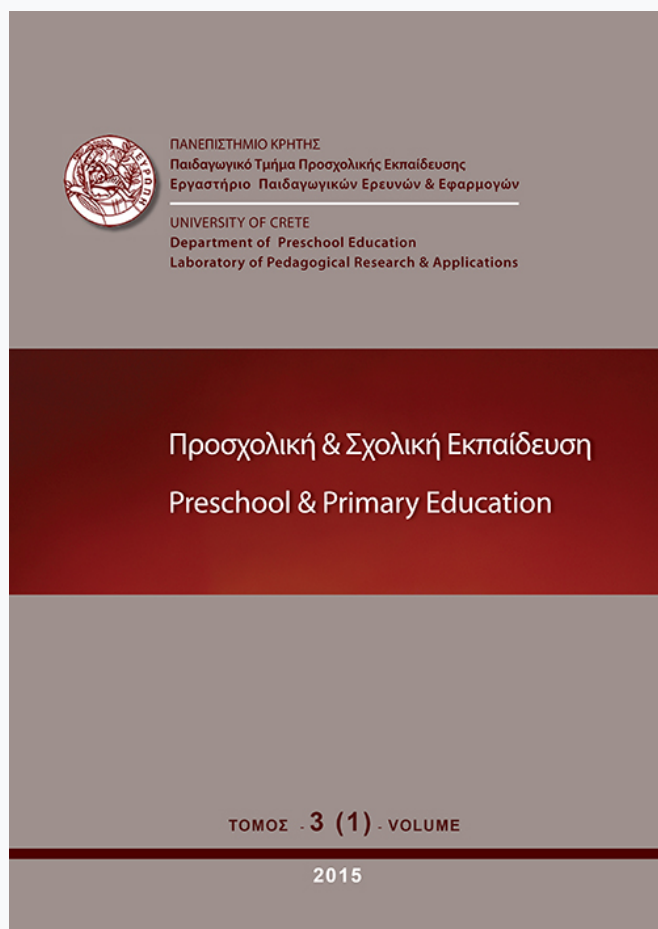


## Preschool and Primary Education

Τόμ. 3, Αρ. 1 (2015)

2015 Early view issue



### Three- to four-year-old children's socioemotional competencies assessed by kindergarten teachers in general and physical education settings, and by parents at home

*Katri Takala, Marja Kokkonen, Arto Gråstén, Jarmo Liukkonen*

doi: [10.12681/ppej.97](https://doi.org/10.12681/ppej.97)

Copyright © 2025, Katri Takala, Marja Kokkonen, Arto Gråstén, Jarmo Liukkonen



Άδεια χρήσης [Creative Commons Attribution-NonCommercial-ShareAlike 4.0](https://creativecommons.org/licenses/by-nc-sa/4.0/).

### Βιβλιογραφική αναφορά:

Takala, K., Kokkonen, M., Gråstén, A., & Liukkonen, J. (2014). Three- to four-year-old children's socioemotional competencies assessed by kindergarten teachers in general and physical education settings, and by parents at home. *Preschool and Primary Education*, 3(1), 17–33. <https://doi.org/10.12681/ppej.97>

# Three- to four-year-old children's socioemotional competencies assessed by kindergarten teachers in general and physical education settings, and by parents at home

Katri Takala

*University of Jyväskylä & Jyväskylä University of Applied Sciences*

Marja Kokkonen

*University of Jyväskylä*

Arto Gråstén

*University of Jyväskylä*

Jarmo Liukkonen

*University of Jyväskylä*

**Summary.** Early childhood education programs represent a valuable early learning opportunity for promoting the socioemotional skills. The aims of the study were to validate the socioemotional skills observation scale, to compare 3-4 year-old children's socioemotional competencies in general kindergarten settings and in a PE session, separately by gender, and to compare 3-4 year-old children's socioemotional competencies in general kindergarten settings and at home. The participants were 59 children (23 girls, 36 boys) from six communal kindergartens in Finland, their parents, and early educators. The data were analyzed using the confirmatory factor analysis and t-tests. The results showed that the construct of the socioemotional skills model was maintained as a three-factor model comprising self- and social awareness, self-management, and relationship competencies. No differences in teacher-rated socioemotional competencies between general kindergarten settings and the PE session appeared. Girls scored higher in self- and social awareness. There were no gender differences in self-management and relationship skills in kindergarten settings, the PE session and home environment. Parent-rated self- and social awareness was significantly higher than teacher-rated in general kindergarten settings, whereas teacher-rated self-management and relationship skills in general kindergarten settings were higher than parent-rated. These results may benefit the basic and continuing training of both early educators and physical education teachers.

**Keywords:** socioemotional skills, kindergarten, physical education session, home environment

Corresponding author: *Katri, Takala*, University of Jyväskylä & Jyväskylä University of Applied Sciences, PL 52, 87101 Jyväskylä, Finland, e-mail: katri.takala@kamk.fi

e-publisher: *National Documentation Centre, National Hellenic Research Foundation*  
URL: <http://childeducation-journal.org>

## Introduction

Early childhood is a time of rapid and significant physical (Malina, 2012), cognitive (Greenwood, Walker, Carta, & Higgins, 2006), emotional and social development (Denham & Weissberg, 2004). Early child care outside home plays a significant role in supporting children's learning and socialization, and is now considered common practice in many Western countries such as Finland, whereby 69% of 3-year-olds and 74% of 4-5-year-olds are involved in formal day care (OECD Family database, 2008). Early childhood education has also been shown to be valuable for promoting positive development in socioemotional skills (Achhpal, Goldman, & Rohner, 2007; Peisner-Feinberg et al., 2001; Thorpe, Staton, Morgan, Danby, & Tayler, 2012). Furthermore, parents can actively promote children's social and emotional skills at home and engage in regular contact with kindergarten, resulting in children demonstrating positive engagement with their peers, adults, and learning (McWayne, 2004).

The Collaborative for Academic, Social and Emotional Learning (CASEL) has identified a set of social and emotional competencies, which include self-awareness, social awareness, self-management, relationship skills, and responsible decision making (Lantieri & Nambiar, 2012; Zins, Payton, Weissberg, & O'Brien, 2007). According to Denham and Weissberg (2004) these competencies are also relevant for small children.

In this study the socioemotional competencies considered were: 1) self- and social awareness, which include the skills of finding words for own feelings by naming them, talking about own feelings, telling how someone is feeling, identifying others' feelings based on facial expressions and body language (e.g. Parker, Mathis, & Kupersmidt, 2013; Webster-Stratton & Reid, 2004) and identifying others' feelings, for example talking in emphatic way (e.g. Miller et al., 2003); 2) self-management, which includes the skills of controlling temper in conflict situations by reacting calmly to disagreements (e.g. Lane, Stanton-Chapman, Jamison, & Phillips, 2007; Niles, Reynolds, & Roe-Sepowitz, 2008; Webster-Stratton & Reid, 2004), waiting one's turn (e.g. Lane et al., 2007; Webster-Stratton & Reid, 2004), listening to instructions or others' opinion (e.g., Webster-Stratton & Reid, 2004); and 3) relationship skills, which include the skills of being helpful in different chores (e.g. returning or moving equipment or to others) (e.g. Webster-Stratton & Reid, 2004), cooperating in pair and group tasks (e.g. Fantuzzo, Bulosky, McDermott, Mosca, & Lutz, 2003; Lane et al., 2007; Webster-Stratton & Reid, 2004), being friendly toward peers (e.g. Niles et al., 2008), asking permission before taking others' property (e.g. Lane et al., 2007) and speaking to others with an appropriate tone of voice (e.g. Lane et al., 2007).

Previous research has found socioemotional competence to be important in several aspects related to children's overall development. Teachers' and parents perceive social skills to be associated with children's school readiness (McBryde, Ziviani, & Cuskelly, 2004). Socially and emotionally competent children enjoy more academic success (Duncan et al., 2007; Hotulainen & Lappalainen, 2011; Stan, 2012) and they have better relationships with their family members and friends (Elias & Weissberg, 2000). Children with high social competence also showed greater increases in peer popularity (Blandon, Calkins, Grimm, Keane, & O'Brien, 2010). In contrast, children with low social competence at age 4 years exhibit more externalizing (e.g. problems with attention and self-regulation) and internalizing (e.g. depression and withdrawal) behaviors at age 10 (Bornstein, Hahn, & Haynes, 2010). Keane and Calkins (2004) found in their research involving a sample of toddlers that teachers' reports of kindergarten problem behaviors and parental reports of externalizing behavior, as indexed by low emotion regulation and social skills, were predictive of children being disliked by peers. Emotional competence contributes to later emotionally prosocial behavior (Denham et al., 2012), various social skills, such as listening (Arslan, Durmusoglu-Saltali, & Yilmaz, 2011), and adaptation in different social contexts

(Stan, 2012). In the physical education (PE) context, social and emotional competencies have been shown to be associated with junior and senior high school students' integrative conflict resolution strategies and the experience of positive emotions in PE classes (Siskos, Proios, & Lykesas, 2012).

Previous studies have shown gender differences in children's socioemotional skills. Parents and teachers perceive girls as demonstrating more social and emotional strengths and knowledge of skills, such as empathy, emotion regulation, and interpersonal relationship (Romer, Ravitch, Toma, Merrell, & Wesley, 2011). Girls generally score higher in self-regulation (Bassett, Denham, Wyatt, & Warren-Khot, 2012), emotion regulation, and display of appropriate behavior in social settings (Onchwari & Keengwe, 2011), whereas boys score higher in emotionally negative-aggressive behavior (Denham et al., 2012). Peer group entry, sharing, and taking turns are linked with higher levels of competence (e.g. reflective of successful functioning with peers) for girls (Walker, Irving, & Berthelsen, 2002). Apart from a limited number of findings highlighting stronger social and emotional skills in boys (e.g. Lahaye, Luminet, van Broeck, Bodart, & Mikolajczak, 2010; Parker et al., 2013; Reid et al., 2013), girls generally begin school with more advanced social, emotional and behavioral skills (DiPrete & Jennings, 2012; Barbarin, 2013; Herndon, Bailey, Shewark, Denham, & Bassett, 2013). Results reported in the PE domain regarding school-aged children have generally resembled the abovementioned findings, and shown, for example, that girls score higher in helping than boys in PE class (Christodoulides, Derri, Tsivitanidou, & Kioumourtoglou, 2012; Kokkonen, Kokkonen, Telama, & Liukkonen, 2011).

In this study, socioemotional skills were assessed in general kindergarten settings and in one PE session by teachers and at home by parents. In order to get a comprehensive view of children's behavior in different contexts, collecting data from several sources is recommended (Junttila, 2010; Kalyva, 2010; for a meta-analysis, see Renk & Phares, 2004). Various studies, in which disagreement between data sources has been reported to be substantial and rather robust (for a review, see De Los Reyes & Kazdin, 2005), will produce different information of children's behavior (Vierikko, Pulkkinen, Kaprio, Viken, & Rose, 2003), due to, for example, differences in expectations, behavior norms, and rules between home and school contexts (Junttila, Voeten, Kaukiainen, & Vauras, 2006). There has been an inconsistent pattern of relationships demonstrated between parent and teacher ratings of social competencies (Fagan & Fantuzzo, 1999). Parents have been shown to evaluate their kindergarten children sometimes more positively (Swindells & Stagnitti, 2006; Tsangaridou, Zachopoulou, Liukkonen, Gråsten, & Kokkonen, 2013), and sometimes less positively (Rescorla et al., 2012) than teachers. Although the discrepancies between parent and teacher ratings might be linked to the characteristics of the rater (Reed & Osborne, 2013), they have more commonly been suggested to reflect meaningful, real-world variations in children's behavior (De Los Reyes, Henry, Tolan, & Wakschlag, 2009), which is why information on children's social behavior should be collected from both teachers and parents.

The context of PE has been seen as ideal for enhancing children's socioemotional skills, because it offers opportunities for social interaction (Eldar & Ayvazo, 2009; Telama, 1999; Telama & Polvi, 2007), and for learning self-regulation strategies (Fraser & Robinson, 2013). Similarly to the views of the abovementioned scholars, high school PE teachers have also reported that PE classes are suitable situations for teaching and monitoring social skills (Jacobs, Knoppers, & Webb, 2013), and preservice PE teachers identify social development as an important curricular outcome (Sofo, Beard, Slattery, & Howard, 2012). Social skill programs delivered within PE programs have indeed been reported to support school-aged children's sociomoral development (Hassandra, Goudas, Hatzigeorgiadis, & Theodorakis, 2007), goal setting, positive thinking (Goudas, Dermitzaki, & Leondari, 2006), increases in control over behavior and temper, listening skills, and confidence when making friends and

completing desk work (Fraser & Robinson, 2013), and decreases in blaming other team members when handling failure (Ang & Penney, 2013).

In the early childhood PE context the development of gross-motor and fine-motor skills as well as fitness are generally in focus (Quality in early childhood education and care, 2013). Only a limited number of studies, however, have explored pre-school aged children's socioemotional skills in PE. Children's skills to cooperate and understand individual differences improved during the PE program for 5 to 6-year olds (Trevlas & Tsigilis, 2008). Four to 5-year old children's social skills, as evaluated by teachers and parents, improved during the implementation of a four-month PE curriculum (Tsangaridou et al., 2013). Children's socioemotional skills of both the test and the control group showed improvement in an eight-month PE intervention conducted by Takala, Kokkonen, and Liukkonen (2009).

## **Purpose of the study**

The purpose of the present study was fourfold: 1) to validate the socioemotional skills observation scale, 2) to compare kindergarten teachers' ratings of three-to four-year-old children's socioemotional competencies in general kindergarten settings and within a PE session, 3) to compare kindergarten teachers' ratings of three-to four-year-old girls' and boys' socioemotional competencies in general kindergarten settings and within a PE session and 4) to compare kindergarten teachers' ratings of three-to four-year-old children's socioemotional competencies in general kindergarten settings and parent ratings in the home environment. According to the previous study of Walker et al. (2002) we hypothesized that the girls would score higher in socioemotional skills than the boys. We also hypothesized that the parents' ratings would differ from those of teachers (e.g. Fagan & Fantuzzo, 1999; Swindells & Stagnitti, 2006; Tsangaridou et al., 2013).

## **Method**

### ***Participants***

Participants were 59 children (23 girls, 36 boys,  $M = 50.1$  months,  $SD = 7.05$ ) from six communal kindergartens in northern Finland. Children were recruited from kindergartens with three-to four-year-old children and where the teachers, parents, and children consented to be involved in the study.

### ***Design and materials***

The first author attended a staff meeting in each kindergarten in order to present the purpose of the study, the socioemotional skills observation scale, as well as the implementation of the PE session for the children. Children's socioemotional skills were assessed generally in kindergarten based on a wide range of experiences, as well as immediately after one, standardized PE session by the same female kindergarten teachers in both settings. At two kindergartens two observers did the evaluation together, whereas four kindergartens used one observer. All observers had over 10 years of teacher experience with 3-4-year old children in kindergarten. The implementation of the 45 -minute PE session was similar in each kindergarten. The theme of the PE session was exercising using equipment. The curriculum of the session was constructed in detail and consisted of four different parts: warm-up, work out, relaxation, and feedback. Kindergarten teachers were advised to facilitate didactically the learning tasks and environment so that it would enable children to use socioemotional skills, such as learning words for different feelings, understanding the importance of rules, waiting for one's own turn, listening, co-operating with peers, and

helping others. The children were advised briefly of the course of the PE session, as well as the aims of the exercises.

In order to assess children's socioemotional skills at home, the observation scale was sent to parents by the teachers, who also informed them how to execute the assessment. Parents returned the completed scale to the teachers in two weeks' time. Children were assessed by mothers only in 70%, by mothers and fathers together in 20%, and by fathers only in 10% of cases. The written informed consent was obtained both from the heads of the kindergarten and from the parents, who were able to ask for more information about the study from the first author.

### ***Instrument***

The theoretical background of the socioemotional skills observation scale (Figure 1) is based on classification of Lantieri and Nambiar (2012) and it comprises 14 items (see the original instrument in Appendix 1), for instance "does not usually talk about own feelings", "concentrating" and "being friendly towards peers".

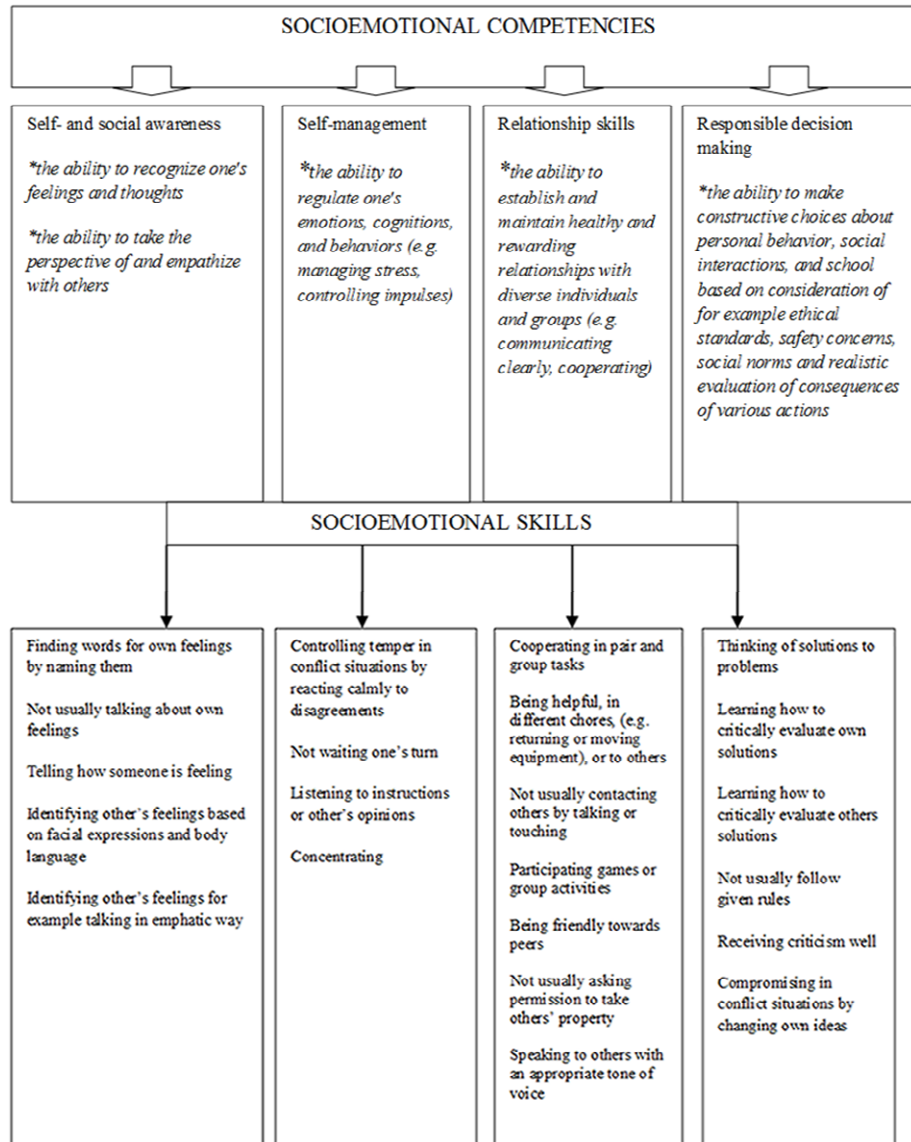
In assessing the children's socioemotional skills the teachers and parents used a five-point Likert-scale anchored by 1 = describes the child's behavior poorly and 5 = describes the child's behavior well. Before the start of the assessment period the teachers were trained to use the observation scale which was pre-tested with 12 children (6 boys, 6 girls). The reliability of the observation scale was analyzed using inter-observer congruencies. Three pairs of kindergarten teachers assessed 2 boys and 2 girls each. The congruence percentages were calculated for the child evaluations of each pair by using the five-point scale (1-5). If both evaluators marked the same value, the congruence percentage was 100, if there was a one-unit difference, the percentage was 80, for a two-unit difference the percentage was 60 etc.

The inter-rater reliability of the entire observation system was 81%. The pairwise reliabilities for individual items varied between 73% and 88% and were as follows: 78% for "Is not waiting one's turn", 87% for "Controlling temper in conflict situations by reacting calmly to disagreements", 87% for "Being friendly towards peers", 80% for "Being helpful in different chores (e.g. returning or moving equipment) or to others", 85% for "Listening to instructions or others opinion", 78% for "Identifying other's feelings based on facial expressions and body language", 75% for "Identifying other's feelings for example talking in emphatic way", 88% for "Concentrating", 87% for "Telling how someone is feeling", 80% for "Speaking to others with an appropriate tone of voice", 77% for "Cooperating in pair and group tasks", 75% for "Not usually talking about feelings", 82% for "Not usually asking permission to take others' property", and 73% for "Finding words for own feelings by naming them".

### ***Statistical analyses***

Paired samples t-tests were used to analyze children's teacher-rated socioemotional skills between general kindergarten settings and the PE session, as well as between parents' ratings at home and teachers' ratings in general kindergarten settings.

A confirmatory factor analysis (CFA) was conducted on items measuring socioemotional skills in general kindergarten settings to examine the construct validity of the measures. The data were entered as a covariance matrix and maximum likelihood procedures were used. The indices were selected on the basis of the examination of the literature associated with the best practice determination of model fit suggested with multivariate analysis texts, whereby, the indices used are representative of the absolute fit,



**Figure 1** The theoretical background of the socioemotional skills observation instrument (Lantieri & Nambiar 2012)

incremental fit, and model parsimony categories (e.g. Hair, Black, Babin, Anderson, & Tatham, 2006; Holmes-Smith & Coote, 2002). To determine the goodness-of-fit chi-square ( $\chi^2$ ), chi-square degrees of freedom, the comparative fit index (CFI), the Tucker-Lewis index (TLI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR) indices were used. A non-significant  $\chi^2$  indicates the model to be an acceptable fit for the data. Values greater than 0.90 for CFI and TLI, less than 0.08 for RMSEA, and less than 0.05 for SRMR indicate good model fit (Browne & Cudeck, 1993). The bias in SRMR is greater for small  $N$  and for low  $df$  studies (Hu & Bentler, 1998). Statistical analyses were completed using Mplus 6.12 version (Muthén & Muthén, 1998-2010).

## Results

The construct of the socioemotional skills model was maintained as a three-factor model because the four-factor model including the "Responsible decision making" resulted in non-acceptable fit for the data. After omitting the "Responsible decision making" factor from the model, the self- and social awareness and relationship skills factors consisted of five, and self-management factor of four items. The CFA revealed a non-acceptable fit for the data ( $\chi^2(74, N = 59) = 122.458, p < 0.05, CFI = 0.89, TLI = 0.86, RMSEA = 0.108, SRMR = 0.096$ ). The next step was to modify the most reasonable factor model for children. Eight variables were dropped from the final model due to low factor loadings and non-acceptable fit for the data. In addition, the measurement errors of the items "Speaking to others with an appropriate tone of voice", "Being friendly towards peers", "Cooperating in pair and group tasks", "Controlling temper in conflict situations by reacting calmly to disagreements", "Finding words for own feelings by naming them" and "Talking about own feelings" were allowed to correlate, because some of the shared variance in the indicators was due to the latent factor or an outside cause. The final CFA (Figure 2) revealed an acceptable fit for the modified model ( $\chi^2(71, N = 52) = 74.046, p < 0.05, CFI = 0.99, TLI = 0.99, RMSEA = 0.029, SRMR = 0.080$ ). The small sample size may have an excessive effect on the SRMR indices. The SRMR has no penalty for model complexity. Based on the results of the CFA, a scale was constructed for the emotional and social skills. Taken together, these results indicated that measures for the socioemotional competence of children produced reliable and valid scores in this study. Cronbach alpha coefficients for the competence of self- and social awareness were 0.80 for general kindergarten settings, 0.85 for PE session and 0.68 for home environment. For self-management the coefficients were 0.84, 0.81 and 0.68 and for relationship skills 0.84, 0.75 and 0.73, respectively.



**Figure 2** Measurement model of the hypothesized three-factor structure of the socioemotional skills observation scale

Paired samples t-tests revealed no differences in teacher-rated socioemotional skills between general kindergarten settings and the PE session. Independent samples t-test



showed that girls scored higher than boys in teacher-rated self- and social awareness in general kindergarten settings and in PE session (Table 1).

**Table 1** Teacher ratings of socioemotional competencies in general kindergarten settings and PE session, and separately by gender

<b>Kindergarten settings</b>					
	<b>General</b>	<b>PE session</b>			
Variables	n=56 <i>M(SD)</i>	n=56 <i>M(SD)</i>	<i>t</i>	<i>df</i>	<i>p</i>
Self- and social awareness	3.4(0.78)	3.3(0.88)	1.019	55	0.313
Self-management	3.9(0.85)	3.7(0.86)	1.704	55	0.094
Relationship skills	4.1(0.76)	3.9(0.66)	1.625	55	0.110
<b>General</b>					
Variables	Girls n=21 <i>M(SD)</i>	Boys n=35 <i>M(SD)</i>	<i>t</i>	<i>df</i>	<i>p</i>
Self- and social awareness	3.8(0.56)	3.2(0.79)	3.310	54	0.002
Self-management	3.9(0.81)	3.8(0.15)	.594	54	0.553
Relationship skills	4.4(0.66)	4.0(0.81)	1.048	54	0.299
<b>PE session</b>					
Variables	Girls n=23 <i>M(SD)</i>	Boys n=36 <i>M(SD)</i>	<i>t</i>	<i>df</i>	<i>p</i>
Self- and social awareness	3.7(.60)	3.1(.98)	3.055	57	0.003
Self-management	3.7(.84)	3.6(.62)	-0.113	52	0.910
Relationship skills	4.1(.54)	3.8(.70)	1.516	57	0.135

Paired samples *t*-tests revealed that children's parent-rated self- and social awareness was higher than teacher-rated self- and social awareness in general kindergarten settings. On the contrary, teacher-rated self-management and relationship skills in general kindergarten settings were significantly higher than parent-rated (Table 2).

### Implications and conclusions

The aims of the study were to validate the socioemotional skills observation scale, to compare children's socioemotional competencies rated by kindergarten teachers between general kindergarten settings and a PE session, separately by gender, and to analyze differences in children's socioemotional competencies rated by teachers in general kindergarten settings and parents in the home environment.

**Table 2** Children's socioemotional competencies assessed by teachers in general kindergarten settings and parents at home (n=51)

Variables	Teacher- ratings at kindergarten		Parent- ratings at home		<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Self- and social awareness	3.5	0.70	4.1	0.52	-4.992	50	0.000
Self-management	3.9	0.81	3.6	0.59	2.364	50	0.022
Relationship skills	4.1	0.74	3.9	0.54	2.072	50	0.043

The CFA results provided a reliable and valid three-factor model of socioemotional competencies. The second-order factors maintained self- and social awareness, self-management, and relationship skills. It seems that the "Responsible decision making" factor is not applicable for kindergarten children. The fit indices and the Cronbach alpha coefficients were mostly acceptable. Also the inter-rater reliability of the entire observation system was satisfactory. Individual items with the lowest inter-rater reliabilities belonged to the self-and social awareness competence factor. It might be that skills particularly related to self-awareness are difficult to observe, because they are intrapersonal. More education would be needed for the teachers in order to get more reliable observation results. The highest inter-rater reliabilities were for the individual items representing self-management and relationship skill competencies. The skill of "Controlling temper in conflict situations by reacting calmly to disagreements" had a low factor loading to the competence of self-management as well as the skills of "Being friendly towards peers" and "Speaking to others with an appropriate tone of voice" to the competence of relationship skills.

Although it is generally assumed that PE offers children a different behavioral setting compared to general educational settings, because it offers plenty of opportunities for social interaction (Eldar & Ayvazo, 2009; Telama, 1999; Telama & Polvi, 2007), no differences were found in this study in children's socioemotional competencies across general kindergarten settings and the PE session. The national curriculum guidelines on early childhood education and care in Finland (2005) generally emphasize the development of SE competencies as central goals, regardless of content area in day care. It may also be that teachers' perceptions about the children are so constant that they have difficulties in separating their evaluations in different kindergarten contexts. The two kindergarten assessment procedures of socioemotional skills were different. In the general kindergarten context, children's socioemotional skills were assessed generally based on a wide range of experiences, whereas in the PE context the assessment was executed immediately after the standardized PE session.

The girls demonstrated higher self- and social awareness in both kindergarten settings, which supports previous findings showing, for example, that girls score higher in various dimensions of empathy (Belacchi & Farina, 2012; Merrell, Felver-Gant, & Tom, 2011; Romer et al., 2011) and emotional awareness (Bajgar, Ciarrochi, Lane, & Deane, 2005; Bender, Reinhold-Dunne, Esbjorn, & Pons, 2012), both of which are included in the self- and social awareness competence. On the other hand, this finding might also reflect gender-bias

in teacher-ratings because, as argued by Herndon and her colleagues (2013), teachers' beliefs about boys and girls are based on emotion-laden experiences with different genders. Previous studies have reported that girls score higher in self-regulation (Bassett et al., 2012), emotion regulation or management (Onchwari & Keengwe, 2011; Romer et al., 2011), peer group entry, as well as sharing and taking turns (Walker et al., 2002). However, in this study no gender differences were found in the self-management and relationship skills competencies.

This study utilized two different informants, specifically parents and kindergarten teachers in order to get a comprehensive view of children's behavior in general home settings and both general kindergarten and PE settings. The use of different informants has been considered important in the study of any behavior in children (Junttila, 2010; Kalyva, 2010; Renk & Phares, 2004). In our study, children's parent-rated self- and social awareness was higher than teacher-rated self- and social awareness in general kindergarten settings. This finding makes sense because most likely the parents have a deeper and more long-lasting relationship and emotional bond with their children, compared to teachers. Parents might have also had more time and peace to observe the less visible behavior related to their child's self-awareness, in particular. Detecting children's self-awareness in a group of ten might have been rather challenging to the teachers.

### *Limitations of the study*

The limitations of the present study included the small number of participants, due to which our results of the psychometric properties of the instrument are preliminary. Future attempts with larger samples are needed in order to draw more firm conclusions about the reliability and validity of the instrument. Also a face-to-face educational meeting with the parents could have been organized in order to help them understand the assessment items more thoroughly. Another limitation was that there was only one PE session for the assessments of socioemotional skills in this study. In addition, given that children's socioemotional skills in both kindergarten settings were assessed by the same teachers, there might have been a carryover from the assessment of the socioemotional skills in the general kindergarten settings to the assessment of the socioemotional skills in one PE session, typical of the halo effect (Nisbett & Wilson, 1977).

### *Future recommendations*

This study gained the understanding of small children's socioemotional competencies in several settings: general kindergarten settings, a PE session, and home. Previous research has supported that PE may increase social skills in four-to-five-year-olds (Tsangaridou et al., 2013) and in five-to-six-year-olds (Trevlas & Tsigilis, 2008). The novelty value of this research is that the socioemotional skills have been assessed in various settings and by two different informants.

These results may help teachers to support children's socioemotional skills in kindergarten. The results also help teachers and parents to define and differentiate children's socioemotional skills, as well as to support each child together in their socioemotional growth. Parents view the early kindergarten years as an important period for children to acquire social skills and behaviors (Achhpal et al., 2007). Well-developed social skills influence parents' as well as teachers' perceptions of school readiness (McBryde et al., 2004). The results of this study are valuable also in teacher education. First, the results help the teachers to pay attention to existence of socioemotional skills, as well as gender differences, and secondly, the teachers can define the differences in evaluation between teachers and parents.

Further studies should explore why girls and boys differ in certain competencies and if interventions can dispel gender differences. Also, more PE interventions should be implemented to develop small children's socioemotional skills.

## References

- Achhpal, B., Goldman, J. A., & Rohner, R. P. (2007). A comparison of European American and Puerto Rican parent's goals and expectations about the socialization and education of preschool children. *International Journal of Early Years Education, 15*, 1-13.
- Ang, S. C., & Penney, D. (2013). Promoting social and emotional learning outcomes in physical education: Insights from a school-based research project in Singapore. *Asia-Pacific Journal of Health, Sport, and Physical Education, 4*, 267-286.
- Arslan, E., Durmusoglu-Saltali, N., & Yilmaz, H. (2011). 6-year old children positive relationship between interpersonal skills and emotion regulation, school readiness, social confidence and family involvement. *Social Behavior and Personality, 39*, 1281-1288.
- Bajgar, J., Ciarrochi, J., Lane, R., & Deane, F. P. (2005). Development of the levels of emotional awareness scale for children (LEAS-C). *British Journal of Developmental Psychology, 23*, 569-586.
- Barbarin, O. (2013). A longitudinal examination of socioemotional learning in African American and Latino boys across the transition from pre-K to kindergarten. *American Journal of Orthopsychiatry, 83*, 156-64.
- Bassett, H., Denham, S., Wyatt, T., & Warren-Khot, H. (2012). Refining the preschool self-regulation assessment for use in preschool classrooms. *Infant and Child Development, 21*, 596-616.
- Belacchi, C., & Farina, E. (2012). Feeling and thinking of others: Affective and cognitive empathy and emotion comprehension in prosocial/hostile preschoolers. *Aggressive Behavior, 38*, 150-165.
- Bender, P. K., Reinhold-Dunne, M. L., Esbjorn, B. H., & Pons, F. (2012). Emotion dysregulation and anxiety in children and adolescents: Gender differences. *Personality and Individual Differences, 53*, 284-288.
- Blandon, A. Y., Calkins, S. D., Grimm, K. J., Keane, S. P., & O'Brien, M. (2010). Testing a developmental cascade model of emotional and social competence and early peer acceptance. *Development and Psychopathology, 22*, 737-748.
- Bornstein, M. H., Hahn, C. S., & Haynes, O. M. (2010). Social competence, externalizing and internalizing behavioral adjustment from early childhood through early adolescence: Developmental cascades. *Development and Psychopathology, 22*, 717-735.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing Structural Equation Models* (pp. 136-162). Beverly Hills, CA: Sage.
- Christodoulides, E., Derri, V., Tsivitanidou, O., & Kioumourtzoglou, E. (2012). Differences in social skills of Cypriot students in the physical education class. *Journal of Physical Education & Sport, 12*, 371-380.
- De Los Reyes, A., Henry, D. B., Tolan, P. H., & Wakschlag, L. S. (2009). Linking informant discrepancies to observed variations in young children's disruptive behavior. *Journal of Abnormal Psychology, 37*, 637-652.

- De Los Reyes, A., & Kazdin, A. E. (2005). Informant discrepancies in the assessment of childhood psychopathology: A critical review, theoretical framework, and recommendations for future study. *Psychological Bulletin*, *131*, 483-509.
- Denham, S. A., Bassett, H. H., Thayer, S. K., Mincic, M. S., Sirotkin, Y. S., & Zinsler, K. (2012). Observing Preschoolers' Social-Emotional Behavior: Structure, Foundations, and Prediction of Early School Success. *Journal of Genetic Psychology*, *173*, 246-278.
- Denham, S. A., & Weissberg, R. P. (2004). Social-emotional learning in early childhood: What we know and where to go from here. In E. Chesebrough, P. King, T. P. Gullotta, & M. Boom (Eds.), *A blueprint for the promotion of prosocial behaviour in early childhood* (pp. 13-50). New York: Kluwer.
- DiPrete, T. A., & Jennings, J. L. (2012). Social and behavioral skills and the gender gap in early educational achievement. *Social Science Research*, *41*, 1-15.
- Duncan, G. J., Dowsett, C., Claessens, A., Magnuson, K., Huston, A., Klebanov, P., Pagani, L. L., Engel, M., Brooks-Gunn, J., Sexton, H., Duckworth, K., & Japel, C. (2007). School readiness and later achievement. *Developmental Psychology*, *43*, 1428-1446.
- Eldar, E., & Ayvazo, S. (2009). Education through the physical - rationale. *Education and Treatment of Children*, *32*, 471-486.
- Elias, M. J., & Weissberg, R. P. (2000). Primary prevention: Educational approaches to enhance social and emotional learning. *Journal of School Health*, *70*, 186-190.
- Fagan, J., & Fantuzzo, J. W. (1999). Multirater congruence on the social skills rating system: Mother, father, and teacher assessments of urban Head Start children's social competencies. *Early Childhood Research Quarterly*, *14*, 229-242.
- Fantuzzo, J., Bulosky R., McDermott, P., Mosca, S., & Lutz, M. N. (2003). A multivariate analysis of emotional and behavioural adjustment and preschool educational outcomes. *School Psychology Review*, *32*, 185-203.
- Fraser, M. L., & Robinson, B. L. (2013). Development of social skills through physical education with a complex needs child population. *International Journal of Sport and Society*, *3*, 113-124.
- Greenwood, C. R., Walker, D., Carta, J. J., & Higgins, S. K. (2006). Developing outcome measure of growth in the cognitive abilities of children 1 to 4 years old: The early problem-solving indicator. *School Psychology Review*, *35*, 535-551.
- Goudas, M., Dermitzaki, I., & Leondari, A. (2006). The effectiveness of teaching a life skills program a physical education context. *European Journal of Psychology of Education*, *22*, 429-438.
- Hair, J., Black, B., Babin, B., Anderson, R., & Tatham, R. (2006). *Multivariate Data Analysis* (6th edition). Upper Saddle River, NJ: Prentice-Hall.
- Hassandra, M., Goudas, M., Hatzigeorgiadis, A., & Theodorakis, Y. (2007). A fair play intervention program in school Olympic education. *European Journal of Psychology of Education*, *22*, 99-114.
- Herndon, K. J., Bailey, C. S., Shewark, E. A., Denham, S. A., & Bassett, H. H. (2013). Preschoolers' emotion expression and regulation: Relations with school adjustment. *Journal of Genetic Psychology*, *174*, 642-663.
- Holmes-Smith, P., & Coote, L. (2002). *Structural equation modeling: From the fundamentals to advanced topics*. Melbourne, Australia: School Research, Evaluation, and Measurement Services.

- Hotulainen, R., & Lappalainen, K. (2011). Pre-school socio-emotional behavior and its correlation to self-perceptions and strengths of young adults. *Emotional & Behavioural Difficulties*, 16, 365-381.
- Hu, L., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, 3, 424-453.
- Jacobs, F., Knoppers, A., & Webb, L. (2013). Making sense of teaching social and moral skills in physical education. *Physical Education and Sport Pedagogy*, 18, 1-14.
- Junttila, N. (2010). Social competence and loneliness during the school years – issues in assessment, interrelations and intergenerational transmission. *Annales Universitatis Turkuensis B* 325. Department of Teacher Education.
- Junttila, N., Voeten, M., Kaukiainen, A., & Vauras, M. (2006). Multisource assessment of children's social competence. *Educational and Psychological Measurements*, 66, 874-895.
- Kalyva, E. (2010). Multirater congruence on the social skills assessment of children with Asberger syndrome: Self, mother, father, and teacher ratings. *Journal of Autism and Developmental Disorder*, 40, 1202-1208.
- Keane, S. P., & Calkins, S. D. (2004). Predicting kindergarten peer social status from toddlers and preschool problem behavior. *Journal of Abnormal Child Psychology*, 32, 409-423.
- Kokkonen, J., Kokkonen, M., Telama, R., & Liukkonen, J. (2011). Teachers' behaviour and pupils' achievement motivation as determinants of intended helping behaviour in physical education. *Scandinavian Journal of Educational Research*, 57, 199-216.
- Lahaye, M., Luminet, O., van Broeck, N., Bodart, E., & Mikolajczak, M. (2010). Psychometric properties of the emotion awareness questionnaire for children in a French-speaking population. *Journal of Personality Assessment*, 92, 317-326.
- Lane, K. I., Stanton-Chapman, T., Jamison, K., & Phillips, A. (2007). Teacher and parent expectations of preschoolers' behavior: Social skills necessary for success. *Topics in Early Childhood Special Education*, 27, 86-92.
- Lantieri, L., & Nambiar, M. (2012). Cultivating the social, emotional, and inner lives of children and teachers. *Reclaiming Children & Youth*, 21, 27-33.
- Malina, R. M. (2012). Movement proficiency in childhood: Implications for physical activity and youth sport. *Kinesiology Slovenica*, 18, 19-34.
- McBryde, C., Ziviani, J., & Cuskelly, M. (2004). School readiness and factors that influence decision making. *Occupational Therapy International*, 11, 193-208.
- McWayne, C. (2004). A multivariate examination of parent involvement and the social and academic competencies of urban kindergarten children. *Psychology in the School*, 41, 363-377.
- Merrell, K. W., Felver-Gant, J. C., & Tom, K. M. (2011). Development and validation of a parent report measure for assessing social-emotional competencies of children and adolescents. *Journal of Child Family Studies*, 20, 529-540.
- Miller, A., Gouley, K., Shields, S., Dicstein, S., Seifer, R., et al., C. (2003). Brief functional screening for transition difficulties prior to enrolment predicts socio-emotional competence and school adjustment in head start preschoolers. *Early Child Development and Care*, 173, 681-698.
- Muthén, L. K., & Muthén, B.O. (1998-2010). *Mplus User's Guide*. Sixth Edition. Los Angeles, CA: Muthén & Muthén.
- National curriculum guidelines on early childhood education and care in Finland (2005). The second, revised edition. Helsinki: STAKES.

- Niles, M. D., Reynolds, A. J., & Roe-Sepowitz, D. (2008). Early childhood intervention and early adolescent social and emotional competence: Second generation evaluation evidence from the Chicago longitudinal study. *Educational Research, 50*, 55-73.
- Nisbett, R. E., & Wilson, T. D. (1977). The halo effect: Evidence for unconscious alteration of judgments. *Journal of Personality and Social Psychology, 35*, 250-256.
- OECD Family database (2008). *OECD - Social Policy Division - Directorate of Employment, Labour and Social Affairs*. Retrieved December 2013 from [www.oecd.org/els/social/family/database](http://www.oecd.org/els/social/family/database).
- Onchwari, G., & Keengwe, J. (2011). Examining the relationship of children's behaviour to emotion regulation ability. *Early Childhood Education Journal, 39*, 179-284.
- Parker, A. E., Mathis, E. T., & Kupersmidt, J. B. (2013). How is this child feeling? Preschool-aged children's ability to recognize emotion in faces and body poses. *Early Education and Development, 24*, 188-211.
- Peisner-Feinberg, E. S., Burchinal, M. R., Clifford, R. M., Culkin, M. L., Howes, C., Lynn Kagan, S., et al., (2001). The relation of pre-school child-care quality to children's cognitive and social developmental trajectories through second grade. *Child Development, 72*, 1543-1553.
- Quality in early childhood education and care (2013). Retrieved September 2014 from <http://www.europarl.europa.eu/studies>
- Reed, P., & Osborne, L. A. (2013). The role of parenting stress in discrepancies between parent and teacher ratings of behaviour problems in young children with autism spectrum disorder. *Journal of Autism and Developmental Disorders, 43*, 471-477.
- Reid, C., Davis, H., Horlin, C., Anderson, M., Baughman, N., & Campbell, C. (2013). The Kids' Empathic Development Scale (KEDS): A multi-dimensional measure of empathy in primary school-aged children. *British Journal of Developmental Psychology, 31*, 231-256.
- Renk, K., & Phares, V. (2004). Cross-informant ratings of social competence in children and adolescents. *Clinical Psychology Review, 24*, 239-254.
- Rescorla, L.A., Achenbach, T.M., Ivanova, M.Y., Bilenberg, N., Bjarnadottir, G., Denner, S., et al., (2001). Behavioral/emotional problems of preschoolers: Caregiver/teacher reports from 15 societies. *Journal of Emotional and Behavioral Disorders, 20*, 68-81.
- Romer, N., Ravitch, N. K., Toma K., Merrel, K. W., & Wesley, K. L. (2011). Gender differences in positive social-emotional functioning. *Psychology in the Schools, 48*, 958-970.
- Siskos, B., Proios, M., & Lykesas, G. (2012). Relationships between emotional intelligence and psychological factors in physical education. *Studies in Physical Culture and Tourism, 19*, 154-159.
- Sofa, S., Beard, D. H., Slattery, A., & Howard, S. (2012). Preservice teachers' beliefs about the curricular goals for physical education. *Missouri Journal of Health, Physical Education, Recreation, and Dance, 22*, 18-35.
- Stan, M. M. (2012). Socioemotional predictors of school success at the beginning of school years. *Social and Behavioral Sciences, 33*, 806-810. doi: <http://dx.doi.org/10.1016/j.sbspro.2012.01.233>
- Swindells, D., & Stagnitti, K. (2006). Pretend play and parents' view of social competence: The construct validity of the child-initiated pretend play assessment. *Australian Occupational Therapy Journal, 53*, 314-324.
- Takala, K., Kokkonen, M., & Liukkonen, J. (2009). Päiväkotilasten sosioemotionaalisten taitojen kehittäminen liikuntatuokioiden avulla. *Liikunta & Tiede [Sport and Science, 46*, 22-29.
- Telama, R. (1999). Moral development. In Y. Auweele, F. Bakker, S. Biddle, M. Durand,



- & R. Seiler (Eds.), *Psychology for physical educators* (pp. 321-342). Champaign, IL: Human Kinetics.
- Telama, R., & Polvi, S. (2007). Facilitating prosocial behavior in physical education. In J. Liukkonen, Y.V. Auweele, B. Vereijken, D. Alferman, & Y. Theodorakis (Eds.), *Psychology for physical educators. Student in focus* (pp. 85-99). Champaign: Human Kinetics.
- Thorpe, K., Staton, S., Morgan, R., Danby, S., & Tayler, C. (2012). Testing the vision: Preschool settings as places for meeting, bonding and bridging. *Children & Society, 26*, 328-340.
- Trevlas, E., & Tsigilis, N. (2008). Evaluation of the influence of a physical education programme on playfulness of preschool children: A qualitative approach. *Inquiries in Sport & Physical Education, 6*, 1-13.
- Tsangaridou, N., Zachopoulou, E., Liukkonen, J., Gråsten, A., & Kokkonen, M. (2013). Developing preschoolers' social skills through cross-cultural physical education intervention. *Early Child Development and Care, 1-16*. doi: 10.1080/03004430.2013.865616
- Vierikko, E., Pulkkinen, L., Kaprio, J., Viken, R., & Rose, R. (2003). Sex differences in genetic and environmental effects on aggression. *Aggressive Behavior, 29*, 55-68.
- Walker, S., Irving, K., & Berthelsen, D. (2002). Gender influences on preschool children's social problem-solving strategies. *The Journal of Genetic Psychology, 163*, 197-209.
- Webster-Stratton, C., & Reid, J. (2004). Strengthening social and emotional competence in young children - The foundation for early school readiness and success. *Infants and Young Children, 17*, 96-113.
- Zins, J. E., Payton, J. W., Weissberg, R. P., & O'Brien, M. U. (2007). Social and emotional learning for successful school performance. In G. Matthews, M. Zeidner, & R. D. Roberts (Eds.), *Emotional intelligence: Applications* (pp. 376-395). New York: Oxford University Press.

## Appendix 1.

### SOCIOEMOTIONAL SKILLS OBSERVATION INSTRUMENT

Name of the child \_\_\_\_\_

Age: \_\_\_\_\_ months

Observer: \_\_\_\_\_

Assess the child's behavior by using following scale:

1= describes poorly child behavior

2= describes sufficiently child behavior

3= describes somewhat child behavior

4= describes rather well child behavior

5= describes well child behavior

The child:

**1. Is not waiting one's turn**

1      2      3      4      5

**2. Can control temper in conflict situations by reacting calmly to disagreements**

1      2      3      4      5

**3. Can learn how to critically evaluate own solutions**

1      2      3      4      5

**4. Can be friendly towards peers**

- |  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
|  | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|--|----------|----------|----------|----------|----------|
- 5. Can be helpful, in different chores, (e.g. returning or moving equipment), or to others**
- |  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
|  | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|--|----------|----------|----------|----------|----------|
- 6. Can listen to instructions or other's opinions**
- |  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
|  | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|--|----------|----------|----------|----------|----------|
7. Can learn how to critically evaluate others solutions
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
|  | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
- 8. Can identify other's feelings based on facial expressions and body language**
- |  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
|  | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|--|----------|----------|----------|----------|----------|
9. Does not usually follow given rules
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
|  | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
- 10. Can identify other's feelings for example talking in emphatic way**
- |  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
|  | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|--|----------|----------|----------|----------|----------|
- 11. Can concentrate**
- |  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
|  | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|--|----------|----------|----------|----------|----------|
12. Does not usually contact others by talking or touching
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
|  | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
13. Can participate games or group activities
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
|  | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
14. Can receive criticism well
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
|  | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
15. Can compromise in conflict situations by changing own ideas
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
|  | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
- 16. Can tell how someone is feeling**
- |  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
|  | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|--|----------|----------|----------|----------|----------|
- 17. Can speak to others with an appropriate tone of voice**
- |  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
|  | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|--|----------|----------|----------|----------|----------|
- 18. Can cooperate in pair and group tasks**
- |  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
|  | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|--|----------|----------|----------|----------|----------|
19. Can think of solutions to problems
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
|  | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
- 20. Does not usually talk about own feelings**
- |  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
|  | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|--|----------|----------|----------|----------|----------|
- 21. Does not usually ask permission to take others' property**
- |  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
|  | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|--|----------|----------|----------|----------|----------|
- 22. Can find words for own feelings by naming them**
- |  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
|  | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|--|----------|----------|----------|----------|----------|

Note. Bolded items selected to the final socioemotional skills observation instrument.