

Promoting preschoolers' social-emotional competence: the effects of a body-oriented intervention on self-regulation.

Promovendo a competência sócio-emocional de crianças em idade pré-escolar: efeitos de uma intervenção de mediação corporal na autorregulação.

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Abstract

Despite the increase of scientific evidence, there is a lack of studies focusing on the effects of specific BOI in educational context, such as loose parts play (LPP), on children's social-emotional competence. The present study aims to analyze the impact of a 12-week loose parts play program (two 30-min sessions per week) on behavioral self-regulation of preschool children. Thirty-two children participated in this study, having been allocated into 2 groups: experimental group (LPP program; n=17); and control group (no intervention; n=15). No significant differences were observed between groups after the 12-week program, however significant improvements were found in the intervention group after the program, $t^{(16)} = 3.339$, $p = .004$. Regarding the results found, i.e., intra-group (LPP) but not between groups improvements, it is suggested to increase the duration of the intervention in future studies to prove the potential of LPP on the ability of self-regulate behaviors of preschool children.

Keywords

Play; loose parts; social-emotional competence; preschool education.

Resumo

Apesar da crescente evidência científica, existe uma lacuna no que concerne a estudos que foquem os efeitos de intervenções de mediação corporal específicas em contexto educativo, como é o caso do jogo de peças soltas (JPS), na competência sócio-emocional das crianças. O presente estudo tem como objetivo analisar o impacto de um programa de JPS com a duração de 12 semanas (2 sessões de 30 minutos/semana) na autorregulação comportamental de crianças em idade pré-escolar. Trinta e duas crianças participaram neste estudo, tendo sido alocadas em 2 grupos: grupo experimental (JPS; n=17); e grupo de controlo (sem intervenção; n=15). Não foram observadas diferenças significativas entre os grupos após o programa de 12 semanas, mas foram encontradas melhorias significativas no grupo de intervenção após o programa, $t^{(16)}=3.339$, $p=.004$. Atendendo aos resultados encontrados, i.e., melhorias intra-grupo (JPS) mas não entre-grupos, é sugerido aumentar a duração da intervenção em futuros estudos no sentido de se comprovar o potencial do JPS sobre a capacidade de autorregulação comportamental de pré-escolares.

Palavras-chave

Jogo; peças soltas; competência sócio-emocional; educação pré-escolar.

INTRODUCTION

During early childhood, children experience a significant development of social-emotional competence (SEC), which is an important foundation for children's short- and long-term health and success⁽¹⁻³⁾.

Self-regulation represents the ability to successfully regulate one's thoughts, emotions, and behaviors in various situations to pursue goal-directed behavior and is an important foundation of SEC^(4,5). Children who can regulate their emotions, behaviors, and attention are thought to better accomplish positive social interactions, cooperate with peers, and build strong relationships^(6,7).

Free play allows children to choose and create their own playful activities, to navigate their social worlds, to make independent decisions and to experience the consequences of their own actions, having proved to be a crucial context for the development of emotional and behavioral self-regulation⁽⁸⁾. Implementing loose parts in outdoor spaces provide opportunities for free play. Loose parts play (LPP) introduces a variety of manipulatable, open-ended objects in children's play space to improve opportunities for their engagement^(9,10).

A growing body of evidence supports the effectiveness of free play in the educational context, showing positive influences on children's social-emotional competence^(11,12). Nevertheless, there is still a lack of studies focusing the effects of LPP on preschoolers specific social-emotional competence, such as self-regulation^(9,13). In this way, the present study aims to analyze the impact of a 12-week LPP program on self-regulation of preschoolers.

METHOD

Participants

Children were recruited in public preschools. Parents provided written informed consent for participation, and children provided verbal consent.

Thirty-two preschool children (17 boys), with a mean age of 4.59 years ($SD=1.07$) participated in the study, being allocated by convenience (i.e., classroom) to the Loose Parts Play Group (LPPG, $n=17$) and to the Control Group (CG, $n=15$).

Procedures and outcome measure

The instrument was collected by the same researcher at baseline and after 12 weeks (post-intervention).

The Portuguese version of Head-Toes-Knees-Shoulders (HTKS) was used to assess self-regulation⁽¹⁴⁾. This task measures children's behavioral regulation using a structured observation that requires children to perform the opposite of a dominant response (e.g., touch their heads when the interviewer says "touch your toes") to four different oral commands. This task includes three phases (each with 10 trials), and for each trial, the child received a score of 0 (incorrect), 1 (self-correct), or 2 (correct). Scores were summed to reflect a total score from 0 to 60.

Intervention program

The LPP program was implemented in the school playground (except for the days when it rained, where it took place in the classroom) with the whole class. The program comprised two 30-min sessions per week for 12 weeks, and occurred around 10:00 a.m. The sessions began with an initial dialogue (3 min), a main section (25 min), and a final ritual (2 min). During the main section, participants were allowed to play freely with any materials available in the playground (e.g., sticks, stones, fabric, cardboard boxes, tires). The sessions were conducted by a psychomotor therapist and the teacher, who only intervened upon request. The CG participants maintained their usual daily lives activities during the intervention period.

Statistical analysis

Intervention effects were first examined using a repeated-measures analysis of variance. Paired-sample *t*-test was used to compare data within each group at baseline and after 12 weeks. Data were analyzed using SPSS 27.0 (SPSS, Chicago, IL).

RESULTS

As shown in Table 1, at baseline the LPPG and CG did not show statistical differences. Significant improvements were found in the LPPG after the intervention program, $t^{(16)} = 3.339$, $p = .004$. However, there were no statistically significant differences between groups after the 12-week program, $F(1, 30) = 1.572$, $p = 0.220$.

Table 1. Scores on the HTKS.

	Baseline <i>M (SD)</i>	12 weeks <i>M (SD)</i>	Difference between means <i>M (95% CI)</i>	p
LPPG	9.59 (11.21)	21.35 (20.55)	11.76 (4.29, 19.23)*	0.22
CG	6.00 (6.06)	12.87 (17.32)	6.87 (-.69, 14.42)	

Note. CI=confidence interval. The *p* values are for repeated-measures analysis of variance. **p* < .05 changes within the group. Paired-sample *t*-test.

DISCUSSION

To the best of our knowledge, this is the first study to examine the effects of a LPP program on preschoolers' self-regulation.

Despite there were no statistically significant differences between groups by the end of the program, the LPPG showed a statistically significant increase of self-regulation. These results may be due to the short intervention program duration (12 weeks), once in other studies that showed significant improvements on social-emotional competence^(15,16), the duration of the intervention programs was longer (5 and 2 years, respectively).

CONCLUSIONS

Although not conclusive, this study provides preliminary evidence that the availability of loose parts in the child's play space can be a promising tool to promote self-regulation. Further research should analyze the effects of a longer-term intervention program, or with a higher frequency of sessions, in order to prove the potential of LPP on preschoolers' social-emotional competence.

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