

ICEEPSY 2025

16th International Conference on Education and Educational Psychology

**PROMOTING EDUCATORS' SOCIAL AND EMOTIONAL
COMPETENCE: A PILOT STUDY USING A PRE-POST DESIGN**

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Abstract

The main aim of the study was to compare five core components of social-emotional competence (SEC: self-awareness, self-regulation, positive relationship, conflict management, and responsible decision making) among Estonian educators (teachers and social pedagogues) who participated in an in-service training course at two time points – at the beginning and end of the social-emotional learning (SEL) intervention. A longitudinal pre-post research design was employed in a sample of 74 Estonian teachers and social pedagogues using the Social and Emotional Competence Assessment Battery for Adults (SECAB-A) with the additional aim of adapting and validating this multi-component self-report measure in an Estonian sample. The developed SEL group-based intervention was delivered in the form of an in-service training course, which included five sessions as 60-h program for educators' career development for four months. Results showed a significant increase in participant educators' self-reported social and emotional competence components in terms of self-awareness, self-regulation, positive relationship, conflict management, and responsible decision making, which demonstrated the positive effect of the pilot SEL intervention. This study contributes to a growing body of research which reinforces the importance of investing in SEL interventions to improve educators' social-emotional competence.

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Keywords: SECAB-A, SEL intervention, social and emotional competence, educators



1. Introduction

The conceptual, theoretical, and methodological historical journey of the social-emotional competences (SEC) construct spans nearly a century (Lozano-Peña et al., 2021), it is only in recent decades that research on integrated SEC components following social-emotional learning (SEL) interventions among students and teachers (e.g. Durlak et al., 2011; 2015; Jennings & Greenberg, 2009) within the educational context basing on the CASEL model as multidimensional construct that integrates five domains – self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (e.g. CASEL, 2020). According to the holistic SEL frame, as it is understood today in the educational context, SEL refers to the process by which individuals acquire and apply core SEC to recognize and manage emotions, develop care and concern for others, make responsible decisions, establish positive relationships, and handle challenging situations effectively (Jennings & Greenberg, 2009). Applied to professional development in an educational context, SEL interventions are a set of practices and educational policies that aim to promote participants' SEC through the explicit instruction of these intra- and interpersonal core skills (Durlak et al., 2015; Tolan et al., 2016), while SEL interventions have differed in their approaches, dosage, and the importance placed on each SEC-related competence (e. g. Oliveira et al., 2021a; 2021b).

Although the first wave of SEL educational interventions targeted children and youth with promising impacts in terms of developing social and academical score skills, healthy behaviors, mental health and well-being (e.g., Durlak et al., 2011; Taylor et al., 2017). Contemporary interventions have expanded to include adults, namely educators, with the primary target group being teachers and their own SEC. SEL interventions that directly aim to develop in-service and pre-service teachers' SEL assessment have increased exponentially over the last decade worldwide with promising results in participants' SEC and professional well-being (e.g. Fitzgerald, 2022; Jennings et al., 2017; Jiang, 2025; Ohtarina & Kurniawati, 2025; Oliveira et al., 2021a; 2025a), showing that pre-service teachers' perceived SEC in general terms was lower compared to in-service teachers (Goegan et al., 2017), whereby in-service male and female teachers perceived relatively high scores on self-awareness, with gender differences in favour of men in self-regulation across specific components of SEC (Oliveira et al., 2025a).

Empirical evidence over the past decade consistently supports the positive outcomes of SEL interventions for in-service teachers – both indirectly and directly, for their professional development and for their own SEC. Prior research highlights the distal impact of SEL interventions on teachers' classroom management skills and teacher-student interactions, fostering the SEC development of students, which ultimately benefit students' well-being and academic performance (de Carvalho et al., 2021; Jennings et al., 2017; Jennings & Greenberg, 2009). Previous individual-level research (e. g. Oliveira et al., 2021a, 2021b; Jennings et al., 2017) showed that SEL interventions have a positive impact on teachers' occupational health and well-being, highlighting important protective factors to buffer against burnout and increasing teachers' occupational health and decreasing of teachers' psychological and physical distress.

On the other hand, recent research has confirmed the promising contributions of SEL interventions to teachers' own SEC (Oliveira et al., 2021a, 2021b) with some recent studies focusing on outcomes that directly reflect one or more of the five core competencies measured by self-reports and addressed in the SEL frame in educational context: (1) the implementation of mindfulness-based SEL programmes among

USA educators' (teachers, support specialist, educational leaders; Fitzgerald, 2022), USA elementary school teachers (Jennings et al, 2017), and among Portuguese elementary school teachers (de Carvalho et al., 2021) revealed direct positive impacts on participants' emotion regulation competencies; (2) SEL intervention based on group music activities among Chinese college students (Jiang, 2025) improved participants' SEC in terms of self-regulation, self-awareness, positive relationships, and conflict management; and (3) the developed and implemented online SEL intervention program for Portuguese elementary-school teachers (Oliveira et al, 2022) had positive impacts on participants' SEC in terms of increasing of responsible decision-making skills using pre-post test study design, while the interpersonal SEC (conflict management, positive relationship) decreased without changes over time in intrapersonal SEC like self-awareness and self-regulation (Oliveira et al, 2025b).

Although, there is a growing consensus that educators' multi-component SEC is crucial in their SEL interventions, there are several self-reported assessment measures for teachers' SEC (e. g. Otkarina & Kurniawati, 2025) that focus on specific aspects of SEC rather than using a holistic assessment (Lozano-Peña et al., 2021). Recently, for example, some self-reported instruments have been developed to measure educators' SEC based on the CASEL frame: for teachers in China and Korea (Lee et al., 2025: the *Multidimensional Assessment of Teacher Social-Emotional Competence*); among Israel teacher training students and teachers (Hemi & Kasperski, 2023: the *Educators' Social-Emotional Learning questionnaire*); among USA teachers (Tom, 2012: the *Social-Emotional Competence Teacher Rating Scale*) with validating this instrument across different European (Italy, Latvia, and Portugal) countries (Grazzania et al., 2024); and among Portuguese teachers/adults (Oliveira et al., 2023: the *Social and Emotional Competence Assessment Battery for Adults: SECAB-A*) with validation of Portuguese and English version of the SECAB-A across five core SEC components – self-awareness, self-regulation, positive relationship, conflict management, and responsible decision making.

In line with the CASEL framework in education and prior results with the implications of SEL interventions' assessments of educators' multi-component SEC, the following research question emerged: *To what extent do educators experience changes in the components of SEC (self-awareness, self-regulation, conflict management, positive relationship, responsible decision-making) after the SEL in-service educator training course compared to the situation before its implementation?*

The main aim of the study was to compare five core SEC (self-awareness, self-regulation, positive relationship, conflict management, and responsible decision making) components among Estonian educators (teachers and social pedagogues) who participated in an in-service training at two points of time – at the beginning and end of the SEL group-based intervention.

It was hypothesized that after participating in a SEL in-service training course, participant educators would have higher socio-emotional competencies (self-regulation, self-awareness, conflict management, positive relationships, and responsible decision-making) compared to pre-test results.

To achieve the goal of this study, it is essential to validate theoretically grounded measure that directly assess all the specific skills of educators in five core SEC components – SECAB-A (Oliveira et al., 2023). To guarantee social, cultural, and linguistic validity of the multi-component SEC measure, we pre-tested, adapted and validated the Estonian versions of the used – the SECAB-A, instrument in this study, whereby psychometric qualities had been previously studied within Portuguese samples (Oliveira et al., 2023). Specifically, an additional aim of the study was to test the Estonian version of the SECAB-A

expected five-factor structure in order to evaluate psychometric properties of the SECAB-A and to validate this measure with Estonian educators' sample.

2. Method

2.1. Study design

A longitudinal pre-post study design was employed to investigate the changes of components of SEC among educators (teachers and social pedagogues) in Estonia who engaged in an in-service educator SEL training course.

2.2. Sample and participants

In this study, a convenience sample, with teachers and social pedagogues self-selecting into the in-service SEL training course, was used without any particular exclusion criteria. The final sample consisted of 74 teachers and social pedagogues (81.1% female, $M = 36.46$ years, standard deviation $SD = 10.81$, range: 20–53 years) and was surveyed using a self-reported instrument twice (at the beginning and end of the course) with dropout rate from the course over the four-month period was 12% ($N = 10$).

2.3. Data collection and analysis

Data was collected using the SECAB-A (Oliveira et al., 2023) as self-reported questionnaire from participants of the training course allowing the pre- and post-study design with quantitative test-retest analysis. The SECAB-A assesses different specific skills within the five core components of SEC in accordance with the SEL frame: Self-awareness (7 items, $\alpha = .81$; e.g., “In my daily life, I am able to identify and name my emotions when they occur” Item01: item number according to the original source); Self-regulation (8 items, $\alpha = .83$; e.g., “I am able to effectively regulate my emotions”; Item02), Positive relationship (8 items, $\alpha = .85$; e.g., “I can say ‘no’ when asked to do something I don’t agree with/goes against what I believe”; Item09); Conflict management (7 items, $\alpha = .86$; e.g., “I try to understand others’ perspectives and experiences before offering suggestions”; Item11, whereby one negatively formulated item removed during pilot-testing); and Responsible decision-making (6 items; $\alpha = .85$; e.g., “In the presence of a problem that also affects other people, I try to involve all parties in finding the solution” Item03).

The participants were asked to evaluate how each of the 36 items characterized their own behavior on a 5-point Likert-type scale (from 1 – *Never or hardly ever* to 5 – *Almost always or always*). All the included items and the corresponding score components are presented in English in the Figure 1 in the Results section. As stated above, the final scales of questionnaire demonstrated good internal consistency, with Cronbach’s alpha coefficients of $> .80$ for participants. Also, anonymous sociodemographic information regarding participants’ gender and age was collected by means of the questionnaire.

We developed the Estonian version of SECAB-A through a multi-stage scale development process, including initial item translation-retranslation procedure by experts, pilot-testing, scale finalization through confirmatory factor analysis, and testing of psychometric properties of the scales. The Estonian translated-

back-translated version of the SECAB-A was pilot-tested with a total of 37 items among teacher training students (N = 23) with initial feedback to exclude one negatively worded item (Item01 in Conflict management scale).

Validation of the measurement model for the SECAB-A was based on two data collections followed by multivariate Confirmatory Factor Analysis (CFA) procedures. Reliability of the measure was studied through internal consistency calculated with the Cronbach Alpha. Mean differences in five factor scores were computed between two timepoints using paired samples *t*-test.

2.4. Procedures

The SEL intervention was delivered in the form of an in-service training course throughout a 60-h program consisting of five sessions as for educators' career development. The training sessions were mixed group-based for the teachers and social pedagogues (i.e., 5 sessions × 3 groups). Data collection by used research instrument was done by pencil-paper version (average response time was 15 minutes) with instructions and at the same time throughout two timepoints of the study – prior to the intervention's first training session (pre-test held in September 2024), and immediately after the last training session (post-test held in December 2024) over a four-month period.

Written informed consents were obtained from the participants and the data confidentiality, and anonymity were ensured. Data collection protocols were identified with an alphanumeric code created by the participants themselves, allowing data to be crossed between the two data collection timepoints without revealing the participants' identity. The participation was voluntary, and participants could withdraw their participation at any time.

The developed, implemented and evaluated in-service training course as group-based SEL intervention for educators focuses on participants to increase their own SEC and teach their students social and emotional skills with the aim to enhance educators' intra- and inter-personal development, based on the CASEL (2020) educational frame with SEL research-driven strategies (e.g. Durlak et al., 2010) that prioritize structured, skill-focused as specific set of skills (intrapersonal: self-awareness, self-regulation; interpersonal: social awareness, relationship skills; and responsible decision-making), coordinated sequence with increasing complexity, use of active learning, including practical exercises with feedback and reflection to equip participants with the tools and build their confidence in using them.

Developed five sequential training components, organized as five modules: Module 1 was an introduction, and Module 2 focused on intrapersonal SEC (self-awareness and self-regulation), Modules 3 and 4 on interpersonal SEC (social awareness and relationship management, and responsible decision-making skills) and the final module was integrative. All five mixed group-based sessions lasted 8 hours following the same structure – in relation to each topic area SEC covered, half of the time was the so-called theoretical part (a mix of expository and active learning methods: e. g., introduction of new concepts, individual and group works, feedback), and half was the small group based practical part (a mix of active and creative learning methods: e.g., role-playing, storytelling, use of creative modalities like visual art, music, drama and movement), with the analysis and feedback of the corresponding practical homework following online instructions using Moodle platform (i.e., a weekly exercise related to the contents covered

in the synchronous training session and which gave an opportunity for practice, reflection, and implement the skills addressed in their daily lives in educational context).

Four trained instructors (all authors of the article), specializing in Educational Psychology, were responsible for delivering all the training sessions. The participants did not pay for the training course; however, they were required to attend at least 2/3 of the sessions to receive the certificate.

3. Results

In this study, confirmatory factor analysis (CFA) was conducted to assess the five-factor model fit for Estonian version of the SECAB-A questionnaire. CFA results revealed a good fit of the data, suggesting that the measurement model adequately represents the data (Table 1). Figure 1 presents the factor structure and loadings derived from CFA of the Estonian version of the SECAB-A questionnaire comprising 36 items measuring five factors in educators' SEC; namely Self-awareness, Self-regulation, Conflict management, Positive relationships, and Responsible decision-making.

Table 1. Goodness-of-Fit Statistics for the Solutions of the Estonian version of the SECAB-A Questionnaire (N = 74)

χ^2	df	χ^2/df	CFI	TLI	SRMR	RMSEA	90% CI
792.275	584	1.356	0.966	0.963	0.075	0.049	0.040, 0.058

Note. χ^2 = chi-square test; df = degrees of freedom; CFI = Comparative Fit Index; TLI = Tucker–Lewis Index; SRMR = Standardized Root Mean Square Residual; RMSEA = Root Mean Square Error of Approximation.

Consequently, consistent with previous research suggesting a multi-component model of SECAB-A (Oliveira et al., 2023; 2025a), our findings support the five-factor model of the SECAB-A Estonian version: Self-awareness, Self-regulation, Conflict management, Positive relationship, and Responsible decision-making, with good psychometric properties (high internal consistency reliability as Cronbach's alpha coefficients all above 0.80).

Independent samples t-tests were used to assess differences between educators (teachers and social pedagogues) who participated in the in-service training through pre- and post-assessment, examining the mean scores of the five components of the SECAB-A scales. Results revealed several statistically significant differences across all the five scales (Table 2). Namely, results indicate a significant difference between the five two measured timepoints with the post-test scores being higher than pre-test scores in five SEC scales – Self-awareness, Self-regulation, Conflict management, Positive relationships, and Responsible decision-making.

Consequently, pre- and post-test self-reported SECAB-A scores of educators who participated in the SEL intervention training course indicated significant improvements in their five core SEC components as self-regulation, self-awareness, conflict management, positive relationships, and responsible decision-making, with relatively high scores on self-awareness and positive relationships scales.

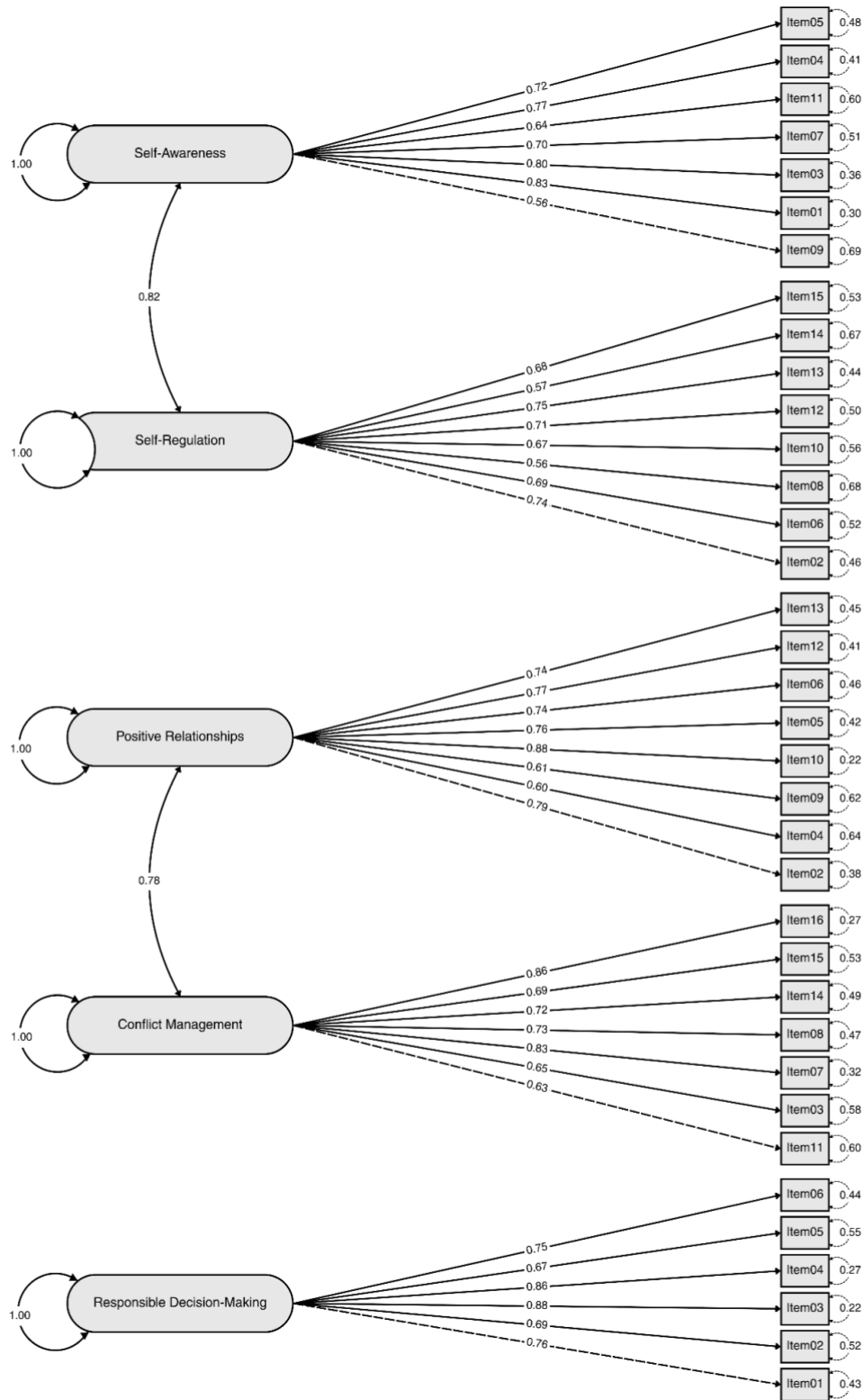


Figure 1. Factor Structure and Factor Loadings of the Estonian version of the SECAB-A questionnaire.
 Note. SECAB-A = Social and Emotional Competence Assessment Battery for Adults Estonian version (items numbers according to the original source: Oliveira et al., 2023).

Table 2. Means, standard deviations and t-test results of the SECAB-A Scales at pre- and post-test

SECAB-A Scales	<i>M (SD)</i>		<i>t</i> -test results		
	Pre-test	Post-test	p value	<i>t</i> -value	df
Self-awareness	3.95 (0.50)	4.43 (0.41)	<0.001	-5.98	71
Self-regulation	3.68 (0.47)	4.10 (0.44)	<0.001	-5.08	71
Conflict management	3.82 (0.67)	4.24 (0.34)	<0.001	-4.80	72
Positive relationships	3.90 (0.59)	4.39 (0.39)	<0.001	-5.28	72
Responsible decision-making	3.89 (0.62)	4.37 (0.42)	<0.001	-5.48	72

4. Discussion

As discussed, only recently has the CASEL (2020) frame prompted the assessment of both students and educators, as a comprehensive guide for educators to use SEL interventions in education to foster a supportive learning environment, and promote students' SEC and well-being, with teachers' SEC being essential for the quality of education. However, educators' pre- and in-service training focuses mainly on the academic domain, their main core educational professional demands are social and emotional in nature. Therefore, SEL interventions designed within the CASEL frame to promote pre- and in-service educators' own SEC appear to be particularly important with positive impacts in different countries (USA: Fitzgerald, 2022; Jennings et al, 2017; Portugal: Oliveira et al, 2022; 2025b; de Carvalho et al., 2021; China: Jiang, 2025). Although, SEL interventions seeking to directly promote educators' SEC have increased in the last decade, only a few interventions (Jiang, 2025; Olivera et al., 2025b) focusing on educators' multi-component SEC can be found in the literature.

In the present longitudinal pre-post-test pilot study, we developed, implemented and evaluated an in-service educator SEL training course in Estonia with educators (teachers and social pedagogues) to explore whether the SECAB-A as validated research instrument can contribute to the increase of educators' multi-component SEC.

The hypothesis that after participating in the in-service SEL training course, participants would have higher socio-emotional competencies (self-regulation, self-awareness, conflict management, positive relationships, and responsible decision-making) compared to pre-test results was confirmed. Research results showed a significant increase in educators' self-reported social and emotional competence components, which demonstrated the positive effect of the pilot intervention – the in-service educator SEL group-based training course.

Present results align with previous research suggesting that SEL intervention based on music activities enhance teacher-training students' SEC in terms of self-regulation, self-awareness, positive relationships, and conflict management (Jiang, 2025), and SEL intervention based on an online program improves teachers' SEC in terms of increasing of responsible decision-making skills (Oliveira et al., 2025b), whereby SEL mindfulness-based intervention improve educators' (de Carvalho et al., 2021; Fitzgerald et al., 2022; Jennings et al., 2017) SEC in terms of emotional regulation competencies. Thus, there is a growing consensus that educators' SEC is crucial for promoting educators' own SEC through SEL frame-based and mindfulness-based programmes, and, as this study has shown – in the form of an in-service training long-lasting group-based course by enhancing the cultivation of SEC among educators.

This study also revealed that Estonian educators' self-assessments across the SEC multi-component structure were relatively high in assessing their skills in the areas of self-awareness and positive relationships, which confirms the same tendencies among Chinese teacher training students (Jiang, 2025) and among Portuguese teachers (Oliveira et al., 2023; Oliveira et al, 2025b).

Despite these promising findings, the absence of a control group and random assignment limits the ability to differentiate between the intervention's effects which limits the generalizability of the findings. Since this was a preliminary study with the decision to exclude a control group based on ethical concerns, the generalization of the findings was not the primary focus. However, future research should aim to replicate these findings with a larger and more diverse representative sample of educators.

Our study advances important contributions to both research and practice, by providing preliminary support for the validity and adequacy of the SECAB-A as a theoretically based measure to assess educators' (teachers and social pedagogues) multi-component SEC. Namely, present results validated the proposed factorial structure using confirmatory factor analysis of the Estonian version of the SECAB-A (Oliveira et al., 2023) for measuring educators' self-reported SEC, facilitating cross-cultural studies and the expansion of research and intervention across different adult populations in the educational context. The SECAB-A may also be a useful resource to practitioners and professionals of education (e.g. support specialists), as it can assist the identification of competence gaps, provide strong clues on priority intervention topics, and help to establish targeted action goals and strategies. However, it would be important for future research to integrate multi-method data collection approaches, including behavioral measures or third-party reports, to strengthen causal interpretation and improve the generalizability of the results.

5. Conclusion

Although this longitudinal pilot study was not able to determine causality, the preliminary pilot findings suggest that the developed and implemented SEL intervention was a promising program for educators' multi-component SEC development. Results indicate pre-post changes in all five components of educators' SEC – in interpersonal (conflict management and positive relationship), in intrapersonal (self-awareness and self-regulation), and in responsible decision-making skills.

Thus, results showed a significant increase in educators' self-reported social and emotional competence components, which demonstrated the positive effect of the pilot SEL intervention – the in-service educator group-based training course. This study contributes to a growing body of research which reinforces the importance of investing in SEL interventions to improve educators' own SEC components, which are (e.g., Oliveira et al., 2021a; 2021b) linked with increased well-being and reduced mental health challenges in educators.

In summary, this study highlights the importance of implementation quality research as a component of SEL interventions as an effective in-service training course program narrowing the gaps between research and practice in improving educators' SEC.

Author Contributions

Kristi Kõiv: Conceptualization, Methodology, Writing – Original Draft, Data Curation, Data Analysis, Validation. Minni Aia-Utsal: Data Curation, Formal Analysis, Software, Visualization. Anu Jõgi: Pre-test Development, Data Collection. All authors reviewed and approved the final manuscript.

Conflict of Interest Statement

The authors declare that there is no conflict of interest.

Data Availability Statement

The authors confirm that all data generated or analysed during this study are included in this article. The datasets are available from the corresponding author upon reasonable request.

Ethical Statement

This research did not require institutional review board approval as only deidentified data from the entirely anonymous nature of the database were used.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

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