are considerably more present in Swedish medical curricula, while Portuguese medical students have the opportunity to learn skills in the grieving process in an optional course of Grief in Medicine. Courses that clearly define the Physical Comfort dimension as a learning goal or part of the course curriculum are less compared to other dimensions and are in Portugal's favour. Students in both countries learn about the multidisciplinary approach to pain and suffering through a compulsory curriculum, but a holistic approach to pain management is neglected - in Portugal it can be chosen as an optional course, while in Sweden there is no such course. Involvement of family and friend dimensions in different ways is an integral part of the medical curriculum in both countries since Portuguese courses emphasize knowledge skills, while the Swedish curriculum emphasizes the development of the student's competence to approach the patient's relatives professionally. Although Portuguese medical courses focus on knowledge skills (such as the importance of narratives, the art of observation), Swedish ones emphasize skills (including conversational, active listening).

The compulsory curriculum of medical students in both countries has acquired knowledge and experience on ethical issues, with a focus in Portugal on medical bioethics and the religious values and beliefs of patients. In contrast, Sweden focuses on professionalism and learning about professional practices and ethical principles, codes and skills in care, care and medical relations. Medical students develop skills in both countries to understand the patient's point of view as an integral part of the patient-doctor relationship and the concept of human/person/patient rights. Swedish students develop competence in how to tailor patient treatment and care to the dignity of the patient’s prerequisites. Swedish medical students learn to communicate through an interpreter, but in Portugal, students can also study Sign Language and the basics of Indian and Chinese medicine, to learn about the influence of cultures, subcultures, and religion on health and disease.

Learning about contact with team members in a collaborative situation is also described as learning outcomes of PCC-related courses prevalent in the Swedish medical curriculum. Both groups of students are empowered to understand and respect the areas of expertise of other professionals, the freedom of their professional position in the relationship with other professionals, as well as their roles, rights, and responsibilities, and other members of a multidisciplinary team. Interdisciplinarity appears to be part of the teaching curriculum of both countries, but its existence is much less than that of other groups. Differences between countries tend to be in the approach of teaching coordination of care where the organizational-functional perspective of different health units is in the learning objectives of Portuguese courses, while the human aspect of teamwork within a multidisciplinary team is in the case of Swedish learning programmes. In Portuguese medical curricula, informed consent is present in the course program as a result of learning or program material, as opposed to under-represented learning about health literacy, digital communication, communication of bad news, and the dichotomy of doctor-patient autonomy in both countries. Health policy, management and administration, health economics and management in both countries, and health systems and organizations are well established in education as compulsory in Swedish and mostly optional in Portuguese medical curricula. Little attention is paid to learning about the quality of health care in the education program of both countries.

9.2.2. Findings from Medical Students’ interviews

9.2.2.1. PCC AS IDEA

Defining the PCC concept and dimensions from medical students’ perspectives. Although most of the Portuguese students had heard about the PCC term or concept, it appears to be in an unstructured way, whereas only a few were familiar with what the PCC concept might embrace. Portuguese medical students perceive the PCC existence on all levels of care with attributes that differ across levels of care and speciality. The long-term doctor-patient relationship is a dominant attribute on the primary care level, while the continuity of patient care on the secondary and tertiary; yet not all specialities are equally prone to the PCC provision (see Section 8.1.1.). It has already been shown that patient education for chronic illness management is the focus of primary care visits (Sidani et al., 2014). Previously it has been shown that doctors' attitudes depend on the speciality, whereas more patient-centredness was examined among general practice than surgery doctors in training (Batenburg et al., 1999). In line with our results, patient-centredness should be perceived within relationship-centredness phenomena emphasizing the importance of valuation and enhancing relationships (Duggan et al., 2006). For Portuguese medical students, PCC is care delivered within a network of actors who provide care to the patient either directly, indirectly, or in both ways. Building a trustful relationship within a team of actors involved in the patient's care lies behind all identified patient-centric activities identified by students. It is possible for them to be distinguished as intangible (talking with the patient about the disease) and tangible (providing a comfortable bed, informed consent) and serve for operationalization of the PCC phenomena and help for application in practice. Apart from associating PCC with primary or total care, medical students assess it as necessary, embracing agreement, personalization, or innovation segment. Associating PCC with the innovation segment is reflected in the dynamics behind health service provision that includes innovation in technology, processes, operational procedures, restructuring organization, information, and logistics systems earlier discussed in the theoretical part (Section 4.1.3.). When 'high involvement' work practices (HIWP) are applied, PCC is also perceived as a sort of workplace innovation (Avgar et al., 2011). For some of the students, the distinction between Continuity and Transition and Coordination and Integration of Care is not clear at first glance.

Information, Communication, and Education in health care relates to health professionals' controlled forms of behaviours (a professional codex) and forms of practical application (all the specific actions in the doctor-patient interaction). It embraces five attributes as doctor-patient relationship creation (patient's contribution and doctor's contribution), information management (informing, explaining and educating part), the importance of effective communication, informed consent and provision of written information (see Section 8.1.2.1.). Building trusting relationship and communication depends on the patient's health literacy (patient re-thinker who interferes in own treatment and 'non-thinkers' who avoid asking a question) and doctor's attitude and abilities to enter the patient's inner world, empower the patient to share information and change behaviour. Health literacy is tightly linked to information and education, appropriate and effective use of health care resources and tackling health inequalities. It involves the patient's ability to read, understand, evaluate and use health information to make appropriate decisions about health and health care (Coulter et al., 2008). Students' perception is similar to what several previous studies revealed that building a relationship between physicians' partnership and active patient participation is perceived as a factor of mutual influence, meaning if it increases in one, it can often lead to increases in the other (Street et al., 2003). The patient-centred approach does not assume the patient would prefer to leave power and responsibility with their physicians (Duggan et al., 2006). Hence, patient and physician applying own communication skills are supposed to help the other in becoming an effective communicator and allow doctors to engage patient as an active participant in consultation (Epstein & Street, 2011; Street et al., 2003). Low health literacy and the patient's inability to provide information to the doctor and cooperate with him affect clinical outcomes and tend to lead to poorer health and a greater risk of hospitalization (Coulter et al., 2008; Mosadeghrad, 2014). Low health literacy of the patient or family is a highly positioned protentional barrier to undertaking advanced care planning right after time constraints and insufficient relationship with patients and before lack of skills of the doctor, unavailability of an appropriate place for discussions, and patients not being interested and a language barrier (Keene, 2018). To force communication and to avoid misunderstanding of information doctors provide to the patient, students believe the doctor should share the information in a written form, and informed consent applied. The possible explanation is that in medical encounters communication is influenced by the physician's and patient's beliefs about controlling their relationship as well as by one another's behaviour (Street et al., 2003). Therefore, informed consent, a form of PCC communication based on patient's decision-making capacity (DMC), is perceived as pivotal for maintaining patient autonomy in the patient-centred process (Jarosch & Allhoff, 2006) and right to self-determination (Duggan et al., 2006; Hermann, Trachsel, Mitchell, & Biller-Andorno, 2014). Besides, medical students believe this dimension embraces the importance of communication among the different health care providers (see Section 8.1.2.3.) and education given by an older to a younger doctor (see Section 8.6.1.).

Respect for Patient's Values and Preferences dimension relates to the patient's involvement in the decision-making process and personalized treatment, meaning the doctor understands the patient's preferences regarding own body, illness and treatment options and values behind those preferences (cultural values, religious beliefs) respecting them together with the patient's opinion and decision (see Section 8.1.2.2.). People's right to be treated with dignity and respect is guaranteed by the United Nations declaration on Human Rights from 1948, reflecting the laws of morality and natural justice. This dimension is found to be the most challenging concerning ethical dilemmas and implications in practice as it indicates the lengths that the doctor is prepared to go to respect the patient's values and possible risk of the doctor being manipulated by the patient while trying to respect the patient's values and preferences. Establishing the doctor-patient relationship is the attribute of this dimension in which the patient contributes in three ways: by bringing his own dimension of life (his beliefs, the previous knowledge, and assumptions); by having the ability and right to have a wish (e.g. for privacy, for knowing what he does not want); and by having the right and ability to decide or choose (e.g. treatment option, second opinion). The doctor contributes in four ways to this dimension: by involving the patient (e.g. asking, letting patient talk, listen while talking, giving feedback, planning next steps, discovering patient's feelings, concerns, and opinions, proposing alternatives, doctor-patient-family alliance), by providing consultation and advice (the pros and cons in treatment options), by letting the patient think (giving time to decide) and by respecting the patient choice and decision (e.g. patient preference for the doctor, (not) informing the family). Lack of patient's involvement in the care process and an increased feeling of discomfort occur when respect for patient's privacy is neglected by health care providers (Mosadeghrad 2013). According to students' beliefs, this dimension depends on the stage of the disease and medical specialty. The time required to collect evidence and agree on a management strategy would depend on the patient's basic knowledge, level of intellect, the capacity of the doctor and the patient to communicate successfully, and the complexity of the patient's problems (Dunn, 2003). The results are in line with the discussion on how it is impossible to have a single approach to fit all and how different types of patients might need different types of care exactly because of existing differences in their needs (Cramm et al., 2015). However, the patient might be satisfied with the care that is not considered as high quality but also dissatisfied with quality care depending on the patient's perception of the fulfilment of his needs (Mosadeghrad, 2013). Students' beliefs reflect earlier findings from the literature. Previous studies already discussed how considering the patient's preferences as 'paramount' possibly jeopardize best practices (Carbajal, 2016; Jotterand et al., 2016). Thus, Verheij (2011) highlights how it is a challenge for doctors to balance professional and scientific knowledge and beliefs while meeting the patient's preferences and expectations.

Coordination and Integration of Care dimension relates to all aspects of a patient's care that are organized among several specialties and services and integrated to direct the patient towards achieving better treatment and health benefits. It includes coordination of patient's disease (involving the patient in the care and coordinating patient's condition together with the patient), coordination of doctors (called upon by the specialty, multidisciplinary meetings, and teamwork) and coordination among administration and hospitals (see Section 8.1.2.3.). These findings match the results of medical doctors who believe that there is coordination between individuals and organizations involved in a process that goes between doctors and other clinical staff across facilities, various providers within and outside of a hospital (e.g. health insurance fund) (Mosadeghrad, 2013). Care is coordinated and integrated across all elements of the health-care system, such as specialty care, hospitals, home health agencies, nursing homes, and the community (OMA, 2010).

The Emotional Support dimension relates to health professionals' supporting and caring attitude as a way of interacting with the patient and patient's family. Treating emotional aspects is also part of the patient's disease expression and involving them by providing emotional support (see Section 8.1.2.5.). A key feature of this component is the development of a doctor-patient relationship (surgeons tend to be less emotionally friendly because of intrinsic rule). As part of the disease expression essential to addressing his disease, the patient brings a whole inner world of emotions, so the patient expects to talk and get a feeling of being heard about his fears and doubts. Depending on the emotional stamina, time, and given situation of the patient, the emotionally weaker may be more in need of emotional support. The doctor, as a source of trust, helps the patient and family better deal with the situation showing capacity, responsibility, and empathy. Similar results are found among students who believe that a doctor is most important to balance curing and caring elements (Weaver et al., 2014).

Physical Comfort dimension as ‘hardware’ side of the medicine involves provision of physical comfort (material items that make surroundings familiar to the patient), physical space (patient’s accommodation, infrastructure, and comfortable care units), pain management (benefit of the treatment and pharmacologic by emulating or reducing symptoms) and, doctor’s attitude (humour, giving a call to the patient) towards eliminating patient’s unpleasant experience (see Section 8.1.2.4.).

The Continuity and Transition dimension embraces the idea that everything (different steps in continuous care) and everybody (various professionals and teams) are integrated into the patient’s care process. It includes team working (all the PCC actors work as a team communicating and exchanging relevant and confidential information often in a written and accessible form), following and orientating the patient to the specialties within a well-developed integrated network process to continue his healing process and educating the patient for life after discharge outside of the hospital (see Section 8.1.2.7). Each team member’s knowledge expertise, skills, and know-how practice produces a common asset for collective achievement in a cooperative and compromised manner (Liff, 2011). The dimension depends on the speciality (e.g. surgery is specific due to the possibility of the patient being followed in ambulatory settings).

The involvement of the Family and Friends dimension is about holding carers responsible for the patient’s care in the information sharing process, in maintaining the familiar surroundings in the patient’s unfamiliar situation, and, finally, for the patient’s recovery since family is the ultimate provider after discharge, with particular regard for the family’s right to be informed and the way of approaching them (see Section 8.1.2.6). Previous studies’ findings reflect on patient and family engagement as a key element of the designing, planning, and implementation of PCC innovations (Locatelli et al., 2015) and how family involvement seems to improve communication and shared decision-making (Muething, Kotagal, Schoettker, del Rey, & DeWitt, 2007). As dominant attributes of these dimensions, medical students identify family’s right to be informed (it is sensitive as it requires the patient’s agreement and the privacy of sharing information) and approaching caregivers (understanding patient’s family contexts because supporting the patient physically, psychologically, emotionally, materially, they often can experience burnout and suffer emotional stress) (see Section 8.1.2.6.). Similar to our findings, previous research argues that family members wish to establish efficient communication relationships and at the same time own therapeutic relationships with care providers (Mazor et al., 2013 in Rathert et al., 2016). In the various contexts of care (e.g. paediatrics, veterans), family involvement gives a unique perspective to the understanding of patient's needs, and allows care providers to discover unexpected outcomes and involve them in the decision-making process (Locatelli et al., 2015; Muething et al., 2007). Factors of family involvement in the care process are mutual and grouped depending on patient’s values, wants, and needs; the type of patient’s health problem and his (in)capability to provide information; family’s willingness and interest to be involved; and the existing difference among specialties and doctors cognitive capacities (doctor should be trained to know how to involve and empower patient's family). Students agree that a doctor's assessment must be focused on the need for family support and awareness of the patient's context (the relationship between patient and family) followed by family participation in a variety of ways (calling family members or encouraging them to visit, communicating to relatives to help understand the disease, health status, medical progress and prognosis, care goals, and limitations). The doctor has to assess if the family needs emotional support (direct or indirect) by referring to specialists or associations. Earlier studies show that family members that belong to the informed family group which is significantly more likely to have higher education usually value the opportunity to learn health improvement skills, teamwork, interprofessional communication, and brief waiting times, while the convenience group values convenient settings, a welcoming environment, and hospital access (OMA, 2010).

Access to Care dimension is about how a country's health care system takes care of people. It is an instrument that the policymakers use to ensure territorial access (everybody should have access to care in urban or rural areas); socio-financial access (regardless of societal and material status); timely access (rapid transition to specialized, qualified consultation, medical procedures and treatments available in an adequate or fair time); and access to information and own medical record (see Section 8.1.2.8). Students' beliefs are in line with Mosadeghrad (2013) in that findings indicate that the patient values physical access (having access to doctors and nurses), financial access (affordability of health service), and conceptual access (acceptable healthcare service).

Interconnection and interrelations among dimensions. Our study results reveal the importance of interconnection and interrelations of all dimensions from the medical students' perspective. The most dominant dimension appears to be Information, Communication, and Education linked with Emotional Support and Patient's Preference dimensions (*Figure 18*). A possible explanation is that in PCC doctor-patient communication, it is impossible to take a 'one size fits all' approach but rather patient's needs and expectations necessitate a tailored physician communication approach (Schmid Mast et al., 2007). Access to Care is essential as it is perceived to be a precondition for the patient to benefit from other dimensions such as information and Education dimension and Coordination of care. The Mosadeghrad (2013) study results highlight the importance of patients' perception of the usefulness of an available health service so it is necessary to guarantee it, but it is not sufficient *per sé*. Sometimes, some available PCC interventions may not be useful for some patients particularly those with chronic illnesses because they might develop own self-care behaviours and a long-term relationship with their immediate carers (Fredericks, Lapum, & Hui, 2015). The precondition for respecting the patient's preferences is to inform, communicate and educate the patient. Medical students perceive respecting patient's preferences dimension as closely linked to the Access to Care, Information and Education, and Emotional Support dimensions. Possible explanations are when the patient gets the opportunity for an illness narrative, the process of building an ‘egalitarian provider (care and treatment expert)--patient (person expert) partnership’ starts and by receiving the doctor’s support, the patient becomes empowered in finding a solution for their own health problem following own preferences (Charon, 2001 in Ekman et al., 2011).

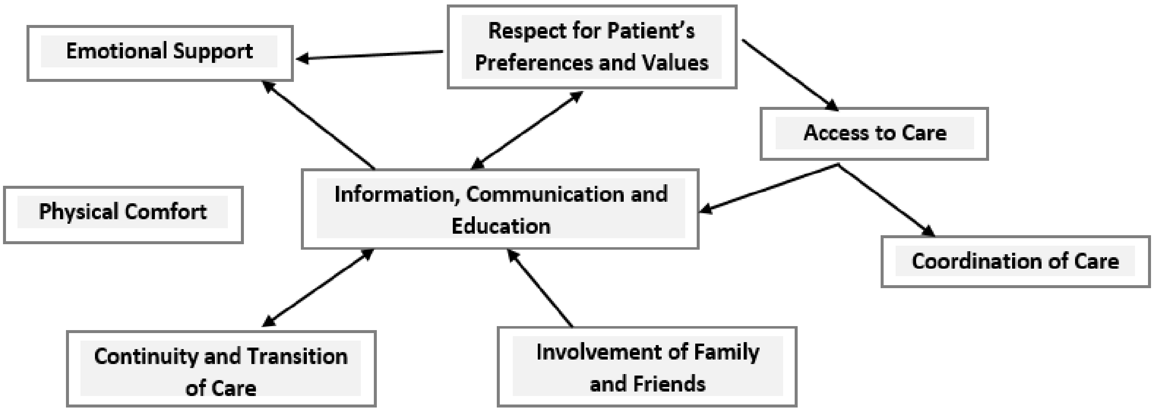

Figure 18. Interrelation among PCC dimensions from medical students' perspectives

Students’ perception of the close relation of Continuity and Transition dimension to Information, education, and communication potentially could be explained by a cooperative and collaborative effort among health professionals and institutions coupled with effective communication (Liff, 2011; Mosadeghrad, 2014).

9.2.2.2. PCC AS PROCESS

Aspects of the PCC process. For Portuguese medical students, the PCC as a process embraces four different aspects (see Section 8.2.4.). Building a trustful and long-term relationship with the patient and exploring and understanding the patient’s relations with the environmental aspects, adapted to components that focus on an interactive process between patient and doctor defined by Stewart’s (2003) dichotomy (see Section 3.4.). Two other aspects of the PCC process establishing the multidisciplinary teamwork and data management process match the second component of Stewart’s dichotomy in the PCC process that focuses on the context within which the interaction between patient and doctor occurs. Building a trustful doctor-patient relationship appears to be a dominant attribute in several PCC dimensions, such as Information, Education and Communication, Emotional Support, and Respect For Patient Values and Preferences.

PCC activities. All Portuguese students were able to identify activities of the PCC within the process, most of which fall within the Information, Education and Communications dimension: talking to the patient about further behaviour, listening to the patient's answer, discussing the best treatment choice, obtaining informed consent of the patient for medical procedures, engaging the patient in therapy, giving advice about a specific behaviour and keeping a patient’s medical diary updated. Further, students identify some activities related to the *Physical Comfort dimension* (providing decent space, comfortable bed and bedclothes, closed curtain in the hospital bedroom to provide privacy); *Emotional support* (holding patient's hand in the moment of fragility, offering psychological help) and *Family Involvement* (communicating with the family about patient's health status) (see Section 8.1.1.). For Portuguese medical students, a common ground for all the PCC activities is building a trustful relationship within a team of actors involved in the patient's care. However, they argue the PCC as an abstract should be defined in patient-centric actions helpful for operationalization and application in practice. They distinguish between them as intangible (talking with the patient about the disease) and tangible (providing a comfortable bed, informed consent). These findings are also in line with Duggan et al. (2006), who argue that the PCC is not just about patient-physician encounters but also about prescriptive or normative accounts (Section 2.4.). Student beliefs reflect the broad debate about a doctor-patient relationship based on agreement, particularly, as reflected in Bury's negotiation model (Section 2.3. and 3.4).

Actors, Contribution, and Benefits. For the PCC process, it is essential to build a trustful doctor-patient relationship in which both actors contribute in several ways; yet the advantages of PCC implementation are mutual for all the actors (see Section 8.2.2.). Since he is at the core of any PCC process, the patient is known as the first actor (see Section 8.2.1.). Besides, all other actors create a network forming a team for patient's care either directly (doctors, nurses, service chiefs and service directors, professors, health technicians, and social assistants) or indirectly involved (administration members on a different level, hospital managers, various health providers, and politicians) or both (family members). Portuguese students were able to identify the main actors in the PCC similar to what we found in the theoretical review (Section 3.3.).

Patient's contribution and benefits. The medical student's perspective reveals the patient's contribution to the PCC process in several dimensions, namely as Information, Education and Communication; Emotional Support; Patient values and Preferences; and Involvement of Family and Friends. When building a trustful relationship with the doctor, the patient brings his own dimension of life, not just beliefs, knowledge, and assumptions but also an endless inner world of emotions as part of his disease expression. Further, in this central PCC relationship, patients enter with these two pivotal rights and abilities for having a wish and right to decide or choose. Medical students identify the patient's health literacy as crucial for the patient's contribution to building the trustful doctor-patient relationship. For the PCC process, students believe it is favourable to have a re-thinker patient who interferes in their own treatment expecting to talk and be heard about fears and doubts comparing to non-thinkers who avoid asking a doctor a question or for some clarifications. The patient's family as an integral part of the patient's surroundings and health professionals, may be involved in the care process from which patients might benefit, depending on the patient's values, wishes and needs, the type of health problem, and (in)capability to provide information, and the family's willingness and interest in being involved. From a Portuguese medical student's perspective, the patient benefits from the PCC implementation in the following ways: being involved in their own care process by getting a chance for personal reflection on disease and symptoms; patient's reflection provides better information about and expressions of disease and symptoms; a better understanding of the situation; receiving better care provision; patient's environment is taken into account; getting a feeling of being important; gaining confidence in the system and doctors; possibility for medical errors and cost of care is reduced while affective outcomes are increased (see Section 8.2.2.1.). Previously it has been shown that possessing information about medical practice and increased patient's trust in the physician, decreases the patent's uncertainty and medical visits repetition (Mosadeghrad, 2014).

*Doctor's contribution and benefits***.** Students believe that the doctor is a source of confidence for the patient and his family by showing his empathy, ability, and responsibility during the PCC process. When establishing a relationship with the patient, a patient-centric doctor shows his abilities to enter the patient's inner world, to empower the patient to share information, and eventually change the patient's behaviour. The doctor starts the PCC process by involving the patient by asking, letting him talk, actively listen while talking, providing feedback, discovering a patient's feelings, concerns, and opinions. After an initial phase of the patient's involvement in the care process, the doctor transits to open discussion about the pros and cons of treatment options and lets the patient think about it. Finally, they plan the next steps of treatment together, by respecting the patient's choice and decision, and eventually, they upgrade their relationship to the doctor-patient-family alliance if needed. Family involvement depends on doctors' cognitive capacities because it initially requires an assessment of the necessity for involvement, and then making an effort to comprehend the patient's family context and finally behavioural capacity for taking actions for involving the family directly or indirectly in the care process. Our study identifies doctor's patient-centric actions for family involvement, such as by inviting them for a site visit, giving a phone call to family, talking to them to let them understand the disease better, patient health status, progress and prognosis, treatment goals and limitations, but also by providing direct emotional support or indirectly by referring patient to a specialist or associations. During the entire process, the patient-centric doctor shows an attentive attitude to all aspects of the patient and establishing the best place and time for the patient to be emotional depending on the patient's needs and emotional stamina. Our study results show that PCC actions improve professional competencies and work efficiency among doctors, but also personal and professional satisfaction rooted in the patient's increased trust, facilitated teamwork, and reduction in workload and burnout (see Section 8.2.2.3.). Most of the results are perceived and discussed in the literature (Section 4.1.4.). If a patient's involvement and knowledge during the care process increases, his satisfaction with the care also increases, as opposed to anxiety (Coulter et al., 2008). The doctor's effectiveness in PCC increases by understanding the patient's views on illness and the role in treating the patient (Platt, 2001).

Family's contributions and benefits. The patient's family is an integral part of the patient's environment, and their involvement depends on the patient's desire for their involvement and (in) ability to provide data, the willingness and interest of the family to be involved, and the cognitive abilities of the doctors. Apart from the benefit of giving support to the patient, the family might get support during the PCC process that reduces their psychological and emotional burden (see Section 8.2.2.2.). For family members, satisfying patient's needs appears as indicator of quality in the PCC provision (Mosadeghrad, 2013).

Organization's contribution and benefits. Medical students see the advantages of PCC for the medical organisation under the ideals of NPM and NPS (see Section 4.1.) as following: improved communication (with the patient and within the team), positive work environment (reduced stress level among employees), better service provision (efficient resource management and allocation, reduction in unnecessary procedures, data management) and cost-efficient expenditure (see section 8.2.2.4.). Findings of this study are in line with some previous ones that show how applying the PCC in a hospital setting has a positive effect on the quality of care, reducing error rates and employee turnover intention rates and the increased effectiveness of the PCC (Avgar et al., 2011). However, cost-effectiveness, as an attribute of health care quality in PCC care, is often recognized by managers and policymakers as an important attribute but neglected by medical doctors (Mosadeghrad, 2013).

*Society's contribution and benefits****.*** The PCC process improves the health status of the population and recuperation, and empowers patients'/citizens' trust in a doctor as a social class and brings to society balanced (social) care provision while to the state it improves cost-benefit expenditure (see Section 8.2.2.5.). If the patient's and doctor's beliefs are congruent, the three components of the endorsement index are fulfilled: patient trusts doctor more and most likely will recommend them to other people, follows the advice, and makes a special effort to see their doctor (Krupat, 2001).

The medical specialty and stage of the patient's illness directly affect the delivery of the patient-centred process, in particular in four dimensions: Respect for Patient's Values and Preferences, Emotional Support, Continuity and Transition, Involvement of Family and Friends, given the fact that some specialties are more prone to patient-centred care than others. Portuguese students believe the importance of each PCC dimension still depends on the moment of care, and the type of the illness patient has. Results from our study show that, from the medical student perspective, all dimensions are not equally important in the PCC process (see Section 8.2.3.). Students put Information, Communication and Education in the upper part, followed by Access to Care and Emotional Support and Respect for the Values of Patients that share third place, Physical Comfort, Coordination and Integration of Care, Continuity and Transition and Involvement of Family, depending on how much it is directly connected to the patients and how many patient-centric activities students need in daily practice.

Medical students' contributions and benefits. Dimensions which medical students, and later as doctors, believe they can contribute to the most in the PCC process are Information, Education and Communication, and Emotional Support (see Section 8.4.1. and 8.4.2.). Unsurprisingly, most of the PCC activities that students were able to identify were exactly those that belong to the Information, education and communication dimension and this is the dimension they assess as being directly related to the patient and the most important for the PCC process. The main difference in the provision of care between being a student and a doctor concerning these two domains is in an authorization to do certain activities that go in the doctor's favour. In the domain of provision of a piece of written information to the patient (e.g. a medical report), it is exclusively a doctor's right that keeps him accountable for patient care provision, while students can exceptionally provide one just under the tutor's supervision. To be accountable means to act responsibly under predetermined standards embracing two types of duties-legal and moral (Dimock & Dimock, 1969 in Denhardt & Denhardt 2007). Authorization is also an important difference in practising PCC dimension between medical students and doctors when it comes to controlling physical comfort and pain management, asking for agreement formalized in the informed consent (patient's preferences), and in fostering smooth communication among health professionals (coordination of care). However, using all possibilities that the Information, Education, and Communication dimension offers might help the doctor to overcome a problem by showing empathic behaviour. Consistent with the findings of the authorization limits, it has been earlier reported that forming responsible students is important for the PCC process, and the responsibility of educators is to stimulate student-patient contact in practice (Bombeke et al., 2010).

Nevertheless, medical students express a fear of not being prepared to deal with certain aspects of the PCC process during their medical doctor practice. Haidet (2010) argues that medical students lose their initial energy over time with the result that they begin to accept or adopt dehumanizing and non-patient-centred behaviors. In this regard, the patient-centred approach helps "to maintain unconditional positive regard, even as we interact with unsavoury characters […] to maintain our sense of awe and to find the meaning and ceremony in such seemingly mundane acts as performing a physical examination or drawing blood" Haidet (2010, p.644). Considering the Emotional Support dimension, a student in training has time to provide direct and indirect support but comparing to a doctor, he does not have the authorization to be more personal or caring with the patient, lacks the technical professional posture as a doctor's profession requires and lacks competence in how to respond to an unpleasant situation (e.g. providing bad news).

***Effect of gender, age, and previous experience*.** Results from the students' interview data show an effect on developing patient-centric attitudes and behaviour in the PCC process. Both genders are perceived as equally capable of practising the PCC and able to behave patient-centric; however, a gender difference in cognitive (processing thought and reasoning) and behavioural level still exist (see Section 8.5.3.). Some studies reproduced earlier demonstrate that gender does not affect the physician-patient interaction and that male and female physicians do not differ in their patient-centred beliefs (Batenburg et al., 1999; Krupat, 2001). In contrast, recent studies show doctor's gender impacts the process of medical care (Batenburg, 1997; Bertakis & Azari, 2011; Noble et al., 2007; Wahlqvist et al., 2010). Hence, physician and patient gender both impact the process of medical care and moderate how different physician communication styles affect patient satisfaction (Bertakis & Azari, 2011; Schmid Mast et al., 2007). Gender difference towards the PCC is shown already among medical studies during their medical education (Ribeiro et al., 2007). According to the results from our study, unlike males who are perceived as more pragmatic with a tendency to conformation and good team management skills, females tend to demonstrate more emphatic and communicative behaviour. Students' beliefs are consistent with previous work that demonstrates male doctors tend to devote more time to technical practice behaviours, such as history taking (Bertakis & Azari, 2011) and that female students have a tendency to show greater humanism in the medical encounters and empathy comparing to male students (Haidet et al., 2002; Wimmers & Stuber, 2010). Hence, female doctors show more patient-centric attitudes and behaviours related to communication compared with men (Batenburg, 1997; Bertakis & Azari, 2011; Haidet et al., 2002; Noble et al., 2007). Patient-centric communication behavior, according to Bertakis and Azari (2011), illustrates that female patients have more concerns, more information, receive more counselling and preventive care and more participatory visits than male patients. In the female role, a congruent communication style leads to higher patient satisfaction when women see a female doctor (Schmid Mast et al., 2007). Also, several studies report already female doctors in primary care show more patient-centric attitudes and behaviours related to building a doctor-patient relationship, empowerment of the patient to take participation, and discussion of the psychosocial aspects (Bertakis & Azari, 2011). Still, sensitivity to the patient problem might be rather attributed to personal characteristics, not to gender. Training on the PCC should differ slightly between genders in that educators should pay attention when educating medical students. The age should not affect the PCC provision because the medical doctor profession and practice should embrace PCC professional competencies. Still, it may be true that older doctors lack PCC knowledge and patience for this aspect of work due to limited time sources and get tired of fighting system barriers over the years, while younger doctors show enthusiastic behaviour. Contrary to students' beliefs, the previous study demonstrates that the doctor's age and the time since graduation from medical school do not affect a doctor's patient-centred orientation, more precisely his beliefs in power and information sharing in relation to the patient (Krupat, 2001). Any kind of previous work experience for medical students appears as a significant factor for the PCC provision because it is essential for inner growth and in developing various sets of personal abilities and doctor's professional competencies necessary in doctor's encounters with the patient and colleagues (see Section 8.5.5.). Although most of the Portuguese students reported not having it, learning from the previous work experience appears to be a significant factor for the PCC practice (particularly in the domains of Coordination of Care, Patient Preferences, and Information, Communication and Education). For Portuguese medical students, it is challenging to study and work in the medical field or any other kind of job during medical studies, although more internships would be helpful during studies to gain more work experience.

Model of patient-centric doctor and educator. Medical students believe behind every patient-centric doctor and educator is a pallet of four personal characteristics (see Section 8.5.2.) and six professional competencies (see Section 8.5.1.) pivotal for shaping his patient-centric attitudes and behaviours and entire PCC process despite his age. In the literature, patient-centredness is recognized as a central professional value (IOM, 2001). Mosadeghrad (2014) already confirms that a physician's character and personality affect the quality of medical services and PCC. By including doctors' personal characteristics and professional competencies important for the PCC process, we create a model of patient-centric doctor and educator from medical students' perspective.

- Possessing medical knowledge and having the skills and abilities to understand the different dimensions of illness, symptoms, and treatment is a key attribute that defines a patient-centred doctor. Students' beliefs are in line with the pre-requisites of being a professional with knowledge, skills, and expertise (Heshmati-Nabavi & Vanaki, 2010) and patient's perception of how a knowledgeable, skilful, experienced, and capable doctor is important to the patient's accurate diagnosis and effective treatment in the PCC process (Mosadeghrad, 2013).
- A patient-centric doctor is a professional who *naturally shows the human side of his personality* being humble with patience, selfless with humility, and free from ego in teamwork. Patient-centred care also requires humility on the part of the doctors, because if the patient is in the centre, the doctor must be in the periphery (Dunn, 2003). Similar to understanding the patient as a person, for the PCC process is important to acknowledge the 'doctor-as person' dimension because, during a clinical encounter with the patient, besides obvious clinical expertise, he also brings his own world full of personal experiences (Duggan et al., 2006).
- *Attentive and observing skills* are related to the doctor as an intelligent observer with a sense of *humanity and a community perspective* so that he knows how to focus attention on the patient's context, the informal aspects behind the patient's non-verbal expressions. Learning to be a doctor embraces the process of internalizing professional attitudes and behaviours even at the expense of personal values (Helmich & Dornan, 2012). Some patients require more attention or attention of a different sort; therefore, from a patient-centred perspective, the doctor-patient relationship goes beyond simply professional to moral duties (Duggan et al., 2006). Medical students' perception of medical doctors professional competencies in our study is similar to medical students' perspective about the best clinical educators as a clinically competent doctor who possesses good interpersonal skills, the ability to provide feedback, serve as a good role model, and know-how to educate (Heshmati-Nabavi & Vanaki, 2010). While forming future medical professionals, a medical educator has to foster four professional habits: attentive observation (of oneself and the patient); critical curiosity (honest examination of the patient's and one's own limitations and preconceptions); informed flexibility (holding contradictory ideas simultaneously

and keeping an open mind), and presence (undistracted attention on the task and compassion for the patient) (Epstein, 2003 in Lovell, 2015).

- The doctor must be *empathetic* so that he shows a certain level of empathy and sensitivity as a personal characteristic before or after a life-changing experience. Empathy as professional competence is the ability of the doctor to see the multiple dimensions behind the patient's illness and 'put himself in the patient's shoes,' together with building trust with the patient. In the same way, empathy is perceived as a skill relevant to the clinical performance that includes doctor's accuracy in hearing and understanding the thoughts, concerns, and feelings of patients that can be objectively measured (Hall et al., 2014; Rathert et al., 2016).
- Holding a *proactive personality* reflects a doctor's characteristic of being curious about the surroundings and acting on changes and moving limitations in practice. These results differ from previous studies that identify 87 different personal qualities relevant to the practice of medicine (Price et al. in Albanese, Snow, Skochelak, Huggett, & Farrell, 2003). Respect, helpfulness, reliability, intelligence, and confidence are recognized as a medical doctor’s personality characteristics used in the PCC for developing a good rapport with patients (Mosadeghrad, 2014).
- In interactions, a patient-centric doctor is attentive and observant with strongly developed *competencies in communication and information provision* with patients and co-workers, with the capacity to explain complex things in a simple manner. A doctor’s competence in communication is important for the PCC as results from previous research show that if the physician communicates in a more patient-centric way, chances for a patient’s adherence to doctor’s recommendations increase, and the confidence in the doctor will be stronger (Saha & Beach, 2011). Information on all relevant aspects of patient’s care should be delivered by the doctor in a comprehensive and comprehensible way (OMA, 2010).
- Developed *cultural competencies* for understanding and respecting the patient’s context, beliefs, and customs in the PCC process underpin a sense of humanity. Findings from students’ responses are supported with earlier results that doctor’s less affective behaviour in interaction with ethnic minority patients leads to worse health outcomes (satisfaction and compliance) (Schouten & Meeuwesen, 2006; van der Horst & Lemmens, 2012). Therefore, for a doctor it is important to understand patients’ social-cultural differences, carefully include a culturally sensitive approach in building doctor-patient relationship while being aware of the impact on the PCC process (Schouten & Meeuwesen, 2006; van der Horst & Lemmens, 2012). A culturally sensitive approach embraces culturally competent communication which involves the three core communication skills: listening, exploring, and checking, and offers practice with a professional interpreter (Schouten & Meeuwesen, 2006; Seeleman et al., 2011). Teaching students to consider a patient’s attributes seems to be important. A previous study shows that older and more educated patients

with greater perceived social care and a lower health control locus assigned to God, have higher expectations of caring doctors (Tsimtsiou, Kirana, & Hatzichristou, 2014).

- *Leadership competencies* embrace a doctor's competence in being a proactive leader with organization, teamwork, and coordination of patient care skills. Exercise of organizational, management, and leadership skills in many aspects of medicine are required from medical professionals (Edwards, 2005). The perspective of medical students from our study is similar to findings that leadership competencies embrace leadership knowledge and skills that foster the creative ideas and implementations of innovations to ensure the reformation and transformation of the healthcare system and organization towards greater efficiency (Miner, 2013; Yakubu, Dankyau, & Lodenyo, 2019). Besides, the doctor's leadership competencies in the hospital and clinical setting include resource managing, decision making, recruiting, and medical consulting (Edwards, Kornacki, & Silversin, 2002). Being professional requires doctors to be good team leaders as they lead small groups of healthcare professionals, conduct team building activities, and an appropriate sharing of decision power (Chadi, 2009; Frank, 2007). Doctors' leadership role is necessary to execute directions to assure interprofessional relationships and work environment but in management as well (Chadi, 2009; Edwards, 2005; Frank, 2007). Providing clinical and professional leadership and ultimately, appropriate patient care in a managerial environment might be increasingly difficult (Connell et al., 2009). Medical leadership is an important and required competency for medical students (Tsung-Ying Chena, 2018).
- Our study shows that medical students perceive a patient-centric doctor as one holding a great sense and awareness of *role modelling behaviour* with the result that serving others as an example comes naturally as a personal characteristic. Students learn how to act in the right way by following the example of a teacher or mentor and gradually adopting the dispositions of the other person as one's own (Duggan et al., 2006). We believe being a role model appears as a doctor's moral characteristic since that medical professional identity goes beyond technical expertise and embraces moral and social responsibility where medical educators play a pivotal role by fostering it during the learning process (Weaver et al., 2014). However, medical educators need to carry the idea that both positive and negative role modelling strongly affect students' perception of the learning environment (Wilcox et al., 2017). Behind a good role model requires that person to be aware of the reason but also requires intense practice (Duggan et al., 2006, p. 274). To foster positive student attitudes and behaviours, clinical and university educators serve as role—models that influence students in the process of teaching compassion and empathy (Newton, 2010 in Adam & Taylor, 2014; Williams & Stickley, 2010).

9.2.2.3. PCC AS PRACTICE

1. HEALTH POLICY LEVEL

PCC in Portugal. Portuguese medical students consider the current situation with PCC practice in Portugal to be quite positive, with obvious barriers and possible opportunities for improvement (see Sections 8.3.1.1-8.3.1.8.). Access to Care is a well-developed dimension in terms of access to a well-developed network of primary care centres, but despite this fact, some Portuguese people still do not have a family doctor. The problem is not having access to care within a reasonable time since Portuguese citizens need to wait a very long time on the waiting lists or in the waiting room to have access to care, as is the case in the emergency hospital; additionally, because of the limited availability of care, those citizens who live in interior parts in Portugal must spend time travelling to major health centres. The Portuguese health system is supported by the community and includes private practices that have made it easier for patients to make appointments and examinations without much waiting time. Portugal is a country in which the primary care doctor plays a key role in the patient’s follow-up and specialization orientation, but the involvement of private practice may lead to a discontinuation of the patient's follow-up treatment. Portugal, as a developed country, has no difficulty in providing hospitals with the material resources needed to comfort patients. However, failure to have adequate space and beds for each patient, often with patients in the same room with old facilities (with intensive care units as exceptions) are an image that can be experienced in public hospitals in practice, which significantly affects the provision of patient comfort. Coordination and integration of care and continuity and transition are well-coordinated across several specialties and services, despite some of the differences in hospitals across the country. Oncology care is an example of well-developed coordination and integration of care in Portugal because patient care embraces multidisciplinary approaches. In addition to community and private practice, the family enjoys a large amount of support for continuity and transition in Portugal. Depending on the medical specialties and the severity of the patient's illness, the interest and willingness of the patient and the family, the Portuguese healthcare system can rely on Portuguese family-oriented culture. Portuguese medical staff are trying hard to involve and integrate the family into the possibilities, but there is also the case in which, if the family does not come to the doctors, the doctor does not go to the patient's family to speak. Although it differs among medical organizations, divisions, specialties, and doctors, in Portugal, healthcare is still paternalistic in the sense that doctors are more concerned with getting the patient well without taking into account patient needs and allowing the patient to think and make decisions. Portuguese doctors are well trained and possess a great deal of clinical expertise, but they may find it difficult to communicate either by transmitting information to the patient, by not giving information in written form or by doing so late and by neglecting whether the patient is well aware of and understands the information. Portuguese doctors are usually viewed as compassionate and empathetic, but they are formal in offering emotional support, often do not allow the patient time and place to be heard or the doctors do not spend much time talking to them (which may be due to a patient's level of health literacy).

Barriers to practising PCC in Portugal. Identified barriers are considered to be part of the system, the doctor, and the patient (8.3.2.1.-8.3.2.8.). Only Access to Care is the whole issue of the system, while Continuity and Transition barriers come from both the system and the doctors, but not from the patient side.

System. In the practice of PCC, the Portuguese health system defines the time for the provision of care or consultation that affects the patient's education, access to care and information and information sharing process, and the ability of the doctor to provide emotional support, engage the patient in conversation and respect his or her preferences. Lack of or limited hospital space, poor hospital conditions, old hospital infrastructure, and public hospital facilities affect a patient's physical comfort and access to care. The lack of doctors across the county, especially primary care doctors, affects access to care while the lack of psychologists affects the provision of emotional support. Similar to students' experience in Portugal, there is evidence that access to care in some other cultural contexts, such as in Iran, is affected with increased demand for specialized healthcare by shortages of staff and resources of healthcare organizations (Mosadeghrad, 2014). More time per patient requires more healthcare professionals in the field, and the solution is political instead of medical (Dunn, 2003). International reports on the quality of care in Portugal note significant deficiencies in the distribution of health equipment, which risks affecting the Portuguese health system's ability to meet population needs (Simões, Augusto, Fronteira, & Hernández-Quevedo, 2017). Evidence already shows that time constraints limit the provider's flexibility and adaptability to individual patient needs (Mosadeghrad, 2014). Timeliness in accessing care appears to be a matter of concern of the health system of excellence, as it is in the Netherlands (Health Consumer Powerhouse, 2019) where evidence illustrates patient's need to wait on the telephone for more than two minutes (40% of all practice) while on the emergency line for more than 30 seconds (25% of the practices) (Verheij, 2011). Students' perception relies on WHO's policy on achieving universal access to health care at all levels arguing for an adequate and equitable distribution of health workers across and within countries (WHO 2016). In many European countries, the uneven geographic distribution of physicians is a matter of concern because the density of physicians is consistently greater in urban regions, reflecting the concentration of specialized services such as surgery and physicians' preferences to practice in urban settings (OECD, 2016). Coordination and integration of care in Portugal are faced with the problem of insufficient or inefficient communication between primary, secondary and tertiary care providers and caregivers; however coordinated primary care doctors may be, there is still a lack of coordination of care specifically in the field of therapeutic coordination. A barrier to the practice of PCC is the lack of a central database at the national level with unified patient medical information available to health care providers and patients at the national level that affects patient access and continuity and transition of care. The operating system often fails to work in practice as technology is making rapid progress and requires maintenance and investments for which the Government may or may not be willing to invest, but also it requires time and effort from the system and medical professionals to learn how to use it. The Government is entirely responsible for finding a way to overcome the problem of exposing the patient to additional costs, such as for travelling due to lack of care in the interior of Portugal or visiting a private hospital. The lack of a comprehensive and integrated healthcare network is one of the main barriers to PCC in developing countries (Otero et al., 2015). The sufficient infrastructure, availability of resources, and equipment shape the quality of medical service delivery while a good patient information system is necessary for effective patient diagnosis and treatment support (Mosadeghrad, 2014). Despite the increased need for greater involvement of patients and families in decision-making at all levels of care, still, healthcare organizations and health systems are not all developing and adopting patient engagement strategies at the same pace or achieving the same degrees of success (Baker et al., 2016).

Doctor. The most dominant barrier on the part of the doctor is his personal characteristics, his persuasive and defensive attitude to the patient, a doctor who lacks interest and wants to spend more time informing, explaining and educating the patient and communicating and involving the patient's family in the care process. Patients that prefer shared control in communication with the doctor during encounters, usually are more actively involved in the consultation, unlike others that need more empowerment from the doctor's side (Street et al., 2003). Doctors might understand what effective communication with patients involves, but they might experience difficulties in finding or knowing the ‘best words’ for getting the most out of each interaction with the patient (Platt, 2001). Similar to students’ beliefs, some studies already show that patient’s education on health promotion and self-management depends on the context (primary or secondary care) and that the time available for patient education might be limited due to patient’s complex needs, patient’s cognitive readiness for education before discharge and the high turnover of patients (Sidani et al., 2014). Doctors are educators not merely of medical students and other health professionals, but also patients (Donetto, 2010). However, Portuguese doctors sometimes expose their opinion almost as forced so that it may be a reason for a patient to refuse to do so if he feels that the doctor falls short of respecting his values and wishes. Coordination and integration, as well as continuity and transition in the Portuguese health system, may be affected by the doctor’s attitude and difficulty of communicating well with the team or his fear of being judged by colleagues due to lack of knowledge in providing an outpatient option. In providing emotional support, Portuguese doctors have a very formal attitude and often do not give the patient time and space to express themselves emotionally.

Patient. Portuguese patients may not feel comfortable starting to communicate with the doctor because they do not discuss their level of health literacy with the doctor or because they feel uncomfortable asking additional questions to learn more about the disease. Student’s beliefs correspond to findings that lack of patient health literacy, one of the greatest PCC challenges, affects patient’s experience in accessing care service and facilities, understanding of health condition and care process, adherence to therapy, document comprehension, and problem-solving capacity (OMA, 2010). However, patients in Portugal may experience difficulties in expressing their preferences and feel a lack of appreciation for expressing emotions or talking to a psychiatrist or psychologist about emotions. Family involvement in Portugal is affected by the lack of initiative by the patient to include them in the care process. Patient (e)-health literacy appears to be a significant problem, particularly in developing countries (Otero et al., 2015). If the patient lacks clinical expertise, he is not capable of discussing either the technical side of the care provision or the quality assessment (Mosadeghrad, 2013).

2. *EDUCATION POLICY LEVEL*

Education on the PCC in Portugal. Our study results show that most of the Portuguese medical students had heard of the term or concept of the PCC, but few were still familiar with the concept of the PCC. PCC education in Portugal is mostly unstructured, either formally or informally (see section 8.6.1). Students state that there is a lack of a specific formal education course that teaches students integrally about the PCC concept. It is clear that there is a fragmented education on some of the dimensions of the PCC (Information and Education, Patient Preferences, Physical Comfort and Emotional Support) through various courses throughout all years of study (Family medicine, Internal medicine, Psychology, Palliative care, Family medicine internship). Studies among medical students confirm that PCC can be taught through formal learning methods in courses in formal medical curricula, but also acknowledge the importance of other factors for patient-centred learning experiences as they learn from clinical teams (Muething et al., 2007; Wilcox et al., 2017). Portuguese medical students learn informally about the PCC alongside the rest of their medical training, multidisciplinary meetings or rotations while working with the doctor and watching him interact with the patient. Observational learning occurs when one observes the practice and behaviour of the doctor; some commit a mistake in practice, or the patient lacks independence. In teaching communication skills, direct observation appears as a valuable tool (Muething et al., 2007). Similar to the experience of Portuguese medical students, results from other studies show that observational learning is taking place in a positive role modelling process when medical teachers demonstrate observable reflective listening skills and non-verbal behaviour during patient encounters (Shapiro, 2002 in Burks & Kobus, 2012). Learning by doing builds up student's self-confidence by learning through examples, gaining experience on the ground during training, by receiving feedback on specific actions or behaviour towards the patient. However, Portuguese students still lack confidence about giving bad news as they have just been observing doctors, but they have never been alone or trained in this regard. Receiving feedback on performance is perceived by doctors of high importance as a factor of personal and professional improvement and quality of service provided (Verheij, 2011; Welschen, Kuyvenhoven, Hoes, & Verheij, 2004). If students are encouraged to reflect on the many reasons why PCC is the right thing to do, patient-centredness will be easier to facilitate in practice (Duggan et al., 2006). Learning from the experience of others takes place during a discussion in multidisciplinary meetings, during rotations with the older doctor and within the student group of colleagues, which gives a feeling of comfort to listen to the experience and express their doubts before a situation occurs. Portuguese students still miss the opportunity to talk more about their experience with educators. There is evidence that some teaching can occur with families during family-centred rounds in ways that were not possible in the conference room or lecture hall (Muething et al., 2007). Finally, learning by (re)searching takes place either on its own or on the recommendation of professors to read additional literature, doing some research through different communication channels and platforms. This type of learning is consistent with the image of the PCC as a lifelong learning process discussed in the literature. Starving for excellence in providing health care in a society that is changing, requires students and medical professionals to gain competence in the skills that underpin lifelong learning by constantly generating questions and searching for answers (Lindgren & Gordon, 2016; Overland, Yue, & Mira, 2001). A lifelong learner possesses an inquiring mind, information literacy, a repertoire of learning skills, a sense of personal agency, breadth of perspective, and interpersonal skills and group management (Candy, Crebert & O'Leary in Overland et al., 2001). Although Portuguese students did not attend any additional seminar or course on the PCC (did not come across or actively seek it) they express their willingness to attend, finding it useful for their future medical career.

Motivators for learning about the PCC. All of the identified motivators for learning about the PCC are intrinsic (see Section 8.6.3.). What triggers medical students to learn more about the PCC is a desire to be a complete professional, as the only way to be professional is to practice PCC, to be a perfectionist who pays attention to individual details and to feel personal satisfaction and happiness with the reactions, behaviour, achievement and success of the patient. The educated doctor understands that medical care is by definition patient-centred and that professional attitude of caring for the patient involves listening to the patient carefully and talking to him seriously (Verheij, 2011). A possible explanation for student's motivation we found in argumentation that employee satisfaction is a positive state of being, resulting from positive feedback from one's job or job experiences, closely associated with positive employees' perceptions of the working environment (Locke, 1976 in Saari & Judge, 2004). Job satisfaction in the medical profession is highly connected to their motivations for going into health professions (Farr & Cressey, 2015). Health professionals (case of nurses) who perceived their work units as patient-centric were significantly more satisfied with their jobs and yet, felt more comfortable reporting errors and near-misses while the numbers were decreasing (Rathert & May, 2007). However, previously unpleasant personal experience and the fear of failure in demonstrating professional competencies show as important motivators. Earlier evidence shows that students try to avoid the fear of appearing ignorant in front of patients and families (Muething et al., 2007). Finally, knowing what the PCC concept comprises, provides a background for being critical towards quality improvement in the organization. Extrinsic motivation (e.g. material incentives) does not appear to be a motivating factor for students to learn about the PCC.

Barriers to education. The results of our study identify barriers in learning about the PCC on the system and human level (see Section 8.6.2.). Integral education on the PCC phenomena and behaviour does not exist in Portugal in a formal curriculum.

- Students experience a *lack of practice and formalized training* in the final years on how to be patient-centric and to learn specific actions on how to deal with the most challenging and most common situations in practice. An example is interaction with senior doctors and the patient when giving bad news. Lack of opportunity to practice the PCC despite self-recognition of ability is already identified among students in non-European contexts of Australia (McNair, Griffiths, Reid, & Sloan, 2016). Previous studies already show that patient's perspective is scarcely discussed during most of the clinical medical education that is mostly focused on disease-related knowledge (Wahlqvist et al., 2009). As exposure to patients increases, students assess the patient-centredness of the learning environment decreases (Wilcox et al., 2017).
- There is *a lack of time* for the doctor to devote himself or herself to teaching. This is because Portuguese clinical doctors train students, together with doing their clinical work, often under stressful working conditions, without financial initiatives and with a reduced amount of time for them to explain and discuss PCC with students. One possible explanation is that students have difficulties learning from nonpatient-centred role models and in a non-patient-centred environment (Bombeke et al., 2010). However, existing tensions between being patient-centric and effective pressures are already being discussed in practice, particularly in terms of activities and the use of resources (Farr & Cressey, 2015; Sebai & Yatim, 2018).
- *Big study groups* reduce the student's chance of learning to exercise physical examination and emotional support when a large number of students surrounds a patient. The patient is recognized as a valuable member of interaction with the healthcare team, so it is important to maintain the relationship (Lindgren & Gordon, 2016). Team size influences teaching so that as the number of team members increases, the time for giving careful attention to patient and particularly PCC interactions, as well as several topics addressed, decreases (Satterfield et al., 2014). Besides, medical students experience a lack of opportunity to follow the same patient during training, so that affects not just provision but also learning about the PCC (McNair et al., 2016). Following the same patient, students enrich their knowledge by having the opportunity to see the natural progression of illnesses, the impact of behavioural aspects on health and disease, and by experiencing a continuity of care, as well as developing problem-solving skills and learning about the health care system (Overland et al., 2001). Further evidence suggests that medical education needs to focus on overcoming the existing gap between medical students' and patients' perceptions of patient-centred attitudes (Hur, Cho, & Choi, 2017) and the need for greater involvement of patients in the planning and delivery of medical courses (Robert, Waite, Cornwell, Morrow, & Maben, 2014).

- Portuguese medical students *not being introduced to the service team* is an important issue that affects their informal education on PCC as they would be familiar with the team, the hierarchy between doctors, the rules and the division of tasks. Similar to the experience of medical students, there was a lack of communication between a group of nurses and patients' families simply because they were not aware that communication was part of their role (Slatore et al., 2012). However, poor understanding of roles, inequality of status, little time to develop interprofessional collegiality and relationships, appear to be a barrier to the development of interprofessional communication competencies (Meffe, Claire Moravac, & Espin, 2012). However, to deliver a complex medical curriculum, the medical team must be patient-centred and learner-centred in a busy environment, regardless of the clinical location (metropolitan or rural hospital) and contextual factors, because the clinical location and contextual factors may challenge but do not prevent bedside teaching (Balmer et al., 2010 in Satterfield et al., 2014; Couper & Worley in McNair et al., 2016; Satterfield et al., 2014).
- Since learning about the PCC is not mandatory in Portugal, the barriers to education at the PCC's personal level lie in the relationship between the tutor and the student, which is strongly influenced by the doctor's human characteristics and attitudes and by the student's active approach and position in that relationship. In undergraduate medical education, teacher-student relationships are of paramount importance to the development of future doctors (Donetto, 2010). Students' beliefs are in line with the previous discussion on the student–doctor relationship as essential in several aspects not only for passing on patient-centredness and providing 'social support of patient-centred behaviour' but also supporting the student-as-person, and mirroring patient-centredness by being student-centred (Bombeke et al., 2010). Positive role modelling is the key that influences direct teaching and opportunities to practise patient-centredness (Donetto, 2010; McNair et al., 2016). Medical educators have the power to give or deny students opportunities to participate and learn to fit into their roles (Helmich & Dornan, 2012). For example, being encouraged by the doctor-educator to read patients' diaries and discuss patients' care plans, still appears to be a productive way of learning for students who prefer that the doctor does not involve them directly in the patient care process (Currie et al., 2015). Any discouragement from supervisors and negative role modelling adversely impact students' perception of the patient-centred learning environment (Wilcox et al., 2017). *Doctor's human characteristics* shape the teaching context, and in Portugal some educators have chosen and shown goodwill to talk and discuss the PCC with those who prefer to impose their own opinions, leaving no room for discussion. *A student´s active approach* depends a lot on the student's position in the relationship with the tutors. Currie et al. (2015) show that students who feel self-preparedness and courage to engage in some of the mentor-supported indirect care activities will experience less anxiety and increased confidence in patients' interactions.

Portuguese students experience lack of opportunity to ask a question or feeling disencouraged from having a critical approach; instead of having a discussion between classes with their tutors concerning certain matters and behaviour, they discuss among peers.

- In particular, Portuguese medical students raise the issue of lack of time and opportunities to gain medical-related work experience during study time as assistance to patients in hospitals arguing for the importance of learning from the patient. Portuguese students value student-patient interaction during training and perceive it as important in addition to the student-tutor relationship. Previous studies shed light on the importance of continuity and mutually beneficial relationships between patients and students, where students enhance patient care in a variety of ways and where patients assume a doctor-like role in their relationship with students (Poncelet et al., 2013). While interacting with patients, increased confidence among students in the use of the skills needed to care for patients was a prerequisite for being able to take care of them (Suikkala & Leino-Kilpi, 2005).
- The national selection process for a medical student at university neglects the importance of the social skills necessary for practising PCC. The perceptions of Portuguese medical students reflect the ongoing debate on admission to medical education and residence in Europe based on a strictly objective system (e.g. France, Portugal, and Spain). At the same time, the assessment of personal qualities remains neglected in this process, contrary to the practice of the USA (Martins Martinho, 2012). Interview as a non-academic factor, within its limitations, may be a key source of information; alternatively, the use of the old information already available in the application's personal statement, essay or extracurricular activity may also reflect a compelling personal characteristic that is helpful in the process of admission to the university and for placement in residency (Albanese et al., 2003; Martins Martinho, 2012).

The dissonance between knowledge and practice. Portuguese students experience a discrepancy between what they have learned and what they have practised concerning the PCC. Hence, they are afraid that they will not be prepared to deal with certain aspects of the PCC process (see Section 8.6.1). The existing gap between teaching theory and practice is already discussed phenomenon in the literature (Bombeke et al., 2012). Similar to the problem that Portuguese students have identified, it also appears among their US colleagues who have experienced conflict and powerlessness caused by the difference between what they learned about the PCC (1st and 2nd year) and what they saw as a role model (3rd year) (White, Kumagai, Ross, & Fantone, 2009). Students believe that medical professionals set and work on ideals but argue that as human beings, they fall short of professional behaviour because of lack of knowledge about PCC tangible actions or because things have not gone as they were supposed to. The PCC is more than a philosophy that guides the practice of health professionals because involves the translation of principles into a clear set of guidelines (Sidani et al., 2016). The problem from the student's point of view is that when the doctor fails to achieve a certain ideal for a long time, he will conform to failure and stop working towards ideals. To overcome the existing dissonance at the interpersonal level, Portuguese medical students begin by identifying the root of the problems, the obstacles, and then try to find a solution within the context of the project. Haidet (2010) sheds light on the problem of patient-centredness as a factor that helps to maintain a vision of the ideal and helps to find a solution to any problem facing health professionals within system-based limitations. Medical students need to be aware that medical practice and care delivery will change throughout their medical careers and to respond to (societal) changes in their knowledge and practice, students should not be simply trained for a job but educated for a lifelong career (on a personal level and in the systems and teams in which they work as doctors) (Lindgren & Gordon, 2016).

IMPROVEMENT IN PRACTICE

Student as an agent of change. Driven by an altruistic-noble desire to help people, personal experience, background, and an inner desire to learn more about the novelties of the PCC, all medical students are self-perceived to be agents of change who will work towards better PCC practice in their future medical career (see Section 8.4.3.). Most doctors want to achieve a patient-centred agenda as far as possible, which is consistent with the true motives for becoming a doctor, such as altruism (Dunn, 2003). Intrinsic motivation and satisfaction affect health professionals who wish to embrace personal and professional values in their work to bring about some change in the future (Esmaeili et al., 2014a; Farr & Cressey, 2015; Jansen & Reddy, 1994). In clinical encounters, however, the doctor is perceived as a responsible moral agent with a moral capacity for self-awareness and self-criticism of negative and potentially harmful subjective influence and with a readiness to correct and change it (Duggan et al., 2006). Behind becoming an agent of change is behavioural change as a medical doctor in a way that reduces the negative effect of the 'hidden curriculum' and promotes PCC values (Heshmati-Nabavi & Vanaki, 2010). All Portuguese students expect to be able to change and behave to make it function better as a medical doctor (especially in the fields of Information, Communication and Education, coordination of care and continuity and translation). Most fear that they will be consumed by the system, constrained by the lack of time, personal weaknesses and the capacity to persuade others. Ekman et al. (2011) based on previous studies argue that despite maintaining PCC values, healthcare professionals end up in a routinized healthcare process that does not give them so much opportunity to build a meaningful doctor-patient relationship. Following White et al. (2009) argumentation, students may fail in one of three groups in the future: those whose patient-centred values have been maintained, compromised, or transformed during their practice. A systematic review study confirms fatigue, anxiety, and professional burnout as factors that influence communication between health professionals and patients (Pires & Cavaco, 2014).

Improvement in the domain of health policies. Portuguese medical students identify several aspects regarding the improvement in the health policy and policy of education on the PCC phenomena that are quite interconnected *(8.3.3.1-8.3.3.8).* The belief of Portuguese medical students in improving the PCC at the national level could fall in one of the 'five capitals' – Physical, Human, Social, Leadership and Cultural, which Mosadeghrad (2014) recognizes as a crucial investment in improving the quality of medical services provided (see Section 4.1.6). Guided by the NPM and NPS principles, we are using the STEEPLE model to systematize the results of the proposed interventions to improve health and education policies towards the implementation of the PCC in practice from Portuguese medical students' perspectives. Health care level and organizations are considered to be an open system that interacts with the environment consisting of various factors identified and classified in the STEEPLE model that is an acronym for *Social, Technological, Economic, Environmental, Political, Legal and Ethic*al (Kew & Stredwick, 2005). In almost all of these segments, it is possible to identify the proposed measures that medical students recognize as central to the process of improving the practice of PCC in Portugal. However, in several areas of improvement, health policy, and education policy on the PCC phenomenon are quite interlinked.

Social. Improvement in the segment of social factors relates to changes in social interactions, attitudes, building relationships among actors, and organizational culture (Kew & Stredwick, 2005). Patients and health professionals need to be educated about respecting patient preferences and ethical and moral postulates and practices to have an impact on changing the Portuguese mentality and society. Concerning the change in Portuguese health professional's attitude towards better information, education and communication with the patients and team members, Portuguese health care organizations must foster a culture of closer contact with the patient, allowing doctors time to open a space for sharing information and a longer time for conversation. Finally, formal training following informal educations on an ethical and moral postulate for doctors and the general populations would have an impact on ***changes in the cultural ethos.*** The obtained result reflects the call for policy initiatives aimed at creating health care systems that are culturally competent for diverse patient populations, and medical education systems that recruit and retain underrepresented minorities (Schmittdiel, 2015). In line with general patient-centred approaches and changing the cultural ethos, education of medical doctors should include awareness and knowledge about cultural diversity, formal teaching for conducting consultation with ethnic minority patients, and training in culturally competent communication (Seeleman et al., 2011). However, the culture of medicine should fully accept empathy and humanism into its customs, beliefs, values, interactions, and daily practices (Burks & Kobus, 2012). The government and health care organizations should be measuring channels of communication between doctors but also foster the permanent improvement of communication skills. Policymakers should provide Portuguese doctors with more formal education on how to involve family and friends in the patient's care process, how to provide the information to the family and educate them for taking over homecare of the patient. Hence, to overcome the problem with missteps in coordination, continuity and transition of patient care, the Portuguese Government in collaboration with the medical chamber must establish the specialty that deals with relevant aspects and train professionals to practice these PCC dimensions. Greater involvement of volunteers will change hospital organizational culture in the Portuguese context and attribute it in many PCC aspects.

Policymakers and health managers should empower the role of Portuguese nurses and medical profession students, particularly in the segment of continuity and transition, information, communication and education and family involvement of PCC process and practice. Studies already show nurses with more years of experience, as capable of providing PCC in different clinical contexts by being engaged in holistic, collaborative and responsive care activities (Sidani et al., 2014). In Portugal, the ratio of nurses per doctor is generally low with an inefficient allocation of tasks relative to doctors suggesting a need for supply of nurses as they play a critical role in providing access to care in traditional settings (hospitals, long-term care institutions), but increasingly in primary and home care ones (OECD, 2016). The PCC practice is used to shift a system and organization from an institutional and doctor focus to one that emphasizes the needs and preferences of patients (Avgar et al., 2011). An essential segment of the Emotional Support dimension is a patient's family who is a provider, but also the receiver of emotional assistance. The magic power of music, humour, and listening helps in emotional support provision that in the final instance, influences treatment and benefits. Humour has the functions of developing and maintaining social relations and positive effect and enhanced quality of life (Chadwick & Platt, 2018). Humour is perceived as 'a potent negotiative device' that possibly changes the balance of power on the doctor-patient relation, maintaining the health professionals' practical autonomy (Bolton, 2004).

Technological. Technological changes can impact development and create new opportunities for the application of PCC in practice (Kew & Stredwick, 2005). In this aspect, Portuguese medical students are concerned with the speed of technological changes that require permanent new interventions and development. Various informatic measures should be employed to develop substantial electronic Intra and internetworks, application of the unique medical record and the introduction of health identity cards. Technics and technology should serve health professionals to enhance skills and abilities to better communicate with other professionals toward better care continuity and transition. There are ten identified reasons why the shared medical record is an essential component of a patient-centred approach to care: patients want it; it demystifies healthcare; it supports patients' and family members' engagement; it promotes quality and safety; it powerfully conveys patient-provider partnership; it promotes shared decision making; it enhances patient satisfaction; promotes continuity and coordination of care; it promotes an environment conducive to healing, and it is a patient right (Planetree, 2017). Previous research also acknowledges the need for doctors to understand organizational behaviour and systems theories as well as to develop skills to lead and facilitate teams and use information technology to improve the quality of care in a reformed health care environment (Combes & Arespacochaga, 2012). Portuguese medical professionals will have more time to focus on their clinical work so that previous time spent on interconnecting things and people, would be used more efficiently. The abovementioned informatic measures enhance doctor's but also patient's access to health information and information exchange among providers (national and supranational level) and patients with care providers. The leader in this aspect of improvement is the Portuguese Government. For the full application of the project nationwide, the Government needs support from other stakeholders, such as the management from hospitals. Innovative change in access to care requires intervention from the state as this question belongs to public administration digitalization reform; therefore, it requires systematic solution through four stages that represent the level of interaction between citizens and the government: information, interaction, processing, transaction (Cordella, 2007). Overall, medical students' recommendations are in line with a call coming from population health science for the encouragement of greater use of information technology as it will play an important role in the PCC dimension of coordination of care (Combes & Arespacochaga, 2012; Otero et al., 2015).

Economic. With changes in the economic factors, Portuguese PCC practice will improve. To overcome a shortage of space and old infrastructure in hospitals as well as an increased number of hospitalizations, augmentation of employed professionals in primary care, establishment of political or financial measures, such as better financial reallocation and financial support, should be provided. To solve the problem with insufficient physical space available for the patient, the Portuguese government, hospital management, and organizations should invest in public-private partnerships and build more facilities or functional networks of hospitals, to better involve private care in the national health system and to provide transportation for patients and home visits. The Portuguese government, politicians, organizations and associations should find financial support for reorganizational measures and the employment of additional medical staff to solve the problem of the lack of psychologists in hospitals and community centres and to increase the number of employed professionals to empower primary care centres. The introduction of the doctor's work evaluation after the consultation is a good motivation for the doctor's kindness and patient-centric attitude. However, although it might be expensive for the systems, Portuguese policy-makers should extend the time for consultation because it is beneficial in many aspects. To prepare a doctor for being better in emotional communication skills, more practical and interactive teaching methods should be applied (Baessler et al., 2019).

Ethical. It refers to the range of social values which shape PCC behaviour in an organization. In this regard, it is necessary that Portuguese doctors personally and professionally work on education on ethical and moral postulates, that will change their attitudes and behaviour in practice. As an important aspect of self-development, it requires time, so students propose formal training and informal educations on ethical and moral postulates not only for doctors but also for general populations. Only with this measure is it possible to make an impact on changing the cultural ethos. The ethical ideas of a country will not change overnight, but, small changes in morality take place over time (Pestleanalysis Contributor, 2015). The Portuguese hospitals would become more socially responsible with a change in ethical values over time.

Political. The political decision aims to change attitudes and organization of the health care system and might be a combination of economic, social, or legal changes (Pestleanalysis Contributor, 2015). The politicians' role is pivotal in creating preconditions for the improvement of PCC practice in Portugal. To improve the health care of the Portuguese population and increase the number of Portuguese inhabitants to care access, the Government should improve health prevention policy. Further, the Government should undertake organizational restructuring if aims to improve the PCC on the national level are to be effectively achieved. One of the proposed measures is to introduce voluntary services in the hospital and empower the population to participate in this kind of program as it improves Emotional Support to Continuity of Care dimensions. The Portuguese Government's reforms should consider the introduction of effective policies on home hospitalizations and policies that empower the role of community centres in the PCC process. Students believe that organizational restructuring affects human resource restructuring. Hence, they argue the Portuguese government must start by mapping affected areas in the care process and then augment the number of doctors to work in those affected areas that will reduce burnout and give more consultation time per patient. An adequate number of doctors, with a proper mix between generalists and specialists and a proper distribution in all parts of the country, is a prerequisite for access to care (OECD, 2016). Reasons for doctors to barely engage the family and friends in the care of the patient in hospital settings emanates from a lack of initiatives from doctor and patient, or the patient's family might have scarce information and tools for providing care at home (instead of obtaining information through–communication with the doctor, all information is obtained about the patient throughout the process directly from the patient). In the aspect of informing and educating patients, nurses and medical students (within given limitations) could take on a greater role when doctors lack time to talk, and could use the internet, and social media for information access and dissemination improvement. Students' beliefs are in line with discussion on nurse's role in the PCC that argue nurses are skilful for protocol-driven work given their capability for communication behaviour in sharing information between physicians and patients and the patients' families, which potentially gives doctors more time for practising clinical work (Gounder, 2013; Slatore et al., 2012). Moreover, with experience, the nurses become confident in their own technical and interpersonal skills, demonstrating an ability to deal with patient's complex needs, to tailor the patient's care, process, and to motivate the patient to be involved in their own process of care (Sidani et al., 2014). To improve the quality of health service and control, within the NPM and NPS discourse, the Portuguese Government and the organizations must employ a set of measures: to increase consultation time; to control and reduce the number of unnecessary medical exams, the request of medication and specialty controls; to reduce the number of medical errors, alert professionals about their mistakes and to introduce the rating system. Politicians and creators of education policies, if the aim is to improve the PCC in Portugal, should improve formal education and practical training during the clinical rotation of medical students. Introducing the PCC in formal medical curricula starts with the notions about the PCC in the basic years and continues by learning specific actions on how to deal with the most challenging and most common situations in practice in interaction with the patient and senior doctors. Formal education should be followed by training in later clinical years on how to behave patient-centric because it increases chances to observe doctors in practice. The Government should find measures to motivate Portuguese doctors-educators to teach medical students, by paying them appropriately, through time dedicated to teaching to be discounted from their clinical work, or by giving another slot of time for teaching. The Portuguese policymakers should involve patient's association in doctor's education and vice versa concerning the PCC process, as well as giving more time and more possibilities to all health care professionals to focus on the aspect of the PCC in their practice and help them in formal or informal education about the concept of PCC through education programs. These results correspond to the Quality Management System (QMS) of patient-centredness where the emphasis is on clearly defined procedures, the workflow, roles and responsibilities in task performance, the efficient use of resources (material, human, technology, and information) and improved communication and motivation of all staff in the process; while at the same time, QMS tools serve for monitoring and continuous service improvement based on facts (Bento & Esteves, 2016). Since in public hospitals there are high demands for medical service, doctors might lose motivation to improve their communication skills that possibly could be overcome by creating a link between doctor's attitude and communication with patients and their received income (Mosadeghrad, 2014). The policy and decision-makers in the Portuguese healthcare system should use data evidence to map critical areas towards getting more guided care.

Legal. The legal regulations limit negative behaviours but also assure compliance and safety. As a precondition for the PCC improvement, it is necessary to make changes in the legal aspect of the PCC in Portugal, particularly in the patient's preferences dimension. The Portuguese Government must create specific regulations and norms concerning the PCC to clearly regulate the way that informed consent is given by allowing the patient to take time for the decision, assuring the patient's rights and privacy, and obligating the doctors to explain different alternatives to the patient.

Environmental. The provision of PCC in hospitals is affected by environmental settings, so a positive environment brings benefits to the care process. It may happen that organizational restructuring alone does not solve the problem and does not give expected results. To improve Access to Care, Physical Comfort, and Transition of Care Dimension, the Portuguese government should consider spatial improvement by increasing infrastructural capacities. This could be achieved either by investing more money in the reconstruction of old infrastructure or by building new or repurposing existing hospitals or abandoned facilities. Investing funds in hospital facilities remodelling reflects an interest to ensure a welcoming and patient-friendly environment (Yancey, 2013). To solve the problem of homeless people's transition of care, every hospital should have infrastructural capacities for them and accommodate this group of people until they improve health status. To enhance physical comfort provision, the Government should invest in better conditions so that public hospitals can provide care like private ones, such as giving a bath to the patient, and the involvement of the auxiliaries' assistance. The Portuguese doctors together with nurses, have to raise the responsibility to listen to patients about physical needs and comfort the patient by providing better conditions, the best possible place, and possible alternatives. Students' beliefs are supported by patients' expectations for a clean hospital environment that meets high hygiene standards for reducing chances of infectious contaminations (Mosadeghrad, 2013).

Improvement in the domain of education policies. Concerning education programs on the PCC, medical students in Portugal suggest that the Government should give more time and more possibilities to all human resources in health care to focus on the aspect of the PCC in work and help them in informing and educating about the concept of PCC through education programs on it either formally or informally. Similarly, efforts and roles of decision-makers, academic leaders, and health professional bodies are essential in "true educational reform" (WHO, 2005, p. 12). For students, there are four ways to improve learning about PCC.

Introducing the PCC in formal medical curricula starts with the notions about the PCC in the basic years and continues by learning specific actions on how to deal with the most challenging and most common situations in practice in interaction with the patient and senior doctors. In providing education and professional development opportunities for the healthcare workforce, medical universities are the key role players (Mosadeghrad, 2014). Already in the late '90s, medical educators recognized the importance of teaching medical profession students about the PCC values by introducing a variety of curricula to teach communication skills, professional values, and PCC behaviours (Schmidt, 1998). Consequently, communication skills curricula were introduced, studied, and developed at many medical schools because learning PCC communication received great attention among medical educators (Aspegren 1999; Makoul 2001; Rubin 2002 in Wahlqvist et al., 2010). Similarly, results from England show the need for the introduction of more relevant education courses and specific training concerning the physical needs and comfort of patients, and how patient experiences can be measured and used to improve services (Robert et al., 2014). Besides, the factor of creating a curriculum model should be carefully considered as study results from Brazil demonstrate it affects medical students' attitudes towards the physician-patient relationship in a way that more PCC attitudes are found among students from the school with problem based learning (PBL) compared to schools with a traditional curriculum (TC) (Peixoto, Ribeiro, & Amaral, 2011). Results of our study show that to encourage favourable attitudes towards PCC, medical curricula should also include teaching interventions such as active role modelling and discussion around role-modelled behaviours, debriefing of seminal events that occur in the clinical teaching arena, and critical framing of patient care activities and communication by learners (Hundert, 1996 in Branch et al., 2001). Having a list of specific PCC actions and activities is important not just as a guide for the training of health professionals in the delivery of PCC, but also for monitoring and evaluating their performance and for examining the impact of PCC on patient and system outcomes (Sidani et al., 2014). Education has to overcome a gap that occurs between medical students' and patients' perception of medical students' PCC attitudes (Hur et al., 2017).

Formal education should be followed by ***improving patient-centric training*** in later clinical years because students believe it increases their possibility to observe doctors in practice. Every institution needs to support teachers and students to develop patient-centredness in practice if it aims to teach PCC in an optimal way (Haidet, 2010). Portuguese medical students perceive the role of educator trainer as fostering student's skills, introducing guidelines for correct behaviour, opening space for hearing student's experience, and giving more time to discuss the positive and negative sides of their behaviours. Previous studies from the students' perspective also imply that more time for students' presentations, lessons on how to approach patients individually and interactive communication strategies significantly improve the teaching quality (Baessler et al., 2019). Similar to research findings in our study, there is agreement among students and doctors that early and frequent clinical exposure is pivotal to learning patient-centredness (Bombeke et al., 2010) and learning by 'stepping in' and active learning through contact with patients are recommended (Currie et al., 2015). Evidence shows an increase in patient-centred attitudes during the first two years of training in professional skills, including communication skills, clinical skills and ethics, for students (Noble et al., 2007). We notice from the literature, when speaking about training in patient-centredness, it strongly correlates to training in patient-centred communication (Bombeke et al., 2010; Hur et al., 2017; Schmid Mast et al., 2007; Verheij, 2011; Wahlqvist et al., 2010) and professional skills training (Noble et al., 2007). A possible explanation is that doctor's communication behaviour often appears as routinized, but for the doctor-patient communication as an essential part of the PCC process, the doctors must be well trained in taking into consideration patient perspective when formulating responses (Jucks, Paus, & Bromme, 2012). Student's perception of how to improve the communication dimension fits the perspective of other authors who argue for teaching doctors to improve communication skills in a well-designed training course (Coulter et al., 2008; Ribeiro et al., 2007). Some authors argue for different patient's needs as an axiom for tailoring communication training as there is no 'one size fits all' (Schmid Mast et al., 2007). Others argue, for example, that training physicians for PCC should focus on a balanced approach of shared consideration rather than consideration of one-party preferences, which in practice result in patients who feel validated and doctors who are fulfilled (Carbajal, 2016). Nevertheless, communication skills learned in training increase students' awareness and self-efficacy in an 'ideal' context, helping in interactions with patients and in delivering more PCC; yet communication skills training possibly might jeopardize their ability to bridge the gap between education and practice (Bombeke et al., 2010). Despite this, professional skills training significantly increases students' PCC attitudes and boosts confidence in their ability to communicate with patients (Noble et al., 2007). Through communication skills training (skills in gathering and sharing information, explanation planning, and reaching consensus on problems), students' attention to patients' gender, personality traits, and healthcare needs is better, while doctors' 'sharing' competency is reinforced allowing patients to be more actively involved in decision-making (Hur et al., 2017). To transform the role of doctors from authoritative to a patient-centric relationship based on partnership, solidarity, empathy, and collaboration, training of future doctors should be more mindful, informative, and empathic (Epstein & Street, 2011). Further, Portuguese medical students believe the training allows students to have more practice being in direct contact with the patient. Alternatively, role acting, and standardized patient teaching methods could help. Students argumentation is in line with finding the new teaching and training methods are under continuous development and become essential in actual PCC training, unlike one-way class lectures that do not allow student exposure to highly realistic clinical situations, necessary skills, actual practice, structured feedback (Hur et al., 2017). Small group practical and interactive sessions compared to large-group theoretical teaching approaches motivate and encourage students to question and discuss, which heightens their attention and meaningful transfer of knowledge (Baessler et al., 2019). Using standardized patient interviews and video feedback improves medical students' communication skills (Roter et al., 2004 in Hur et al., 2017). An example of using a standardized patient in training is in exploring associations between students' attitudes toward PCC and standardized patients' perceptions of humanism as one of the patient-satisfaction outcome measures (Haidet et al., 2001). Compared to students, doctors demanded more relevant and practical education and training since their needs for additional education are different (Mosadeghrad, 2014). A systematic review of studies about the communication between patients and health professionals shows the impact of specific training actions on professional activities (Pires & Cavaco, 2014); yet, the effects of PCC training for doctors might result differently from students (Saha & Beach, 2011). Training**,** continuing professional development, appraisals, and assessments, and revalidation is important for a doctor who aims to maintain and enhance trust with a patient (van den Assem & Dulewicz, 2014). Nevertheless, the impact of training on the attitudes and behaviours of students should be measured (Robert et al., 2014). Largely unaddressed in medical education on developing professional behaviour and patient-centredness, is the teaching of students to be sensitive to their own positive and negative emotions and to recognize, accept and value emotions as important (Bombeke et al., 2010). Explicitly taking into account the emotional dimension of learning in workplaces helps more young people really want to be doctors. (Helmich & Dornan, 2012). More practical and feasible emotion skills training would lead to increased empathy and other humanistic qualities because study results show that altruistic ideals and qualities of empathy appear to decrease among some medical students as they progress through their education (Burks & Kobus, 2012). Following Portuguese students' beliefs, they argue for the PCC training to differ slightly between genders. Our findings are in accordance with implications from previous studies that suggest tailoring student's education program to enhance PCC 'sharing' values among males (Hur et al., 2017) and to create physician communication training to overcome existing gender difference in expectations (Schmid Mast et al., 2007). Evidence shows that female learners more readily acquire communication skills during training than do males (Roter & Hall, 2004). It is previously shown that no matter the curriculum model (traditional vs problem-based), in general, women showed more decision-sharing attitudes with patients in comparison with their male colleagues (Peixoto et al., 2011).

Portuguese medical students believe that the Government ***should find measures to increase doctor's motivation to teach*** either through appropriate payment, by giving another slot of time for teaching or time dedicated to teaching students to be discounted from their clinical work. Students' beliefs are in line with the argumentation that work overload of a doctor who is also a tutor might reduce the effectiveness of the education of medical students (Mosadeghrad, 2014). Nevertheless, inconsistent with students' beliefs is finding that autonomous forms of motivation increase through job meaningfulness and interest. Autonomy appears as more important and beneficial for the organization in promoting positive workplace outcomes than over-controlling forms of motivation (social and material awards) (Howard, Gagné, Morin, & van den Broeck, 2016).

Chapter 10

CONCLUSIONS, IMPLICATIONS AND LIMITATIONS

10.1. Conclusions and Implications

Based on the findings from our research, we draw several important conclusions.

Curriculum analysis of medical universities in Portugal and Sweden shows that there is no course called PCC or course that deals comprehensively with the concept of PCC and its dimensions. The concept is taught through a variety of courses, mostly in family medicine, either as an approach linked to the exploration of the patient perspective or as part of the interview process. In both curricula, teaching the three dimensions of the PCC consists mainly of *Information, Communication, and Education, Respect for Patients' Values and Preferences* and *Coordination and Integration of Care*. In contrast*, Transition of Care* is almost non-existent in teaching programs or as a learning objective. The concept of PCC is mainly discussed in the first three years of study in both countries. While Portuguese curricula focus on learning (the importance of narratives, the art of observation), Swedish ones encourage the development of skills (conversational, active listening) especially in terms of family involvement and the involvement of friends. Curriculums in both countries develop the sensitivity of students to cultural differences but in different ways. Swedish medical students learn to consult through an interpreter. Still, in Portugal, students can optionally learn Sign Language and the basics of Indian and Chinese medicine to gain competence to understand the influence of cultures, subcultures and religion on health and disease. In both countries, medical curricula encourage interdisciplinarity, given that the Swedish curriculum encourages learning about communication and teamwork more than the Portuguese one. Little attention is paid to learning about the quality of health care in the education program of both countries. A very important difference between countries is that all courses in Sweden that teach students about PCC-related dimensions and attributes are compulsory, while in Portugal a great number (40%) are still optional.

The results of the interviews show that Portuguese medical students are partially aware of the PCC phenomenon and what the concept embraces. Medical students receive formal education on some aspects of the PCC (Information and Education, Patient Preferences, Physical Comfort and Emotional Support) through different courses throughout all years of study (Family Medicine, Internal Medicine, Psychology, Palliative Care, Family Medicine Internship). The results show that Portuguese medical students did not attend any additional seminar or course about the PCC because they did not come across or actively seek it but expressed their willingness to attend due to it being useful for the future career of a medical doctor. Medical students in Portugal are most likely to learn informally about PCC along with medical training, mostly by observing the doctor when interacting with the patient. They admit, however, that learning by doing is helpful, but that they do not get a chance to learn how to break bad news, and that makes them unconfident. Moreover, Portuguese medical students miss more time to discuss the patient experience with educators and to receive feedback on specific actions or behaviour towards the patient. Students have identified important barriers and opportunities for improvement. Introduction of the PCC in the formal medical curriculum should start with basic notions of the PCC and then be followed by improved patient-centred training in later clinical years because it allows students to do more practice in direct contact with and learn from the patient. Training should be slightly different between genders, done in smaller groups, starting with an introduction to the service team and task division. The doctor-educator must create a teaching context that promotes the active and critical approach of the student, encourages the development of student skills, sets guidelines for correct behaviour, opens the space for listening to the student's experience, and gives more time to discuss the good and the wrong side of their behaviour. The government should find more time, motivational measures and more opportunities for the doctor-educator to focus on the aspect of PCC education. The national selection process for a medical student at the University should include the importance of the social skills necessary for the practice of PCC. Furthermore, policymakers and decision-makers should create opportunities for medical students in Portugal to gain medical-related work experience during their studies.

Portuguese medical students recognize the PCC phenomenon as a lifelong learning concept that enables them to adopt a critical approach to their own (self-reflection) and organizational practice that opens up space for further improvement. They recognize this concept through tangible (providing comfortable bed, informed consent) and intangible (talking with the patient about the disease) activities. For students in the core of the PCC, the concept is to build a trustful doctor-patient relationship and to stress that the PCC must exist at all levels of care in different forms. Building a trustful doctor-patient relationship appears to be a dominant attribute, especially in the three dimensions of PCC: Information, Education and Communication; Emotional Support; and Respect for Patient Values and Preferences.

Besides being the most represented in the curriculum, the Information, Education and Communication dimension, is also considered to be the most important dimension of all eight Picker’s dimensions that are essential to the PCC process from the perspective of Portuguese medical students. Furthermore, the Information, Education and Communication dimension is perceived as basic, connected and correlated with all other dimensions and at the same time, to dimensions in which students and doctors can make the most of their contributions. Since the Information, Education and Communication dimension is the most dominant in the Portuguese curriculum (as well as in the Swedish curriculum), this result may be linked to the results of the curriculum analysis. We believe that medical students have a good knowledge of this dimension as it is well represented in their education.

What makes a particular contribution is how medical student see themselves as agents of change in interactions with patients and colleagues, particularly in the areas of information, communication and education, coordination of care and continuity and translation. Still, they acknowledge a fear of not being absorbed by the system, or limited by lack of time in practice, or some personal limitations and the ability to persuade others in time. Once entering in-service practice, students can enhance the development of the relationship with the patient. In building relationship with the patient, as medical students, they perceive their contribution in two dimensions: Information, education and communication and Emotional Support. Once they become medical professionals, they can also contribute to the other six dimensions of the PCC. In general, medical students show a more caring than sharing attitude in PCC with no difference between countries. In Portugal, if a medical student shows a more caring attitude towards the PCC, he will also show a more shared attitude to some extent. In Sweden, when a medical student has a more caring attitude, he will be more confident about the ability to act patient-centric on all three scales. The tendency of the curriculum to promote the development of the skills of future physicians could explain these findings. The results obtained in quantitative analysis shows, in general, there is no difference between genders in terms of self-perceived competencies. Nevertheless, female medical students have a more positive attitude toward PCC. Although they see themselves as equally capable of practising PCC and capable of acting patient-centric, the results of interviews show that some gender differences between Portuguese medical students can be recognized in dealing with communicative challenges and empathic behaviour. In general, previous work experience does not affect the attitudes of a medical student to the PCC. Still, it affects the self-perception of a medical student being confident in the information and power-sharing segment (ability to deal with a possible conflict situation) and dealing with communicative challenges (separating personal views from their approach in the professional situation). Previous work experience in Portugal has had an impact on sharing and, to some extent, on caring attitudes towards a doctor-patient relationship. It helps medical students to feel more confident about addressing communicative challenges that are also confirmed in the qualitative part of the research.

According to medical students, Portuguese doctors are well trained and possess a great deal of clinical expertise. The role of primary care in the Portuguese health system is very important, and primary doctors play a key role in the follow-up of patients and the orientation of the speciality. The Portuguese family-oriented culture is recognized as the support underpinning the Portuguese medical system, particularly in terms of continuity and transition of care. However, students recognize some of the barriers to the operating of the PCC concept in Portuguese practice that require improvement. Analysis of student narratives reveals that the majority of students identify system barriers to the implementation of PCC. It is recommended that the Portuguese health system provide adequate support for the implementation of the PCC concept in practice. Practically, it means that the policymakers should take the following actions: foster improvement of timely and territorial access to care; coordination between public and private practice; improve information network and national central database development; take reorganization and restructuration measures such as introducing voluntary services in the hospitals; extend consultation time that opens space for the doctor to share information with the patient; introduce doctor's work evaluation after the consultation; employ additional medical staff in affected areas of care;

empower the role of Portuguese nurses and medical profession students particularly in the segment of Continuity and Transition, Information, Communication and Education and Family Involvement dimension and, build new or reconstruct old hospitals or adapt them to the other purposes of care. Health care organizations should change the organizational culture that will foster attitudes of health professionals towards better information, education and communication with patients and team members and establish closer contact with patients. Health organizations in Portugal have to raise nurses' responsibility along with doctor's, especially when there is no time for the doctor to talk. As an important aspect of self-development, Portuguese doctors must personally and professionally work on ethical and moral education that will change their attitudes and behaviour in practice.

Implications

Based on the curriculum analysis, and the data collected in quantitative research and in-depth interviews, we identify several key implications that can help to improve PCC theory and practice in Portugal.

1. Faculties that prepare future doctors should consider introducing an independent course that brings together all the key elements of the PCC and the processes associated with it. If they wish to study this phenomenon in its entirety, students would have the opportunity to see this phenomenon from a variety of perspectives, which would make it easier for them to understand and apply it in practice.
2. This PCC course should be part of a compulsory curriculum that provides a picture of the importance of the doctor-patient relationship that is relevant to all levels of care.
3. In addition to theoretical knowledge in early pre-clinical years, it would be useful to work on practical skills development in later years of education, preferable in smaller groups, to better prepare the medical students for the challenges they will face in practice.
4. Considering Picker's model, the medical curriculum should give more space to topics dedicated to studying and understanding the content of all dimensions of the PCC. Although the Information, Education and Communication dimension is the key and most represented in the current curriculum, it is the only one represented of the seven other dimensions, all of which together form the basis for understanding the integrity of the concept.
5. It is necessary to encourage the development of a more positive attitude of males towards the PCC through training programmes. The training on the PCC should be slightly gender-specific in such a way that educators should pay attention when educating medical students and talk more about activities in this field with all students.
6. Policymakers could provide some kind of guidance (In-Service PCC Guide) with all the key elements and activities that reflect the essence of the PCC concept in practice that could help a medical student to get into practice.

7. Portuguese health education policy and curricula must provide space and time for more practical training and encourage medical students to be involved in the relationship with patients during their studies or any other type of work experience as it boosts their self-confidence in the ability to behave patient centric.

10.2. Limitations of the study

Although this study provided useful insights into the attitudes of medical students to the PCC, several limitations need to be recognized. In the first place, in the qualitative study, we analyzed the results obtained only from a sample of students from Portugal because it was not possible to ensure the participation of students from Sweden. Certainly, the results would have been complete if we had been able to compare the responses of students from both countries. Secondly, by expanding the sample or interviewing educators who train doctors, a different insight into the presence of the PCC concept in the education system of both countries could have been gained. It should provide an additional incentive for future research to complement the view of the PCC as an idea and process and potentially improve practice.

APPENDIX I

Permission for using the PPOS from Prof.Krupat (25/05/2016)

Krupat, Edward <ed_krupat@hms.harvard.edu>

Wed, May 25, 2016, 7:41 PM

Dear Slavica,

I would be pleased to have you use the PPOS in your research. There is no cost associated with its use nor is anything more formal required for permission than this note. I am attaching a document with the scale, scoring instructions, and a fairly up-to-date bibliography of papers and presentations using the PPOS in the US and internationally, and with all sorts of user groups, both medical and no-medical. I have two requests, however. First, it is unclear if you will be using the PPOS in English, or with a currently existing translation, or in a translated version that you will generate. If you do translate the scale, I would very much like to receive a copy of the final translated version for my records. Finally, I am always curious as to the results generated by the scale, so once your data are collected and analyzed, I would very much like to hear of your experiences with it and your findings. In the meantime, if I can be of assistance, please do not hesitate to contact me.

Best,
Ed Krupat

Edward Krupat, PhD
Director
Center for Evaluation
Harvard Medical School
384 MEC
260 Longwood Ave.
Boston, MA 02115
617-432-1689 (phone)
617-734-5224 (fax)

Permission for using the SEPCQ-27 from Prof. Zachariae (25/05/2016)

Hugh James Robert Zachariae <bzach@aarhus.rm.dk>
Wed, May 25, 2016, 1:00 PM
to me, slavica.karajicic@liu.se, Felismina

Dear Slavica Karajicic

We are pleased that you will use the SEPCQ-27 in your research - and wish you good luck with your research. I presume you will be translating it into Portuguese? I would suggest that you use a translational procedure with 2-3 independent translators and subsequent negotiation of a preliminary version, followed by a back-translation, which might lead to some final adjustments.

Best wishes

Robert Zachariae
Professor, DMSc., MSc.
Unit for Psychooncology and Health Psychology
Dept. of Oncology, Aarhus University Hospital
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APPENDIX II

Patient-Practitioner Orientation Scale (PPOS)

The Patient-Practitioner Orientation Scale (PPOS) is copyrighted and it requires the copyright holder's permission before using it. All questions regarding the scale should be addressed to:

Ed Krupat
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Harvard Medical School
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The Self-Efficacy in Patient Centeredness Questionnaire (SEPCQ-27)

Instructions:

In the following, a number of statements describing different aspects of how physicians and medical students can relate to and communicate with patients are presented. Please read each statement carefully and judge how ***confident*** you are in your ability to relate to and communicate with patients in the manner described in the statement. Please answer all questions and provide your best assessment of how confident you are that you will be able to behave in the way described in the statement.

Please answer as honestly and sincerely as possible. Each question must be answered based on how confident you are that you will be able to ***make the patient experience*** the particular behavior - not the extent to which you would like to be able to engage in the behavior.

I am confident that I am able to...

	Scoring Key		To a very low degree				To a very high degree
1	1.1	Make the patient feel that I am genuinely interested in knowing what he/she thinks about his/her situation	0	1	2	3	4
2	2.1	Record a complete medical history	0	1	2	3	4
3	3.1	Accept when there is no longer curative treatment for the patient	0	1	2	3	4
4	1.2	Make the patient feel that I have time to listen	0	1	2	3	4
5	1.3	Recognize the patient's thoughts and feelings	0	1	2	3	4
6	2.2	Reach agreement with the patient about the treatment plan to be implemented	0	1	2	3	4
7	2.3	Advise and support the patient in making decisions about his/her treatment	0	1	2	3	4
8	3.2	Be aware of when my own feelings affect my communication with the patient	0	1	2	3	4
9	1.4	Be attentive and responsive	0	1	2	3	4
10	1.5	Be aware of when the patient is scared or concerned	0	1	2	3	4
11	2.4	Ensure that the patient makes his/her decisions on an informed basis	0	1	2	3	4

	Scoring Key		To a very low degree				To a very high degree
12	2.5	Explain the diagnosis and treatment plan to the patient so that he/she understands	0	1	2	3	4
13	3.3	Deal with my own emotional reactions when the situation is difficult for me	0	1	2	3	4
14	1.6	Treat the patient in a caring manner	0	1	2	3	4
15	2.6	Explain things so that the patient feels well-informed	0	1	2	3	4
16	3.4	To maintain the relationship with the patient when he/she is angry	0	1	2	3	4
17	1.7	Make the patient experience me as empathetic	0	1	2	3	4
18	2.7	Inform the patient about the expected side effects, so the patient understands them	0	1	2	3	4
19	3.5	To stay focused on what is best for the patient if there is a professional disagreement about the diagnosis and treatment	0	1	2	3	4
20	1.8	Make the patient feel that he/she can talk with me about confidential, personal issues	0	1	2	3	4
21	2.8	Explain how the treatment works or is expected to work	0	1	2	3	4
22	3.6	Avoid letting myself be influenced by preconceptions about the patient	0	1	2	3	4
23	1.9	Show a genuine interest in the patient and his/her situation	0	1	2	3	4
24	1.10	Focus on compassion, care and symptomatic treatment, when there is no curative treatment	0	1	2	3	4
25	2.9	Explain how the treatment is likely to affect the patient's condition, so that the patient understands	0	1	2	3	4
26	2.10	Explain the treatment procedures, so that the patient understands them	0	1	2	3	4
27	3.7	Separate my personal views from my approach in the professional situation	0	1	2	3	4

SEPCQ SCORING

Factor	Items		Score
1	1,4,5,9,10,14,17,20,23,24	Exploring the patient perspective	0-40
2	2,6,7,11,12,15,18,21,25,26	Sharing information and power	0-40
3	3,8,13,16,19,22,27	Dealing with communicative challenges	0-28
Total	1-27	SEPCQ-27 Total	0-108

Reference:

Zachariae R, O'Connor M, Lassesen B, Kjær LB, Olesen M, Thygesen M, Mørcke AM. The self-efficacy in patient-centeredness questionnaire – a new measure of medical student and physician confidence in exhibiting patient-centered behaviors. BMC Medical Education, 2015, 15:150.

APPENDIX III

INFORM CONSENT

Dear colleagues,

I am a doctoral student from the PHOENIX Erasmus Mundus Joint Doctoral Program on Dynamics of Health and Welfare. I am working on my doctoral dissertation under the direction of supervisor prof. Felismina Mendes at the University of Évora (Portugal) and prof. Bengt Richt and prof. Sam Willner at Linköping University (Sweden).

My research topic is related to dynamics of the patient-centred care (PCC) phenomenon to discover and assess an existing relation between beliefs and attitudes to PCC and self-perceived PCC competency in the group of medical students in the final years of their study in Portugal and Sweden.

We believe that as future doctors who will become active members of the health care system soon, you will give us an essential insight into the following questions: what PCC phenomenon is, what are advantages/disadvantages in the implementation of PCC, and what you consider as barriers to PCC in practice? You will tell us about your perspective on the physician-patient relationship, the role of the medical doctor in relation to the patient in your opinion, and how you see yourself in terms of practising PCC competence. For that purpose, we invite you to participate in our research by filling the questionnaires and/or participating in the focus groups discussions and/or interviews. We are asking you to share your personal beliefs, practices, or stories, but just as important: you do not have to share any information that you are not comfortable sharing. In conducting this research, we will follow an ethical procedure; therefore, all data will be collected anonymously and treated with confidentiality.

Should you require any further information or requirements, please do not hesitate to contact me via email: sk@uevora.pt or phone number +351 96x xxx xxx.

Your consent is essential for the research and highly appreciated. I hope you will take your time and become a part of this research because your opinion matters to us. Upon completion of the study, your contribution will be acknowledged in the doctoral dissertation and any other publication related to this research.

Yours sincerely,
Slavica Karajičić

ATTENTION

Please, read the following information carefully. If you believe that some information is incorrect or is not clear, do not hesitate to request more information. If you agree with those mentioned above, please sign this document.

I have read and understood this document as well as verbal information given to me by the researcher. I was guaranteed the possibility to refuse to participate in this study without any consequences at any time. I consent voluntarily to be a participant in this study and allow the researcher to use the data for the purpose of the research.

Name of Participant _______________________
Participant (Signature) _____________________
Place/Date ______________________________
Day/month/year

This study is part of a doctoral dissertation. I made sure that participants understand the aim of the research and the answers to their questions. A copy of this Inform Consent has been provided to the participant.

Name of Researcher _________________________
Researcher (Signature) _______________________
Place/ Date ________________________________
Day/month/year

APPENDIX IV

Guide for Interview with students

First of all, I wish to thank you for accepting to be interviewed and to be a part of this international research today about Patient-centered care (PCC) as an idea, process, and practice. We are going to talk today about your beliefs concerning PCC and attitudes toward PCC itself. My name is Slavica Karajicic, and I am a PhD student Erasmus Mundus program. I wish to hear your perceptions and experiences of the PCC phenomena. This is not a knowledge test; there are no right or wrong answers. Therefore, I invite you to express your thoughts, beliefs, and attitudes and to discuss concerns. The interview will last approximately one hour. In the beginning, I will introduce you to some rules of behaviour - you can freely express your own opinion with the right to skip the questions and to stop the interview anytime you feel like. The interview will be recorded, and it will be used only for scientific purposes. I am obligated not to present any individual opinion of interviewed participants to others. Do you consent to participating in this interview?	Duration 5 min
1. Defining the concept of PCC *a)* Have you heard of the term 'patient-centred care'? How would you define PCC, what does it mean and to what does it relate? (*If a student does not give an answer, a researcher offers the eight Picker's PCC dimensions*: *Information, Communication, and Education in Health Care, Respect for Patient Values, Coordination and Integration of Care, Physical Comfort, Emotional Support, Involvement of Family and Friends, Continuity and Transition, Access to care* b) Can you give me some examples of activities that are considered as patient-centred? Could you define this activity in one word?	10 min
2. PCC as process a) What could you identify as parts of the PCC process? (*If a student does not give an answer, a researcher offers* e.g. doctor calls the patient by his name, present himself, walk with the patient to the door, call patient personally to see how he feels?). b) Who would be the actors in that process and what are the benefits/advantages of implementation PCC practice for each of the actors? (*If a student does not give an answer, a researcher offers* patient, patient's family, medical professionals, medical organization and state/society). c) How would you range, these following eight domains based on their importance in the PCC process according to your beliefs? (*researcher presents these eight domains on the paper and facilitates discussion*). d) Please, give me an example of PCC care as a process.	10 min
3. Experience with PCC practice a) According to your experience, on a scale from 1 to 10 (max), how would you assess the existence of PCC phenomenon in hospitals that you have worked? Why?	10 min

b) What could you identify as barriers to the implementation of PCC in practice and why? (*If a student does not give an answer, a researcher offers, e.g. Is there a problem in the domain of communication; ask participants to go through 8 domains listed above and try to list the barriers and stimulates a discussion).* c) Which domains should be improved to get higher scores? Who should take a greater role towards PCC improvement in practice, to overcome these barriers and how?	
4. **Role as a medical student** a) In which of the listed dimension you see your role as a medical student? Which ones you see as the most important for PCC concept and why? b) b) Where do you see that a medical doctor can attribute the most to PCC, in which domain? Is there any difference? c) Do you see yourself as a change agent? What would be the reason for that?	10 min
5. PCC Competencies a) What would be three main competencies that a medical doctor must possess in practicing PCC? b) Which personal characteristics a doctor must possess in practicing the PCC process? (interviewer: If a student does not give an answer, we offer, e.g. Is it important that the patient trusts doctor? What doctor has to have to build trust with the patient? (*if student does not answer, a researcher offers: communication skills, medical knowledge, to show empathy to the patient, respect patient's values and needs, cultural competencies*) c) Do you think that male and female students/doctors differ in their beliefs about what PCC is as well as in their perceived ability to behave toward PCC provision? d) Do you think that there is a dissonance between professional ideals and practice reality and why? Give me an example.	10 min
6. The way to get acquainted with the PCC phenomenon a) Whether the PCC is a part of formal medical curricula? b) What is the way that you were dealing with the PCC: through lectures, evidence-based learning, or hidden curricula? c) Based on your experience in the clinical setting, how would you assess the PCC application in practice; how much it is in line with what you have learned at the university? d) What could you identify as barriers to learning about the PCC? e) What motivates you to learn about the PCC?	10 min
7. PCC policy on the national level a) On a scale from 1 to 10 (max), how would you access the existence of the PCC phenomena in your country? b) What the state/government could do to improve PCC in your country? Precisely, on what should policymakers and (decision-makers) those who make decisions, put special attention regarding PCC?	10 min

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Slavica M. Karajičić holds MA degree in Sustainable Regional Health System from Corvinus University, Budapest. She is a member of Interdisciplinary Centre for History, Culture and Society (CIDEHUS) at the University of Évora, Portugal.

While working at the Special Gynecological Clinic 'Jevremova' in Belgrade, Slavica became especially interested in the concept of patient-centred care (PCC). Her professional interests focus on health policy, health care quality, and health professionals' education. She has also worked as a researcher at Health Policy Institute (HPI) in Bratislava, leading the national *PaCe 2014* project about the patient-centred care in Slovak infertility hospitals. Moreover, as a research fellow at Central European University (CEU)-Center for Ethics and Law in Biomedicine (CELAB) in Budapest, Slavica made a comparative analysis on policy perspectives of *in vitro* fertilization in Serbia and Hungary.

As a participant of the national project '1000 Young Leaders of Serbia,' she was a team member working on the 'Entrepreneurship' project. In 2007, the project was conferred the best project award supported by the Serbian President and Government.

Slavica was a host lecturer in the Public Policy Department at the Faculty of Social and Economic Sciences of the Comenius University in Bratislava. She was also a member of the Slovak Health Policy expert team developing a strategy for health system reforms in Serbia, organized by the International Republican Institute (IRI). She was invited to lead the roundtable 'Policy on the Menu' organized by the IRI Serbia.

A native of Serbia, Slavica has researched and lived in Spain, Italy, Hungary, Slovakia, Sweden, and Portugal. She loves to spend her free time with her family enjoying nature, gardening, cooking, and traveling.

ACADEMIC SERVICE

A. Publications

1. Karajicic, S., Mendes, F., & Malinic, J. (2017). Medical students' attitudes towards Caring Dimension of Patient-Centered Care [poster presentation]. 25th Planetree International Conference on Patient-Centered Care (October 15-18), Baltimore, MD, USA.
2. Vlaisavljevic, V., Mursic, J., & Karajicic, S. (2016). Comparison of patients – centeredness experience in infertility care in patients fully reimbursed by national insurance and in cross-border self-paying patients [abstract+presentation]. The 32nd Annual Meeting of the European Society of Human Reproduction and Embryology (3-6 July), Helsinki, Finland in: Abstract Book published for the ESHRE by Oxford University Press vol.31 (1), Oxford, UK, (i63). ISSN 0268-1161
3. Karajicic, S. (2015). Patient-Centred Infertility Health Care: Comparison between Slovakia and The Netherlands [abstract+poster]. 1st Global Conference on Patient Centered Care; Patient Centered Care: Training and Delivery of Universal Healthcare. Nairobi, Kenya (56-57). Kenyatta University, Kenya.
4. Karajicic, S. (2014). *Towards patient-centered infertility health care: Case study Slovak Republic*. Health Policy Institute, Bratislava, Slovakia. ISBN: 978-80-971193-9-3
5. Karajicic, S., Sándor J., and Demény, E. (2014, April). *Different perspectives on regulation of assisted reproduction treatments in Serbia and Hungary: A comparative analysis*. In Ivan Humenik et al. (Eds.), Reprodukcné zdravie zenz v centre záujmu. Paper presented at Conference Reprodukcné zdravie zeny v centre záujmu, Kosice, Slovak Republic, (122-146). Wolters Kluwer Publishing, ISBN: 978-80-8168-035-9.
6. Karajicic, S. (2013). *Policy on Assisted Reproduction in Slovakia*. Health Policy Institute, Bratislava, Slovak Republic. ISBN: 978-80-971193-5-5.
7. Karajicic, S., Radovic T. G., and Krstic A. (2013). *Legal Policy on Assisted Reproduction in Serbia*. In Judit Sándor (ed.), Studies in Biopolitics. Central European University, CELAB, Budapest, Hungary (103-112). ISBN: 978-963-88538-9-9.
8. Karajicic, S., & Muzik, R. (2013). *Serbia: An Overview of the Health System*. Health Policy Institute, Bratislava, Slovak Republic.

B. Reviewed publications

1. Berlin Hub Observatory study on trends in European health systems (2014; unpublished) Refers to: Ewout van Ginneken, Germany and Bernd Rechel, European Observatory on Health Systems and Policies, K.3. Workshop: Trends in European health systems: Organised by: Berlin University of Technology and European Observatory on Health Systems and Policies, European Journal of Public Health, Volume 24, Issue suppl_2, October 2014, cku162–084, https://doi.org/10.1093/eurpub/cku162.084 (Reviewer of trends in Slovak health system and policies).

C. Lecturing

1. In 2013, host lecturer in the Public Policy Department at the Faculty of Social and Economic Sciences, Comenius University, Bratislava, Slovakia (topic: Serbian Health Care System).