

TEACHERS' STRESS AS A MODERATOR OF THE IMPACT OF POMPEDASENS ON PRESCHOOL CHILDREN'S SOCIAL-EMOTIONAL LEARNING

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Abstract

This study examines the extent to which the impact of a universal intervention program, i.e., POMPedasens, on children's early social-emotional learning (SEL) is different depending on early childhood education (ECE) teachers' stress at work. The POMPedasens program aims to promote children's (5–6-year-olds) SEL by supporting ECE teachers' engagement and emotional availability. The intervention effectiveness has been monitored using an 8-month randomized controlled trial design with an intervention (IG; 26 teachers and 195 children) and a waiting control group (CG; 36 teachers and 198 children) that provided the data before and after the program implementation. The ECE teachers in the IG are trained to implement the intervention program in their early childhood education and care groups. Latent change score analysis suggests that the program increases children's prosocial behavior in the IG when teachers show a low level of stress. No significant results were found for the IG regarding a change in antisocial behavior. Unexpectedly, when teachers showed a high level of stress, an increase in prosocial behavior and a decrease in antisocial behavior were only found for children in the CG. The results suggest a promising application of the POMPedasens program for promoting prosocial behavior in early childhood when teachers have low stress. The intervention will likely need a longer time to display the moderating effect of ECE teachers' well-being on children's antisocial behavior change. The stress in CG might mean that the teachers were doing their best at the cost of their own well-being.

Keywords: *Early childhood, social-emotional learning, universal intervention program, professional development, teachers' stress.*

1. Introduction

Social-emotional learning (SEL) is recognized as an essential part of early childhood education and care (ECEC) and vital for supporting children's development, well-being, and mental health to become well-functioning adults (e.g., Jones et al., 2015). Early childhood education (ECE) teachers play an essential role in promoting SEL in early childhood when children undergo rapid developmental growth (Rodríguez et al., 2020). Yet, ECE teachers are often inadequately prepared to meet the expectations and fulfill the challenges of pedagogical work that are explicitly and implicitly required from them, which may expose them to high-stress levels (Ugaste & Niikko, 2015). Although the literature suggests that professional development (PD) can equip ECE teachers with a sense of capability and agency, improving their self-efficacy, reducing their emotional exhaustion, and fostering children's SEL, previous research involves at least two limitations. First, gaps remain in examining the impact of universal PD interventions on preschool children's SEL in Nordic countries (Fonsén & Ukkonen-Mikkola, 2019). Second, empirical studies that have examined the moderating role of ECE teachers' stress on the impact of early interventions on children's SEL are lacking.

1.1. The intervention program

"POMPedaSens", a universal PD intervention program, was recently developed in Finland (2019) to support ECE teachers' PD, engagement, and emotional availability, promote a sense of belonging, and overall quality of teacher-child interactions at the group level, children's self-regulation, peer relationships, and group involvement, and reduce the risk for cumulating behavioral problems and bullying. POMPedasens' principles stem from theories of positive psychology and developmental neurosciences, combined with pedagogical knowledge of high-quality interaction in the context of ECEC.

1.2. The present study

The present study aims to investigate the extent to which the impact of POMPedaSens, on preschool children's (5–6-year-olds) SEL is different depending on the ECE teachers' stress at work.

2. Method

2.1. Participants and procedure

The POMPedaSens intervention program was carried out in 22 ECEC centers in Finland (September 2019–December 2020). The program professionals trained teachers in the IG on implementing the program through ongoing education and nine workshops. The teachers in the IG were trained to develop activities and renew practices to promote children's SEL through inclusive learning environments and responsive and supportive interaction. Teachers also had face-to-face meetings to support and maintain training quality and implementation reliability. The intervention effectiveness has been monitored using an 8-month randomized controlled trial design with an IG and CG that provided the data before and after the program implementation (Table 1).

Table 1. Baseline demographic and characteristics of the IG and CG.

	IG	CG	p-value
Children (n)	195	198	
Gender (n)			.05
Female	105	87	
Male	90	111	
Age (years mean \pm SD)	5.98 \pm 5.75	6 \pm 5.92	.47
Multicultural background			.94
No	160	163	
Yes	35	35	
Special education needs			.77
No	155	155	
Yes	40	43	
Group size	18.07	20.25	<.001
ECE Teachers (n)	36	26	

Note. Values are n / mean \pm SD

2.2. Measures

Multisource Assessment of Social Competence Scale (MASCS; Junttila et al. 2006). ECE teachers rated MASCS on a 4-point scale (1 = never, 4 = very frequently) at the pre-and post-test for the IG and CG. In the present analysis, the domain scores of social competences (i.e., prosocial behavior and antisocial behavior) were used.

Teachers' Stress. Teaching stress was measured using a modified version of the Parental Stress Inventory (Gerris et al., 1993; see Pakarinen et al., 2010). The three items measure feelings of stress in teaching and powerlessness in handling teacher–child situations. Teachers rated on a 5-point scale (1 = not applicable, 5 = very applicable) at the pretest for the IG and CG.

3. Results

Latent change score (LCS) analysis using structural equation modeling (SEM) techniques with the Wald test was used to analyze The group \times time \times moderator interaction. An overall significant group \times time \times stress interaction was found regarding prosocial behavior (Wald test (1) = 9.752, p = .002) and antisocial behavior (Wald test (1) = 8.837, p = .003). The estimated mean change in the prosocial behavior was significant for both the IG and the CG. That is, teachers' stress moderated the effect of change in prosocial behavior in both the IG and the CG. A significant increase in the rate of prosocial behavior over time was found for the IG (β = 0.141, p = .041) only when teachers' level of stress was low ($-1SD$). No significant change was found for the prosocial behavior in the CG (β = -0.035 , p = .480) when teachers showed a low level of stress ($-1SD$). However, when teachers' stress level was high ($+1SD$), prosocial behavior showed a significant increase only in the CG (β = 0.109, p = .049) and not in the IG (β = -0.063 , p = .373). Further, the estimated mean change in antisocial behavior was significant only for the CG. Teachers' stress moderated the effect of change in antisocial behavior for the CG. A significant decrease in the rate of antisocial behavior over time was found for the CG (β = -0.157 , p < .001) only when teachers' level of stress was high ($+1SD$). No significant change was found for the

antisocial behavior in the IG ($\beta = -0.062$, $p = .293$) when teachers showed a high level of stress (+1SD). When teachers' stress level was low (-1SD), no significant change in the rate of antisocial behavior over time was found for the IG ($\beta = 0.095$, $p = .297$) and the CG ($\beta = -0.026$, $p = .566$).

4. Discussion

Our results suggested that when teachers showed a low level of stress, prosocial behavior increased for children only in the IG. This is consistent with the prosocial classroom model (Jennings & Greenberg, 2009), indicating the fundamental role of teachers' well-being and competency in SEL skills contribute to their ability to develop a positive teacher-child relationship, healthier classroom settings, and implement children's SEL interventions. The POMPedasens program has equipped teachers with adequate strategies to implement effective classroom management techniques and responsive and nurturing teacher-child interactions to create a positive learning environment and support children's well-being and social-emotional behaviors. Further, when teachers showed a high level of stress, prosocial behavior increased only for children in the CG. The increased prosocial skill in CG when teachers report high stress could be a consequence of demands for accountability and expectations toward prosocial behavior in the ECEC without supporting teachers' PD and well-being. No significant effects were found for the IG regarding a change in antisocial behavior. However, when teachers showed a high level of stress, antisocial behavior decreased for children in the CG. One explanation could be that the relatively short time between pretest and post-test measurements could not reveal the moderating role of teachers' stress on possible changes in children's problem behaviors in the IG. On the other hand, the decrease in children's antisocial behavior in the CG may have been due to more restrictions and control over children's behaviors in challenging situations that are loading for teachers. Decreased antisocial behavior in the CG could thus be due to increasing obedience instead of maturing children's SEL, such as their self-regulation skills which can be a short-term outcome.

5. Conclusions

The results suggest that compared to the CG, the POMPedasens intervention program increases children's prosocial behavior in the IG only when teachers show low-stress levels. The results suggest a promising impact of the intervention in promoting early prosocial behavior by supporting ECE teachers' PD. However, no significant effects were found regarding the change in antisocial behavior in the IG compared to the CG. This result suggests that changes in antisocial behavior may require a long learning period, and the intervention needs a relatively long time to display the moderating effect of ECE teachers' well-being on children's antisocial behavior change. For the CG, children's prosocial behavior increased when teachers showed a high level of stress. Further, a decrease in the rate of antisocial behavior was found for the CG when teachers' stress was high. The stress in CG might indeed mean that the teachers were doing their best at the cost of their own well-being (high stress).

References

- Fonsén, E., & Ukkonen-Mikkola, T. (2019). Early childhood education teachers' professional development towards pedagogical leadership. *Educational Research*, 61(2), 181-196.
- Jennings, P. A., & Greenberg, M. T. (2009). The Prosocial Classroom: Teacher Social and Emotional Competence in Relation to Student and Classroom Outcomes. *Review of Educational Research*, 79(1), 491-525.
- Junttila, N., Voeten, M., Kaukiainen, A., & Vauras, M. (2006). Multisource assessment of children's social competence. *Educational and psychological measurement*, 66(5), 874-895.
- Jones, D. E., Greenberg, M., & Crowley, M. (2015). Early Social-Emotional Functioning and Public Health: The Relationship Between Kindergarten Social Competence and Future Wellness. *American Journal of Public Health*, 105(11), 2283-2290.
- Pakarinen, E., Kiuru, N., Lerkkanen, M.-K., Poikkeus, A.-M., Siekkinen, M., & Nurmi, J.-E. (2010). Classroom organization and teacher stress predict learning motivation in kindergarten children. *European Journal of Psychology of Education*, 25(3), 281-300.
- Rodriguez, V., Lynne Solis, S., Mascio, B., Kiely Gouley, K., Jennings, P. A., & Brotman, L. M. (2020). With Awareness Comes Competency: The Five Awarenesses of Teaching as a Framework for Understanding Teacher Social-Emotional Competency and Well-being. *Early Education and Development*, 31(7), 940-972.
- Ugaste, A., & Niikko, A. (2015). Identifying the problems that Finnish and Estonian teachers encounter in preschool. *European Early Childhood Education Research Journal*, 23(4), 423-433.