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## Analysis of knowledge, perceptions and self-confidence in tobacco control among graduating dental students in Portugal

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### Introduction

In the 20th century, a tobacco epidemic killed about 100 million people worldwide and kills more than 8 million people each year[1]. Adverse effects of tobacco on oral health are well documented[2]. The WHO Framework Convention on Tobacco Control (WHO FCTC) recommends the integration of guidelines into health systems for tobacco prevention, cessation, treatment (TPCT)[3]. In this context, oral health programmes may have as priority integration of these guidelines into primary schools, because oral health professionals have the greatest access to young and "healthy" smokers and eventually longer than others to advise Smoking. However, it is rare for professionals to address tobacco habits with their patients. The main barriers to the implementation of these interventions are a lack of knowledge and skills about a TPCT, as well as a lack of guidance in oral health programs[3].

Portugal signed the WHO FCTC in 2004 approving it and transposing it into national legislation in 2005. The General Directorate of Health (DGS), in the National Health Plan 2012-2016 considers smoking a priority health problem creating, the National Tobacco Prevention and Control Program in 2012. In this context, DGS implemented a study on the acquisition of professional competencies in the TPCT area during the last year of the Dental Medicine course. This study aims to analyze attitudes, knowledge, perceptions and self-confidence to intervene in the PCTT, among students of the Master's degree in Dental Medicine (DM).

### Methods

The design of the research is observational, cross-sectional and analytical, with a non-probabilistic sample. In 2016, a survey was conducted at national level using a questionnaire (administered online and in the classroom) to 616 participants, obtaining 241 validated answers (39.1%), in 7 Dental Schools. Likert's summary scales were chosen. The questionnaire consists of 110 items grouped into 8 dimensions: I - Sociodemographic information; II -Prevalence of tobacco product consumption; III -Exposure to environmental tobacco smoke; IV -Attitudes and knowledge; V -Perceptions of theoretical formation received; VI -Perceptions of practical training received; VII -Acquisition of perceived competencies; VIII -Perceptions about pedagogical methods. In the pilot study Cronbach's Alpha values allowed us to consider that there is internal reliability in the pilot questionnaire. The study had a favorable opinion from the Ethics Committee. In the analysis of the data we used parametric and nonparametric tests: Pearson and Spearman coefficients, Mann-Whitney and Kruskal-Wallis Test and the Chi Square Test

### Results

Of the participants, 73.0% were females; mean age 23.6 years; SD = 4.269 years. Most (56.5%) state that they have smoked or consumed tobacco products. This experimentation has greater expression in females (51.2%) ( $p < 0.005$ ). Among consumers (44.0%), most (30.5%) started smoking regularly at the

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age of 18 years old. There is a 13.8% increase in the prevalence of smoking in men. Among regular smokers ( $N = 59$ ), 57.6% reported that they had tried to stop smoking, mostly (62.0%) only once, followed by the group that tried twice (14.4%). Among smokers, about 17.6% of female students and 13.0% of male students smoke daily, with the majority (29.8%) consuming up to 10 cigarettes per day. About 28.8% of respondents were exposed to secondhand smoke (SHS) every day. Significant associations were found between smoking habits and age when smoking for the first time ( $p < 0.001$ ), how many times tried fail to smoke or in consume tobacco ( $p < 0.021$ ), exposure to SHS at home and away from home ( $p < 0.001$ ). Most respondents (79.2%) agree with the attitudes and knowledge presented in the questionnaire regarding the consumption of tobacco products. It should be noted that 23.3% of the respondents considered that the theoretical training components presented were not addressed during the course. Most students reported good knowledge of tobacco hazards (53.5%), positive attitudes regarding their role in supporting cessation (99.1%) and their need for training (59.8%). However, a substantial part (17.7%) disagreed that they should be role models as non-smokers; denying that curricula impacts in their tobacco attitudes. While most students reported receiving good theoretical training, especially in tobacco hazards, a important part (45.3%) considered their training poor in behavioral changes and brief cessation skills while 38% reported low self-competence to intervene. From a 1-10 scale, mean score of self-confidence to intervene in cessation was 4.6. Self-confidence was associated with tobacco use, SHE, attitudes/knowledge ( $p=0.029$ ), perception of theoretical training ( $p < 0.001$ ), and, above all, clinical skills and curricula extension (mean 2.4 hours) ( $p < 0.001$ ). Students considered their training insufficient and provided clear indications about curricula gaps.

## Conclusions

The competence to intervene varies in the direct ratio of the number of hours of academic formation of DM students in tobacco prevention and, likewise, in the direct ratio of the perceptions evidenced by the students on the practical training received. We conclude as soon that the greater the number of hours devoted to the PCTT most favorable are the perceptions DM students about the practical training received and the greater will be the confidence in personal skills to intervene in this field. There is room for improvement in the undergraduate DM in tobacco control. A nation-wide assessment involving students is a crucial step to engage decision makers and stress the need for curriculum planning and organizational change.

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