Early Second Language Learners, Staff Responsiveness and Child Engagement in the Swedish Preschool Context in Relation to Child Behaviour Characteristics and Staffing

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Preschool staffs' responsiveness affects children's behaviour, their difficulties, and engagement in the preschool context, but children's behaviour and characteristics also affect staff responsiveness. Early second language learners (L2-learners) have been shown to have more problems with behaviour and emotions and lower engagement in preschool. Being engaged in preschool activities predicts future academic performance, attitude towards school and well-being in the short and long term, and can be promoted by the preschool staff. Knowledge of which factors support engagement in preschool for L2-learners can help prevent, in the early years, negative pathways based on low engagement and problems with behaviour and emotions. This cross-sectional study used data from a longitudinal study to investigate the relationship between child engagement and staff responsiveness as well as how child age, child problems with behaviour and emotions, child group size, and the child:staff ratio impact child engagement and staff responsiveness. The study also investigated whether these relations differ between L2-learners and children learning Swedish as their first language (L1-learners). Preschool staff ($N = 611$) reported through questionnaires on engagement, age, problems with behaviour and emotions and emotional symptoms of 832 children aged 13–71 months, as well as on staffing and staff responsiveness. With a path analysis extended by multi-group analysis, we found two models suggesting that age, problems with behaviour and emotions and preschool staff responsiveness influence child engagement, irrespective of background. The study also found that child engagement significantly influenced staff responsiveness. The multi-group analysis only weakly supported the hypothesis that the child's age affects staff responsiveness more strongly for L2-learners. The results indicate that individual children and child groups themselves can affect the responsiveness of their staff, and that children with low engagement risk being neglected. L2-learners are at increased risk since they tend to display lower engagement and more behaviour problems in preschool in general. If not

attended to early, the lower engagement already apparent among L2-learners in preschool can create stable patterns of low engagement and problems with behaviour and emotions that extend beyond the preschool years and having negative effects on the children's later well-being and school performance.

INTRODUCTION

In the preschool context, it is known that children are highly affected by the preschool staffs' responsiveness (Almqvist & Granlund, 2005; Sjöman et al., 2016), teaching practices and planning of everyday activities (Hyson et al., 2006). However, children, their behaviour and their characteristics also affect the preschool staffs' responsiveness (Greene et al., 2012). For example, early second language learners (L2-learners) tend to display lower engagement and have a higher prevalence of problems with behaviour and emotions (Almqvist et al., 2018; Sabol et al., 2018). This may have many different causes, e.g., language difficulties or stressful experiences as refugees within the family (Fazel & Stein, 2002; Wiegersma et al., 2011). Despite this, these children are less inclined to receive staff-implemented special support in preschool (Almqvist et al., 2018). The Swedish preschool curriculum states that all children that needs special support for some reason shall receive this within the framework of the mainstream preschool (National Agency for Education, 2015). This support is provided by the preschool staff, basically in two forms: teacher-initiated and supervised support (Almqvist et al., 2018). About 15–17% of the children in preschool are assessed by teachers as in need of special support and receive some form of teacher-initiated measures within the preschool group (Lillvist & Granlund, 2010). About 4–5% of the children enrolled in preschool are formally identified as in need of special support (Lillvist & Granlund, 2010). In this case the staff receives supervision for their support provision through a specialist (special pedagogues, psychologists etc.) (Swedish National Agency of Education, 2014). Even though the Swedish National Curriculum states that preschool should reduce inequalities between children (Swedish National Agency for Education, 2018), little is known about the interaction between the preschool environment and child-related factors for L2-learners, as well as how this child group affects the staffs' responsiveness. However, this group of children are perceived by staff as lower performing than children learning Swedish as their first language (L1-learners) (Baker et al., 2015). Therefore, this study aimed to investigate the relationship between child engagement and staff responsiveness as well as how child age, child problems with behaviour and emotions, child group size, and the child:staff ratio impact child engagement and staff responsiveness. The study also investigated whether these relations differed between L2-and L1-learners. This study did not investigate the influence of language learning on child engagement and staff responsiveness, but rather used language to divide children with other mother-tongue than Swedish (L2-learners) and children who learns Swedish as their first language

(L1-learners). This enabled us to explore possible differences between L1-and L2-learners in engagement, problems with behaviour and emotions and staff responsiveness in relation to staffing.

Child Engagement and Problems With Behaviour and Emotions

Engagement is influenced by a multitude of child and environmental factors. It refers to the amount of time the child is actively participating in play material and interacting with peers or adults, in a developmentally and contextually appropriate manner (McWilliam & Bailey, 1992). Externalising and problems with emotions have been negatively associated with child engagement (Searle et al., 2013; Sjöman et al., 2016). Child engagement has been associated with positive peer and teacher interactions (Cadima et al., 2016), self-regulation (Fuhs et al., 2013; Cadima et al., 2015), language development (Vitiello & Williford, 2016) and academic achievements (Ladd & Dinella, 2009; Pakarinen et al., 2011). Child engagement is also associated with mental health and well-being (Raspa & McWilliam, 2001). Children themselves have stated that they feel better when they are more engaged in the preschool context (Almqvist, 2006). Engagement has a central role in promoting well-being, sociability, academic achievement and self-regulation of behaviour and emotions, and therefore it is essential to promote it in the preschool context.

Problems with behaviour and emotions can negatively affect the time spent engaged in social and learning activities (Allan et al., 2015). Such difficulties include externalising behaviours such as hyperactivity and challenging behaviours, as well as internalising behaviours such as emotional symptoms and peer interaction difficulties. Hyperactivity has been associated with lower levels of engagement (Allan et al., 2015; Sjöman et al., 2016), and is also related to lower self-regulation, which affects the child's ability to sustain attention in both social and learning activities (Graziano et al., 2015). Challenging behaviours are usually stable over time (Côté et al., 2006) and therefore risk affecting engagement and learning long-term. Emotional symptoms have been shown to harm the child´s sociability (Cole et al., 1997; Spence et al., 1999), which may lead to difficulties in establishing and maintaining relationships with other children (Chen et al., 2000). Problems with behaviour and emotional symptoms affect learning, sociability, and engagement negatively, which can affect children's development in the long and short term.

Despite the fact that several mechanisms, such as language barriers and stressful experiences within the family, may be

involved, L2-learners are more likely to display lower engagement (Almqvist et al., 2018) and more problems with behaviour and emotions (D'Souza et al., 2017). A vast proportion of the L2-learners in preschool in Sweden are either refugees, or have parents who are (Swedish Central Buerau of Statistics, 2019). These children, and their parents, may have gone through stressors both in the process of fleeing and settling down in their new country of residence (Fazel & Stein, 2002; Wiegersma et al., 2011). The lower engagement levels and more problems with behaviour and emotions that L2-learners generally suffer, can also partly be due to language difficulties, which has been found to negatively affect the relationship and interaction between the children and their staff (Rudasill et al., 2011; Yoleri, 2016). However, the traumatization of being refugees, or being children of refugees, also affects the language acquisition itself of these children (Steel et al., 2011). Contrary, children who are of language minority status, and who lag behind in language development, tend to catch up in their language skills with their peers of language majority status (Rydland et al., 2012; Lonigan et al., 2013). L2-learners are also more likely to live in families with lower socioeconomic status (Swedish Central Bureau of Statistics, 2017), and are more likely to suffer from poor mental health (Williams, 1995). For example, in a New Zealand study, L2-learners showed more problems with behaviour and emotions than L1-learners, including hyperactivity, conduct and emotional symptoms (D'Souza et al., 2017). However, positive school experiences is a protective factor for children's mental health (Fazel et al., 2012) and one of the goals of the Swedish preschool is to reduce inequalities leading to differences in learning opportunities and engagement, and to give children a good start that promotes mental health and later academic achievement (Swedish National Agency for Education, 2018). If this goal is not met, L2-learners, even at this early age, risk having fewer opportunities for developing positive mental health and academic success, due to higher exposure to risk factors both at home and in preschool.

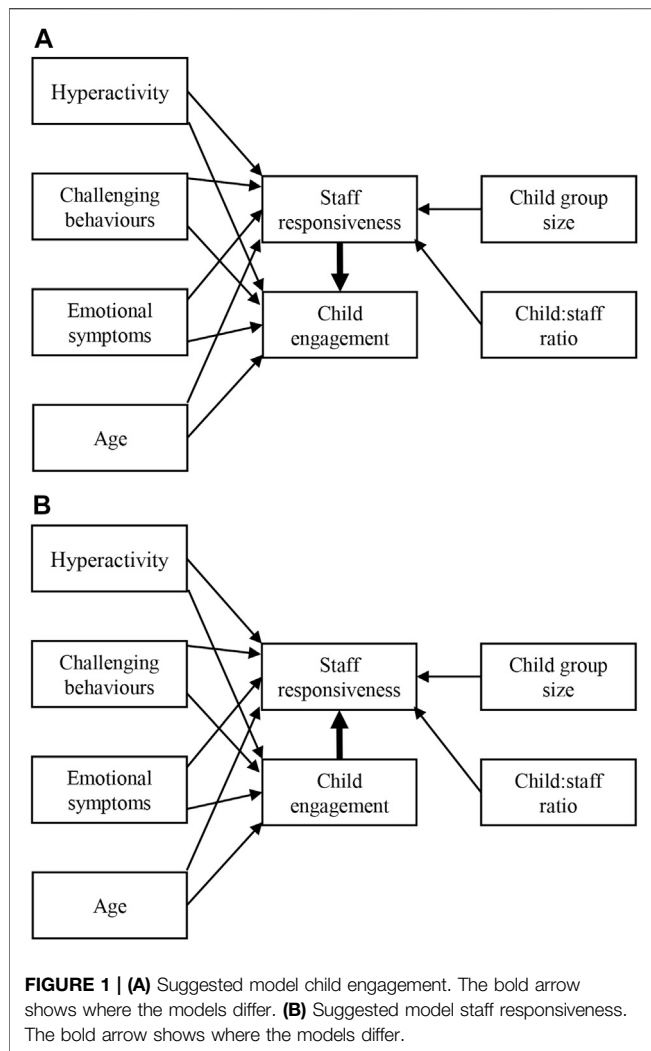## Staff Responsiveness and Contextual Influences

Responsiveness has been referred to as "the appropriateness and promptness of the teacher's responses to the child's actions, communications and intentions" (Mahoney & Wheeden, 1999) and may reflect staffs' interest in the children's experiences, and their willingness to help the child to feel secure and engage in positive interactions (Hyson et al., 2006). Staff responsiveness has been related to positive peer and staff interactions (Cadima et al., 2016). Staff responsiveness supports child engagement in preschool, regardless of problems with behaviour and emotions (Almqvist & Granlund, 2005; Sjöman et al., 2016). In classrooms with more responsive staff, children are usually more engaged, display lower levels of internalising problems and are more self-reliant than children in classrooms with less sensitive staff (Rimm-Kaufman et al., 2002). staffs' contributes to child engagement through their responsiveness, but also the way the child interacts with the staff and other children seems to have an impact on their responsiveness.

Not only does staff responsiveness affect children's behaviour and engagement, but children's behaviour and engagement also affect staff responsiveness (Bell, 1968; Bronfenbrenner & Ceci, 1994). Children who display more problems with behaviour and emotions are often less involved in learning activities with the staff (Carr et al., 1991; Greene et al., 2012) and the staffs' responsiveness towards these children decreases over time (Almqvist, 2006; Greene et al., 2012). The staff also provide less instruction to children identified as high aggressors than to those identified as low aggressors (Greene et al., 2012). Classrooms with a higher prevalence of disturbances and disruptive children can cause the staff emotional exhaustion and affect their occupational commitment (Jepson & Forrest, 2006; Kokkinos, 2007; Dicke et al., 2018). Occupational commitment is a force that binds the individual to their occupation, and which predicts professional activity and work behaviour (Meyer et al., 1993). For example, children in need of special support receive less stimulation from caregivers than their typically developing peers (Girolametto et al., 2000; Girolametto & Weitzman, 2002). L2-learners are perceived by staff as lower performing than L1-learners (Baker et al., 2015). Children's characteristics such as problems with behaviour and emotions and low engagement affect the staffs' responsiveness and their occupational commitment.

The child:staff ratio and child group size influences the interaction and communication between children and staff as well as the level of beneficial activities (De Schipper et al., 2006). Low child:staff ratio, i.e., few teachers in relation to the number of children, affect the ability to plan everyday activities (Hyson et al., 2006), and has been associated with cognitive and language development (Bauchmüller et al., 2014) and low child engagement (Clawson, 1997). Large preschool groups and low staffing are extensively discussed both in Sweden and internationally and are viewed as increasing problems overall (Skalická et al., 2015). In Sweden, the mean child to staff ratio has been reported to be 5.3:1 and did not differ significantly between child groups with less ratios of L2-learners to L1-learners (Swedish National Agency for Education, 2016). However, L2-learners was reported more likely to be in larger child groups than L1-learners, with preschools in areas who have received among the most immigrants recently having child groups means of 18.9 children, while national child group mean is 16.9 children (Swedish School Inspectorate, 2011; Swedish National Agency for Education, 2016). The child:staff ratio and group sizes are reported to be more important for younger children and children from socioeconomically vulnerable families (Balldin and Tallberg Broman, 2010; Hagström, 2010). The child:staff ratio and group size can, therefore, be more important for L2-learners and children that display problems with behaviour and emotions.

Theoretical Framework

This study was grounded in the bioecological model (Bronfenbrenner & Ceci, 1994) proposing that the context is structured in different systems that directly and indirectly affect the child's development and functioning. The children are active agents in these systems and will, therefore, affect both their environment and people around them, including the preschool

FIGURE 1 | (A) Suggested model child engagement. The bold arrow shows where the models differ. (B) Suggested model staff responsiveness. The bold arrow shows where the models differ.

staff (Bell, 1968; Bronfenbrenner & Ceci, 1994). This assumption influenced the hypotheses and the path models tested. The preschool setting is one of the child's microsystems, a place where proximal processes have a direct influence on the child's engagement (Bronfenbrenner & Evans, 2000). Child engagement could be considered an operationalisation of the theoretical construct of proximal processes. Proximal processes are developmentally instigating and reciprocal interaction in parent-child, teacher-child and child-child activities, group or solitary play, reading, learning new skills, and performing complex tasks relative to the child and the child's age (Bronfenbrenner & Ceci, 1994) Thus, engagement occurs in a dynamic interaction among the characteristics of the child, e.g., behaviour, age and ethnicity, and the environment (Beijers et al., 2013).

Aims and Hypotheses

This study aimed to investigate the relationship between child engagement and staff responsiveness as well as how child age, child problems with behaviour and emotions, child group size, and the child:staff ratio impact child engagement and staff

responsiveness. A further aim was to investigate whether these relations differed between L2-and L1-learners. The following hypotheses were tested in two path models (**Figures 1A,B**):

1) Child:staff ratio will have a positive effect on staff responsiveness;
2) Group size will have a positive effect on staff responsiveness;
3) Staff responsiveness and child engagement will have a positive effect on each other;
4) Problems with behaviour and emotions will have a negative effect on child engagement and staff responsiveness, respectively;
5) Emotional symptoms will have a negative effect on child engagement and staff responsiveness, respectively;
6) The age of the child has a positive effect on both child engagement and staff responsiveness, respectively;
7) The relationships between the paths in the model vary in how child age and staff responsiveness affect child engagement in the two different groups of children.

MATERIALS AND METHODS

Settings

The data from this study originate from a longitudinal study in Swedish preschools (Granlund et al., 2015). In the longitudinal study children were followed for 2 years with three waves of data collection. The convenience sample from the original study was collected in 31 preschools (92 classrooms) in one large sized municipality (>200,000), four middle sized (50,000–200,000), and one small municipality (<50,000). The sample for the present study was cross-sectional, including preschool staff (N = 611) and 832 children (424 boys) from 106 preschool units in six municipalities in Sweden, representing both rural and urban areas. Because of internal attrition, in the end, 733 (93%) children remained for analysis. The age span was between 13 and 71 months. The sample included children with Swedish as their mother tongue as well as children with a different mother tongue, i.e., early second language learners. In this study, we defined L2-learners as children entitled to mother tongue education. In Sweden, children with at least one parent of foreign background are entitled to mother tongue education (Swedish National Agency for Education, 2018). A significant proportion of the L2-learners are refugee children (Swedish Central Buerau of Statistics, 2019).

Instruments
Child Engagement

Child engagement was measured with the Child Engagement Questionnaire (McWilliam, 1991). The original CEQ has 32 items, but for this study, only 29 of the items were used. When previously used in Swedish preschool contexts, it was found that three of the items were irrelevant and difficult to answer in a Swedish preschool context (Almqvist, 2006). The excluded items are more suited for children younger than 1 year old, which this study did not include. Children younger than 1 year do not usually attend preschool in Sweden. Each item on

the scale has four (1–4) response options, "not at all typical" (1), "somewhat typical" (2), "typical" (3) and "very typical" (4). For each item, there is an example to further clarify the intent of the item. Internal consistency for the CEQ of this study was $\alpha = 0.96$, and the CEQ has earlier shown good intra-rater reliability, as well as content and construct validity (Almqvist, 2006; Sjöman et al., 2016).

Problems With Behaviour and Emotions

The Strengths and Difficulties Questionnaire (Goodman, 1997) was used to measure problems with behaviour and emotions (which is called in SDQ "behaviour difficulties"). The SDQ contains 25 questions, divided into five subscales with five items for each scale: emotional problems, conduct problems (in this study we use "challenging behaviours"), hyperactivity, peer problems, and prosocial behaviour. There are three different response options for each question, coded from 0 to 2, with 0 as "not at all," 1 "only a little," and 2 "quite a lot" (Goodman, 1997). In this study, only the total scores of the subscales challenging behaviour, hyperactivity and emotional problems were used as predictor variables. Studies that have used partly the same data have reported good intra-rater reliability and good content and construct validity (Gustafsson et al., 2016; Sjöman et al., 2016). The emotional scale had an internal consistency of $\alpha = 0.62$, the challenging behaviours scale had $\alpha = 0.72$ and hyperactivity had $\alpha = 0.81$ in this study.

Staff Responsiveness

Staff responsiveness was measured with a questionnaire developed by Granlund and Olsson (1998). The preschool staff rated their experiences of different kinds of social interactions in the preschool environment. The instrument consists of 36 items in total. The responses are based on a five-point Likert scale with the alternatives "seldom" (1), "quite often" (2), "50% of the time" (3), "fairly often" (4) and "often" (5). The questionnaire covers four sub-dimensions of interactions: interactions between staff and child, child and staff, other children and the child, and the child and other children (Granlund & Olsson, 2006). The questionnaire has been found to have reliability ranging from 0.86 to 0.96 (Almqvist, 2006). In this study, only the sub-dimension of the instrument measuring the staffs interaction with the child was used to operationalise staff' responsiveness, which consists of 10 items. The internal consistency of this sub-dimension was $\alpha = 0.77$.

Procedure and Ethical Considerations

Preschool directors were invited to have their preschool take part in the study. Those preschool directors that accepted were asked to provide information. This information was the number of staff, type of classroom (e.g., aged one to three or 1–5), number of children, number of children formally identified as in need of special support, and number of children entitled to support in their mother tongue. The preschool staff was asked to sign a written consent form and those who agreed returned this consent to the researchers or preschool management. The preschool staff distributed information about the study to the parents (or

guardians) of the children. Those who agreed that their children would be included in the study signed a written consent and gave it to the preschool staff. These were given to the researchers in a closed envelope. The children who participated in the study were assigned codes to their name and social security number. The codes were then noted in the questionnaires that the researcher distributed to the preschool staff in each classroom. The preschool staff divided the questionnaires between them so that each staff answered for several children, within a period of about 4 weeks. The staff commented on children three to five children which they knew well. Then, the questionnaires and the code lists were collected by the researchers. The code list with children's names and personal numbers were handle separate and contained in a safe locker at the University. The project was approved by the ethics committee in Linköping, Sweden (Dnr 2012/199–31).

Data Analysis

A series of bivariate analyses were performed to summarise the sample characteristics and explore variables suited for further analysis. Structural equation models with path analysis were conducted with AMOS 21.0 (Arbuckle, 2013). Path analysis provides possibilities to study associations between variables in series (the relations of the variables can be additive) (Lleras, 2004; Jeon, 2015). For example, child group size can affect staff responsiveness, which in turn can affect child engagement. To assess model fit, multiple fit indices were used: χ^2, root mean square error approximation (RMSEA), and the comparative fit index (CFI) (Bentler, 1990). A non-significant chi-square value indicates a reasonable model fit (Byrne, 2011). CFI should be above 0.90 (Byrne, 2011) and RMSEA should be less than 0.05 (Browne & Cudeck, 1992). An explorative approach was used when the suggested models proved to be non-significant. The variables were tried in several combinations according to the relationships in the hypotheses until two models with good fit were found that included as much of the suggested model as possible. In this phase, the variables conduct problems and child:staff ratio were rejected, since they did not contribute to a good fit in any model.

A multi-group analysis in three steps was conducted to evaluate group differences between L1- and L2-learners in the different paths. First, we implemented two models with no constraints specified. Second, we implemented two models with all paths constrained to be invariant between the two groups. Finally, we implemented two models with covariates constrained one by one to be equal between the groups to discover similarities and differences in their effect across groups. This was to find the models that fit the data the most. Since χ2 can be very sensitive to sample size, only the TLI and CFI were used to evaluate the fit of the models and >0.95 and were considered to have a good fit (Schermelleh-Engel et al., 2003). RMSEA was used as well. This absolute index estimates true parameters in the population and should be < 0.05 to be a good fit, and between 0.05 and 0.08 to be average (Schermelleh-Engel et al., 2003).

TABLE 1 | Demographic of preschool children and staffing information.

	Mean	SD	Range	
			Min	Max
Age (months; 52% females)	41.75	15.95	13	71
Child:staff ratio	6.00	1.32	2.67	9.5
for L1-learners (72.7%)	6.04	1.31	3.33	9.5
for L2-learners (27.3%)	5.89	1.34	2.67	8.54

TABLE 2 | Means and standard deviation between groups.

	L1-learners		L2-learners	
	Mean	SD	Mean	SD
Child engagement (1–4)	3.24	0.60	3.03	0.62
Staff responsiveness (0–5)	4.59	0.31	4.46	0.44
Challenging behaviours (0–10, the higher the score the more difficulties)	1.40	1.82	1.53	1.91
Hyperactivity (0–10, the higher the score the more difficulties)	2.34	2.38	2.71	2.28
Emotional symptoms (0–10, the higher the score the more difficulties)	0.80	1.26	0.69	1.26

Note. N = 733, 562 L1-learners and 211 L2-learners.

TABLE 3 | Correlations among variables (L2-learners in bold).

		1	2	3	4	5	6	7
1	Child engagement		**0.45****	**−0.16***	**−0.35***	**−0.22****	**0.53****	**0.33****
2	Age	0.51**		**−0.14***	**−0.15****	**0.01**	**0.22****	**0.67****
3	Challenging behaviours	−0.18**	−0.10**		**0.55****	**0.13**	**−0.08**	**−0.21****
4	Hyperactivity	−0.42**	−0.23**	0.55**		**0.13**	**0.33****	**−0.09**
5	Emotional symptoms	−0.18**	−0.08	0.11**	0.03		**−0.17***	**−0.09**
6	Staff responsiveness	0.55**	0.18**	−0.17**	−0.35**	−0.15**		**0.13**
7	Child:staff ratio	0.26**	0.62**	−0.16**	−0.16**	−0.05	0.06*	

Note. n = 733. *p < 0.05; **p < 0.01.

RESULTS

The results are presented in three parts. The first part contains the descriptive statistics with means and standard deviations for the variables, as well as the correlation between variables. In the second part, the path model fit for the models is described. Lastly, the path models result, and the multi-group analysis are presented.

Descriptive Statistics

In **Table 1**, demographical information is presented about the mean, standard deviation and range for age and child:staff ratio (sum of both groups as well as the groups (L1- and L2-learners)).Means and standard deviations of the included variables divided by the groups are presented in **Table 2**. The child group size was excluded from further analysis and the suggested models, due to showing insignificant correlations with child engagement and staff responsiveness. L2-learners seem generally to be less engaged, have staff with lower responsiveness, are more hyperactive, and suffer from more challenging behaviours, but show fewer emotional symptoms than L1-learners.

Correlations between the included variables are presented in **Table 3**. Each variable was positively or negatively correlated with child engagement for both groups. The analysis indicated no

strong differences in associations between the variables. Child: staff ratio has a stronger positive impact on child engagement for L2-learners.

Path Model Fit

Initially, we tested the suggested models in a path analysis. The suggested models showed poor fit indices (see **Table 4**—*Suggested model child engagement* and *Suggested model staff responsiveness*).

The variables were tested in several combinations in an explorative approach according to the hypotheses until two significant model fits were found. Child engagement was used as the primary outcome variable in the first model. This model was labelled the *Ethnicity: child engagement model* and had a generally good model fit (see **Table 4**). Staff responsiveness was used as the primary outcome variable in the second model. This model was called the *Ethnicity staff responsiveness model*. Both models excluded the child:staff ratio and challenging behaviours, since these variables did not fit any models due to being insignificant and thus were dropped from further analysis. The first hypothesis concerning the child:staff ratio was rejected. Also, challenging behaviours were removed in the third hypothesis as this issue was insignificant in the models.

Path Model Results and Multi-Group Analysis

A multi-group analysis was applied to the Ethnicity engagement model, labelled the *Multi-group child engagement model* (*MCE model*; see **Figure 2** for path coefficients). This model showed good fit indices in the model fit (see **Table 4**—*MCE model*). As the third hypothesis stated, both emotional symptoms and

TABLE 4 | Fit parameters for the different models.

Models	χ^2	df	p	RMSEA	CFI	TLI
Suggested model child engagement[a]	740.2	11	**0.00**	**0.293**	**0.47**	**-0.014**
Suggested model staff responsiveness[a]	741.0	15	**0.00**	**0.293**	**0.47**	**-0.015**
Ethnicity: child engagement model	4.1	2	0.13	0.037	0.99	0.99
Ethnicity: staff responsiveness model	6.9	3	0.08	0.041	0.99	0.98
Multi-group child engagement model (MCE model)	10.8	10	0.37	0.010	0.99	0.99
Multi-group staff responsiveness model (MSR model)	16.4	12	0.11	0.025	0.99	0.99

Note. Unfulfilled criteria for a good model are marked in **bold** (p > 0.05, RMSEA < 0.05, CFI < 0.90, TLI < 0.90).
[a]In both suggested models, group size was excluded in the correlation analysis and was not brought forward for further analysis.
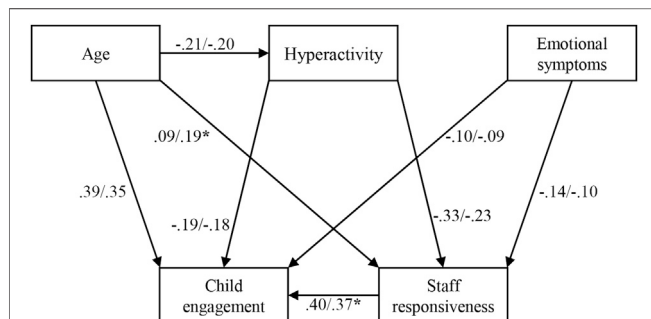
FIGURE 2 | Multi-group child engagement models path. Note: To the left of the slash punctuation of each path is the path coefficient for L1-learners, and to the right is the path coefficient for L2-learners (L1-learners coefficient/ L2-learners coefficient). All paths were p < 0.01, except for the path Age > Staff responsiveness, which was p < 0.01 for both groups. *indicates that there was a significant path between the two groups.
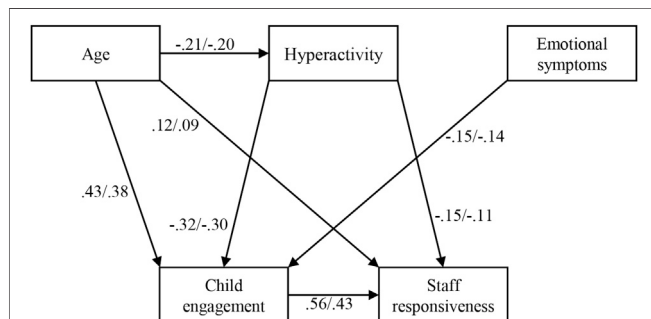
FIGURE 3 | Multi-group staff responsiveness model paths. Note: To the left of the slash punctuation of each path is the path coefficient for L1-learners, and to the right is the path coefficient for L2-learners (L1-learners coefficient/ L2-learners coefficient). All paths were p < 0.01. *indicates that there was a significant path between the two groups.

hyperactivity showed paths to staff responsiveness and child engagement (**Figure 2**). The paths were stronger from hyperactivity to staff responsiveness than to engagement for both groups, while the paths from emotional symptoms were slightly weaker to child engagement than hyperactivity to child engagement. There was a positive path from age to child engagement, which provides evidence for the fourth hypothesis. The path from age to hyperactivity was slightly weaker. Age also affected staff responsiveness, but with moderately weak paths. The multi-group analysis revealed group differences in the relationship between age and child engagement in that the path for children of different ethnicities was slightly stronger. The strongest path was found from staff responsiveness to child engagement, thus giving support to the second hypothesis. This path also showed a significant difference between the two groups. Although the difference was small, the path for L1-learners was weaker, providing only weak evidence for the fifth hypothesis.

A second multi-group analysis was conducted, this time on the *Ethnicity: staff responsiveness model*. In this model, staff responsiveness was used as the outcome variable. The multi-group model was labelled the *MSR model* (see **Figure 3** for path coefficients) and proved to have good fit indices (see **Table 3**—*MSR model*). There were no significant differences between groups in any of the paths, giving further reason to reject the hypothesis (5) of differences between the groups. Hyperactivity had stronger negative paths to child engagement in this model than in the previous one. However, the path from hyperactivity to staff responsiveness was weaker, which was probably due to the non-significant relationship between emotional symptoms and staff responsiveness. The paths from age were similar in all paths, the same to hyperactivity, slightly weaker to staff responsiveness, and slightly stronger to child engagement. The path from child engagement to staff responsiveness was strong, but the path from staff responsiveness to child engagement was even stronger. This provides evidence for the second hypothesis.

DISCUSSION

This study aimed to investigate the relationship between child engagement and staff responsiveness as well as how child age, child problems with behaviour and emotions, child group size, and the child:staff ratio impact child engagement and staff responsiveness. A further aim was to investigate whether these relations differed between L2-and L1-learners.

Child engagement was positively affected by age in both the *MCE model* and the *MSR model*: children tended to be more engaged due to age. Hyperactivity affected child engagement negatively in both models, but substantially more so in the

MSR model. Child engagement was also affected negatively by emotional symptoms in both models, but less so than hyperactivity. Lastly, staff responsiveness had a strong positive impact on child engagement in the *MCE model.* Here, it was also noticed that there was a small difference between the strength of the paths in the two groups according to the multi-group analysis.

Staff responsiveness was positively affected by age in both models. Hyperactivity affected staff responsiveness negatively in both models, but substantially more so in the *MCE model.* Emotional symptoms also affected staff responsiveness negatively, but this path was only found in the *MCE model.* Lastly, child engagement affected staff responsiveness positively on a very strong path. This was only calculated in the *MSR model.*

The first (1) hypothesis was thus rejected as child group size and the child:staff ratio were both rejected before the suggested model was constructed, even though the child:staff ratio has been shown in earlier research to be an important factor in terms of interaction and communication between staff and children (De Schipper et al., 2006) and the provision of developmentally appropriate activities (De Schipper et al., 2006). In most Swedish preschool units, the child:staff ratio levels are quite similar, being 5.3 children per staff member. In this study, the standard deviation was approximately 1.3 for both groups. This probably contributed to the insignificance of the child:staff ratio as a predictor of staff responsiveness, and the variable was excluded from the modified models.

According to the second (2) hypothesis, staff responsiveness had a positive effect on child engagement in the *MCE model.* This corresponds to earlier research, as child engagement has been associated with positive staff-child interactions (Cadima et al., 2016) and as Greene (2012) concludes, lower staff responsiveness usually means lower child engagement (Greene et al., 2012). Staff responsiveness to child engagement was the strongest path in the *MCE model* and implies that staff responsiveness is a very important variable for children's engagement in the preschool context. The staff that is responsive and promote children's engagement can greatly impact children's long-term learning and well-being by stimulating proximal processes (Bronfenbrenner & Ceci, 1994), and promoting self-regulation (Fuhs et al., 2013), and future academic achievement (Ladd & Dinella, 2009). The staff are responsible for providing positive school experiences for the children (Swedish National Agency for Education, 2018), and for refugee children positive school experiences are a protective factor for children's mental health (Fazel et al., 2012). Therefore, it is of great concern that L2-learners are generally less engaged, are more commonly are met with lower staff responsiveness, and at the same time are more dependent on the staffs' responsiveness for becoming engaged in preschool activities.

It was hypothesised (2) that child engagement would have a positive effect on staff responsiveness. In the second model, the *MSR model* with staff responsiveness as the outcome, child engagement had a substantial impact on staff responsiveness. As indicated by earlier research, children with problems with behaviour and emotions and/or who are underachieving tend to receive less attention and less advanced instructions from the staff and are at greater risk of being neglected by the staff (Carr et al.,

1991; Girolametto et al., 2000; Girolametto & Weitzman, 2002). Children affect their own microenvironment (Bronfenbrenner & Ceci, 1994), in this case, the preschool staff, and this study provides further evidence of this relationship. Thus, children might affect their staffs' commitment to their occupation *via* emotional exhaustion from dealing with more demanding children (Jepson & Forrest, 2006; Kokkinos, 2007; Dicke et al., 2018). The group constellation of children may be a vital factor influencing staff responsiveness as well as how often and how the staff interacts with the children. A significant proportion of the L2-learners are refugees, or have parents who are refugees, which can mean that they have a harder time acquiring language skills (Steel et al., 2011) and can also suffer traumatization due to their or their parent's refugee status (Lustig et al., 2004; Steel et al., 2006). This may have a negative influence on both their own engagement and how they are met by staff. If the child group has lower engagement overall it might affect the staff responsiveness, which could contribute to the negative functioning of the whole preschool group. This implies that the municipalities responsible for organising the preschools need to consider group composition more seriously, especially concerning groups of L2-learners, since they are at a higher risk of displaying problems with behaviour and emotions and low engagement and thus affecting the overall staff responsiveness. This problem might be related to the Swedish support model of inclusion in preschool (and perhaps also to the models in other Nordic countries). Most children in Swedish preschools receive special support in their current child group (Swedish National Agency of Education, 2014). The staff must manage children with varied support needs, such as problems with behaviour and emotions and language delay while managing the regular preschool activity. The staffs' responsiveness and commitment might be challenged in cases where staff have many L2-learners and many children who also display problems with behaviour and emotions.

Problems with behaviour and emotional symptoms did, as hypothesised (3), have a negative effect on child engagement and staff responsiveness. However, we could not fit conduct problems into the modified models, contrary to earlier research where such relations were found (Allan et al., 2015). Hyperactivity, however, affected staff responsiveness more strongly in the *MCE model*, with child engagement as the outcome, than in the *MSR model* with staff responsiveness as the outcome. This indicates that hyperactivity affects both child engagement and staff responsiveness, which is in line with earlier research (Allan et al., 2015; Sjöman et al., 2016). Hyperactivity has also been associated with low self-regulation (Graziano et al., 2015), which may negatively affect staff responsiveness as these children possibly demand extra attention. Child engagement seems to be more affected by hyperactivity if the outcome is staff responsiveness since it is then the overall engagement that is affecting the staff more than the hyperactivity itself. Emotional symptoms had a small negative effect on child engagement in both modified models, but only affected staff responsiveness when child engagement was the outcome variable. Hyperactivity and emotional symptoms did affect child engagement, as well as staff responsiveness. L2-learners who are either refugees, or who have parents who are, might be

further prone to display problems with behaviour and emotions (Lustig et al., 2004; Steel et al., 2006) and therefore put more strain on their staff than their peers who are L1-learners. However, child engagement affected staff responsiveness more than the problems with behaviour and emotions and emotional symptoms themselves, which indicates that engagement should be a key target, no matter what problems with behaviour and emotions the child displays.

As hypothesised (4) with influence from the theoretical framework (Bronfenbrenner & Ceci, 1994), age positively affected child engagement in both the MCE model and the MSR model. It also affected hyperactivity and staff responsiveness. When children with hyperactive symptoms get older, they learn to regulate themselves more. This may have a positive effect on engagement even though hyperactive symptoms may remain (Graziano et al., 2015). Age can, therefore, have an impact on hyperactivity, in turn leading to better engagement, partly due to better responsiveness from staff. However, it is essential that the difficulties are dealt with early in the preschool years to avoid negative behaviour and its consequences on engagement as the children progress towards the school years.

It was hypothesised (5) that there would be differences between the groups of L1-and L2-learners. The *MCE model* indicated differences in the paths. The path from staff responsiveness to child engagement showed very small differences, too small to be of concern. Both this study and previous reports in the larger projects that the data in this study stems from shows that L2-learners display more behaviour problems in preschool, and more problems with peer interaction and with handling transition (Granlund et al., 2015; Almqvist et al., 2018). Previous research confirms that minority groups often have more behaviour problems than the majority ethnic group (D'Souza et al., 2017), but less often receive special support in preschool for such difficulties (Almqvist et al., 2018). However, being engaged in preschool activities increased the probability of receiving support. What behaviours are considered problematic or not seems to be related to expectations and the functioning of the overall preschool group. Preschool staff more often have negative or low expectations of L2-learners compared to L1-learners (Baker et al., 2015). Preschool staff may not recognise the needs of L2-learners if they are not engaged in preschool activities. A goal of the Swedish preschool is to reduce inequalities leading to differences in learning opportunities and engagement, and to give children a good start that promotes mental health and later academic achievement (Swedish National Agency for Education, 2018). This study indicates that this goal is not fully met.

Limitations

The study had a relatively good sample size, but the difference in samples between groups is of concern. This could limit the ability to draw solid conclusions from the results. To confirm the results, the study should be replicated with larger sample size and more similar group sizes. Staff responsiveness was used as an indicator of the interaction between the children and staff, as well as an indicator of the ongoing processes as the

staff is responsible for the learning activities. This could be criticised, as it is very general, and more directed quantitative and qualitative research needs to be conducted to deepen the understanding of how staff responsiveness and child engagement are related. Another possible source of bias is the lack of information on the number of children each staff responded a questionnaire for. For practical reasons we had to leave the decision of how to divide the questionnaire assessment to the staff themselves. This may have distorted the variation of children who were rated by the same staff. Also, it needs to be further investigated how the refugee status affects children's engagement and problems with behaviour and emotions, and their staff. In this study, we only included information that indicated if the children were L1-or L2-learners, and thus we do not know how many of the children who were also refugees. Here, finer grained studies must be conducted to investigate how children's refugee status affects child engagement and staff responsiveness. Another important limitation is that we did not include information about children's language skills. Studies have shown that it might be important to consider the relationship between refugee status and language acquisition (Steel et al., 2011). Children's language skills have been show to account for differences in problems with behaviour and emotions, child engagement and can also affect staff responsiveness, as language skills has been found to predict staff-child relationship (Rudasill et al., 2011; Yoleri, 2016). L2-learners who are more fluent in their second language, can possibly be more confident and motivated through their verbal skills to be engaged in learning activities, peer interaction and staff-child interaction. They might also resolve more conflicts and frustrations through verbal communication instead of displaying problems with behaviour and emotions. Future similar studies can include language skills to determine how much of L2-learners' language skills affect factors like problems with behaviour and emotions, child engagement and staff responsiveness, and the relationships between them.

Implications

The fact that child engagement had in this study such a large effect on staff responsiveness and that L2-learners tend to display lower engagement and more hyperactivity might lead to pressure and further demands on the preschool staff working in areas where most of the children are L2-learners. This may affect their occupational commitment which could affect their responsiveness towards the children, creating a negative spiral with less engaged children and less responsive staff over time. Further research is needed that looks more closely at the impact of the macro- and exosystems of the structural organisation of the preschool, e.g., regarding the placement of many L2-learners in the same preschool classroom. Further research is also needed to explore the bidirectional relationship between children's engagement and staff responsiveness when refugee status and language skills are considered. The preschool staff has a major task in stimulating children's engagement, especially in preschools with many children from developmentally disadvantaged backgrounds, being L2-learners or in need of

special support. The promotion of engagement in preschool should be prioritised, since it can lead to more positive peer and teacher interactions (Bronfenbrenner & Ceci, 1994; Sjöman et al., 2016), and can promote language development (Bronfenbrenner & Ceci, 1994), future academic achievement (Ladd & Dinella, 2009) as well as current and future mental health and well-being (Raspa & McWilliam, 2001; Almqvist, 2006). Further research must be conducted on how to improve the engagement of L2-learners and how to provide the necessary tools and structure to achieve this. Many children spend most of their waking hours in preschool, which makes this context especially important for early detection of difficulties and for implementing support measures aimed at promoting engagement. Preschool staff must have the necessary conditions to combat these issues as the Swedish preschool should make up for inequalities in society and every child should have the same opportunities to be engaged and prepared for the later school years (Swedish National Agency for Education, 2018).

Conclusion

In this study, we were not able to show that the child:staff ratio or group size had a direct impact on staff responsiveness. Rather, children who were engaged were met with more responsiveness by staff. The more responsive staff more engaged were the children. Children high in hyperactivity and/or emotional symptoms were met with lower responsiveness and displayed low engagement. Older children were more engaged than younger children, and this relationship was even stronger than the relationship between engagement and staff responsiveness. The hypothesis that age and staff responsiveness affect children's engagement differently depending on whether they are L2-or L1-learners was only weakly supported. However, the results from this study may indicate that staff in classrooms that include many L2-learners may also have more children with problems with behaviour and emotions and lower engagement, which may affect

the staffs' responsiveness and their occupational commitment. This can, in turn, affect the children's engagement, leaving L2-learners less prepared to face future challenges in school and society.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Ethics vetting board in Linköping, Sweden. Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

REFERENCES

Allan, D. M., Allan, N. P., Lerner, M. D., Farrington, A. L., and Lonigan, C. J. (2015). Identifying Unique Components of Preschool Children's Self-Regulatory Skills Using Executive Function Tasks and Continuous Performance Tests. *Early Child. Res. Q.* 32, 40–50. doi:10.1016/j.ecresq.2015.02.001

Almqvist, L. (2006). Children's Health and Developmental Delay : Positive Functioning in Every-Day Life. Dissertation. Örebro University : Universitetsbiblioteket

Almqvist, L., and Granlund, M. (2005). Participation in School Environment of Children and Youth with Disabilities: A Person-Oriented Approach. *Scand. J. Psychol.* 46, 305–314. doi:10.1111/j.1467-9450.2005.00460.x

Almqvist, L., Sjöman, M., Golsäter, M., and Granlund, M. (2018). Special Support for Behavior Difficulties and Engagement in Swedish Preschools. *Front. Educ.* 3. doi:10.3389/feduc.2018.00035

Arbuckle, J. L. (2013). IBM SPSS AMOS 22 User Guide. *IBM Corps.* doi:10.1016/j.jms.2007.04.006

Baker, C. N., Tichovolsky, M. H., Kupersmidt, J. B., Voegler-Lee, M. E., and Arnold, D. H. (2015). Teacher (Mis)perceptions of Preschoolers' Academic Skills: Predictors and Associations with Longitudinal Outcomes. *J. Educ. Psychol.* 107, 805–820. doi:10.1037/edu0000008

Balldin, J., and Tallberg Broman, I. (2010), "Förskolan och de utsatta barnen-utmaningar och möjligheter [Preschool and the exposed children - challenges

and possibilities]," In Se de tidiga tecknen": forskare reflekterar över sju berättelser från förskola och skola: delbetänkande ["See the early signs": researchers reflects on seven stories from preschool and school]. Malmö: Fritze.

Bauchmüller, R., Gørtz, M., and Rasmussen, A. W. (2014). Long-run Benefits from Universal High-Quality Preschooling. *Early Child. Res. Q.* 29, 457–470. doi:10.1016/j.ecresq.2014.05.009

Beijers, R., Riksen-Walraven, M., Putnam, S., de Jong, M., and de Weerth, C. (2013). Early Non-parental Care and Toddler Behaviour Problems: Links with Temperamental Negative Affectivity and Inhibitory Control. *Early Child. Res. Q.* 28, 714–722. doi:10.1016/j.ecresq.2013.06.002

Bell, R. Q. (1968). A Reinterpretation of the Direction of Effects in Studies of Socialization. *Psychol. Rev.* 75, 81–95. doi:10.1037/h0025583

Bentler, P. M. (1990). Comparative Fit Indexes in Structural Models. *Psychol. Bull.* 107, 238–246. doi:10.1037/0033-2909.107.2.238

Bronfenbrenner, U., and Ceci, S. J. (1994). Nature-nuture Reconceptualized in Developmental Perspective: A Bioecological Model. *Psychol. Rev.* 101, 568–586. doi:10.1037/0033-295X.101.4.568

Bronfenbrenner, U., and Evans, G. W. (2000). Developmental Science in the 21 St Century: Emerging Questions, Theoretical Models, Research Designs and Empirical Findings. *Soc. Dev.* 9, 115–125. doi:10.1111/1467-9507.00114

Browne, M. W., and Cudeck, R. (1992). Alternative Ways of Assessing Model Fit. *Sociological Methods Res.* 21, 230–258. doi:10.1177/0049124192021002005

Byrne, B. M. (2011). *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming.* 1st Edn. doi:10.4324/9780203807644

Cadima, J., Doumen, S., Verschueren, K., and Buyse, E. (2015). Child Engagement in the Transition to School: Contributions of Self-Regulation, Teacher-Child Relationships and Classroom Climate. *Early Child. Res. Q.* 32, 1–12. doi:10.1016/j.ecresq.2015.01.008

Cadima, J., Verschueren, K., Leal, T., and Guedes, C. (2016). Classroom Interactions, Dyadic Teacher-Child Relationships, and Self-Regulation in Socially Disadvantaged Young Children. *J. Abnorm Child. Psychol.* 44, 7–17. doi:10.1007/s10802-015-0060-5

Carr, E. G., Taylor, J. C., and Robinson, S. (1991). The Effects of Severe Behavior Problems in Children on the Teaching Behavior of Adults. *J. Appl. Behav. Anal.* 24 (3), 523–535. doi:10.1901/jaba.1991.24-523

Chen, X., Li, D., Li, Z.-y., Li, B.-s., and Liu, M. (2000). Sociable and Prosocial Dimensions of Social Competence in Chinese Children: Common and Unique Contributions to Social, Academic, and Psychological Adjustment. *Dev. Psychol.* 36, 302–314. doi:10.1037/0012-1649.36.3.302

Clawson, M. A. (1997). *Contributions of Regulatable Quality and Teacher-Child Interaction to Children's Attachment Security with Day Care Teachers.*

Cole, D. A., Martin, J. M., and Powers, B. (1997). A Competency-Based Model of Child Depression: A Longitudinal Study of Peer, Parent, Teacher, and Self-Evaluations. *J. Child. Psychol. Psychiat* 38, 505–514. doi:10.1111/j.1469-7610.1997.tb01537.x

Côté, S., Vaillancourt, T., LeBlanc, J. C., Nagin, D. S., and Tremblay, R. E. (2006). The Development of Physical Aggression from Toddlerhood to Pre-adolescence: A Nation Wide Longitudinal Study of Canadian Children. *J. Abnorm Child. Psychol.* 34, 68–82. doi:10.1007/s10802-005-9001-z

De Schipper, E. J., Marianne Riksen-Walraven, J., and Geurts, S. A. E. (2006). Effects of Child?Caregiver Ratio on the Interactions between Caregivers and Children in Child-Care Centers: An Experimental Study. *Child. Dev.* 77, 861–874. doi:10.1111/j.1467-8624.2006.00907.x

Dicke, T., Stebner, F., Linninger, C., Kunter, M., and Leutner, D. (2018). A Longitudinal Study of Teachers' Occupational Well-Being: Applying the Job Demands-Resources Model. *J. Occup. Health Psychol.* 23, 262–277. doi:10.1037/ocp0000070

D'Souza, S., Waldie, K. E., Peterson, E. R., Underwood, L., and Morton, S. M. B. (2017). Psychometric Properties and Normative Data for the Preschool Strengths and Difficulties Questionnaire in Two-Year-Old Children. *J. Abnorm Child. Psychol.* 45, 345–357. doi:10.1007/s10802-016-0176-2

Fazel, M., Reed, R. V., Panter-Brick, C., and Stein, A. (2012). Mental Health of Displaced and Refugee Children Resettled in High-Income Countries: Risk and Protective Factors. *The Lancet* 379 (9812), 266–282. doi:10.1016/S0140-6736(11)60051-2

Fazel, M., and Stein, A. (2002). The Mental Health of Refugee Children. *Arch. Dis. Child.* 87, 366–370. doi:10.1136/adc.87.5.366

Fuhs, M. W., Farran, D. C., and Nesbitt, K. T. (2013). Preschool Classroom Processes as Predictors of Children's Cognitive Self-Regulation Skills Development. *Sch. Psychol. Q.* 28, 347–359. doi:10.1037/spq0000031

Girolametto, L., Hoaken, L., Weitzman, E., and Lieshout, R. v. (2000). Patterns of Adult-Child Linguistic Interaction in Integrated Day Care Groups. *Lshss* 31, 155–168. doi:10.1044/0161-1461.3102.155

Girolametto, L., and Weitzman, E. (2002). Responsiveness of Child Care Providers in Interactions with Toddlers and Preschoolers. *Lang. Speech, Hearing Serv. Schools* 33 (4), 268–281. doi:10.1044/0161-1461(2002/022

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A Research Note. *J. Child. Psychol. Psychiat* 38, 581–586. doi:10.1111/j.1469-7610.1997.tb01545.x

Granlund, M., Almqvist, L., Gustafsson, P., Gustafsson, B., Golsäter, M., Proczkowska, M., et al. (2015). Tidig Upptäckt - Tidig Insats [Early Detection - Early Intervention]. Available at: https://ju.se/download/18.7d241c5015334a41afbaaf9/1520578716298/TUTI Rapport till Socialstyrelsen.pdf

Granlund, M., and Olsson, C. (2006). *Familjen Och Habiliteringen [Family and Habilitation Services].* Ala.

Graziano, P. A., Slavec, J., Ros, R., Garb, L., Hart, K., and Garcia, A. (2015). Self-regulation Assessment Among Preschoolers with Externalizing Behavior Problems. *Psychol. Assess.* 27, 1337–1348. doi:10.1037/pas0000113

Greene, R. W., Ablon, J., S., and Erlandsson, A. (2012). *Att Bemöta Explosiva Barn [To Meet Explosive Children.* Stockholm: Studentlitteratur.

Gustafsson, B. M., Gustafsson, P. A., and Proczkowska-Björklund, M. (2016). The Strengths and Difficulties Questionnaire (SDQ) for Preschool Children-A Swedish Validation. *Nordic J. Psychiatry* 70, 567–574. doi:10.1080/08039488.2016.1184309

Hagström, B. (2010). Kompletterande Anknytningsperson På Förskola [Complementary Liaison Person at Preschool]. *Lärarutbildningen, Malmö högskola.*

Hyson, M., Copple, C., and Jones, J. (2006). Early Childhood Development and Education. *Handbook Child. Psychology: Child. Psychology Practice* 4, 3–47. John Wiley & Sons Inc.

Jeon, J. (2015). The Strengths and Limitations of the Statistical Modeling of Complex Social Phenomenon: Focusing on SEM, Path Analysis, or Multiple Regression Models. *Int. J. Soc. Behav. Educ. Econ. Business Ind. Eng.* 9, 1559–1567. doi:10.5281/zenodo.1105868

Jepson, E., and Forrest, S. (2006). Individual Contributory Factors in Teacher Stress: The Role of Achievement Striving and Occupational Commitment. *Br. J. Educ. Psychol.* 76, 183–197. doi:10.1348/000709905X37299

Kokkinos, C. M. (2007). Job Stressors, Personality and Burnout in Primary School Teachers. *Br. J. Educ. Psychol.* 77, 229–243. doi:10.1348/000709905X90344

Ladd, G. W., and Dinella, L. M. (2009). Continuity and Change in Early School Engagement: Predictive of Children's Achievement Trajectories from First to Eighth Grade? *J. Educ. Psychol.* 101 (1), 190–206. doi:10.1037/a0013153

Lillvist, A., and Granlund, M. (2010). Preschool Children in Need of Special Support: Prevalence of Traditional Disability Categories and Functional Difficulties. *Acta Paediatr.* 99, 131–134. doi:10.1111/j.1651-2227.2009.01494.x

Lleras, C. (2005). Path Analysis. In *Encyclopedia of Social Measurement*. Editor M. Kempf-Leonard (Elsevier), 25–30. doi:10.1016/B0-12-369398-5/00483-7

Lonigan, C. J., Farver, J. M., Nakamoto, J., and Eppe, S. (2013). Developmental Trajectories of Preschool Early Literacy Skills: A Comparison of Language-Minority and Monolingual-English Children. *Dev. Psychol.* 49, 1943–1957. doi:10.1037/a0031408

Lustig, S. L., Kia-Keating, M., Knight, W. G., Geltman, P., Ellis, H., Kinzie, J. D., et al. (2004). Review of Child and Adolescent Refugee Mental Health. *J. Am. Acad. Child Adolesc. Psychiatry* 43, 24–36. doi:10.1097/00004583-200401000-00012

Mahoney, G., and Wheeden, C. A. (1999). The Effect of Teacher Style on Interactive Engagement of Preschool-Aged Children with Special Learning Needs. *Early Child. Res. Q.* 14 (1), 51–68. doi:10.1016/S0885-2006(99)80004-0

McWilliam, R. A., and Bailey, D. (1992). "Promoting Engagement and Mastery," in *Teaching Infants and Preschoolers with Disabilities.* Editors D. B. Bailey and M. Wolery (Upper Saddle River, NJ: Prentice-Hall).

McWilliam, R. A. (1991). *Children's Engagement Questionnaire.* Chapel Hill, NC: Frank Porter Graham Child Development Center.

Meyer, J. P., Allen, N. J., and Smith, C. A. (1993). Commitment to Organizations and Occupations: Extension and Test of a Three-Component Conceptualization. *J. Appl. Psychol.* 78, 538–551. doi:10.1037/0021-9010.78.4.538

Moritz Rudasill, K., Rimm-Kaufman, S. E., Justice, L. M., and Pence, K. (2006).Temperament and Language Skills as Predictors of Teacher-Child Relationship Quality in Preschool. *Early Edu. Dev.*, 17, 271–291. doi:10.1207/s15566935eed1702_4

Pakarinen, E., Kiuru, N., Lerkkanen, M.-K., Poikkeus, A.-M., Ahonen, T., and Nurmi, J.-E. (2011). Instructional Support Predicts Children's Task Avoidance in Kindergarten. *Early Child. Res. Q.* 26, 376–386. doi:10.1016/j.ecresq.2010.11.003

Raspa, M. J., McWilliam, R. A., and Maher Ridley, S. (2001). Child Care Quality and Children's Engagement. *Early Edu. Dev.*, 12, 209–224. doi:10.1207/s15566935eed1202_3

Rimm-Kaufman, S. E., Pianta, R. C., Early, D. M., Cox, M. J., Saluja, G., Bradley, R. H., et al. (2002). Early Behavioral Attributes and Teachers' Sensitivity as Predictors of Competent Behavior in the Kindergarten Classroom. *J. Appl. Dev. Psychol.* 23 (4), 451–470. doi:10.1016/S0193-3973(02)00128-4

Rydland, V., Grøver, V., and Lawrence, J. (2012). *Children's Peer Talk: Learning from Each Other*, 214–234. doi:10.1017/CBO9781139084536.015The Potentials and Challenges of Learning Words from Peers in Preschool: A Longitudinal Study of Second Language Learners in Norway.

Sabol, T. J., Bohlmann, N. L., and Downer, J. T. (2018). Low-Income Ethnically Diverse Children's Engagement as a Predictor of School Readiness above Preschool Classroom Quality. *Child. Dev.* 89, 556–576. doi:10.1111/cdev.12832

Schermelleh-Engel, K., Moosbrugger, H., and Müller, H. (2003). Evaluating the Fit of Structural Equation Models: Tests of Significance and Descriptive Goodness-Of-Fit Measures. *MPR-Online* 8 23–74.

Searle, A. K., Miller-Lewis, L. R., Sawyer, M. G., and Baghurst, P. A. (2013). Predictors of Children's Kindergarten Classroom Engagement: Preschool Adult-Child Relationships, Self-Concept, and Hyperactivity/Inattention. *Early Edu. Dev.* 24, 1112–1136. doi:10.1080/10409289.2013.764223

Sjöman, M., Granlund, M., and Almqvist, L. (2016). Interaction Processes as a Mediating Factor between Children's Externalized Behaviour Difficulties and Engagement in Preschool. *Early Child. Dev. Care* 186, 1649–1663. doi:10.1080/03004430.2015.1121251

Skalická, V., Belsky, J., Stenseng, F., and Wichstrøm, L. (2015). Reciprocal Relations between Student-Teacher Relationship and Children's Behavioral Problems: Moderation by Child-Care Group Size. *Child. Dev.* 86, 1557–1570. doi:10.1111/cdev.12400

Spence, S. H., Donovan, C., and Brechman-Toussaint, M. (1999). Social Skills, Social Outcomes, and Cognitive Features of Childhood Social Phobia. *J. Abnormal Psychol.* 108, 211–221. doi:10.1037/0021-843X.108.2.211

Steel, Z., Momartin, S., Silove, D., Coello, M., Aroche, J., and Tay, K. W. (2011). Two Year Psychosocial and Mental Health Outcomes for Refugees Subjected to Restrictive or Supportive Immigration Policies. *Soc. Sci. Med.* 72, 1149–1156. doi:10.1016/j.socscimed.2011.02.007

Steel, Z., Silove, D., Brooks, R., Momartin, S., Alzuhairi, B., and Susljik, I. (2006). Impact of Immigration Detention and Temporary protection on the Mental Health of Refugees. *Br. J. Psychiatry* 188, 58–64. doi:10.1192/bjp.bp.104.007864

Swedish Central Buerau of Statistics (2019). Population Statistics [Befolkningsmängd]. Available at: http://www.scb.se/be0101.

Swedish Central Bureau of Statistics (2017). Arbetsmarknadssituationen För Hela Befolkningen 15–74 År AKU 2017 [The Labor Market Situation for the Entire Population 2nd Quarter]. Available at: https://www.scb.se/contentassets/b0f63202a034408eb79d9616f767d84a/am0401_2017a01_sm_am12sm1801.pdf.

Swedish National Agency for Education (2016). Barngruppers Storlek I Förskolan - En Kartläggning Av Aktuell Pedagogisk, Utvecklingspsykologisk Och Socialpsykologisk Forskning [Chilren Group Sizes in Preschool – A Mapping of Recent Pedagogic,developmental Psychological and Social Psychological Researc. Available at: http://www.skolverket.se/publikationer?id=3584.

Swedish National Agency for Education (2018). Läroplan För Förskolan, Lpfö 18 [Swedish National Curriculum]. Available at: http://www.skolverket.se/publikationer?id=4001.

Swedish School Inspectorate (2011). *Stadsdelsbeslut Efter Tillsyn Av Stadsdelen Rosengård I Malmö Kommun [District Decision after Supervision of the Rosengård District in Malmö Municipality].*

Vitiello, V., and Williford, A. P. (2016). Relations between Social Skills and Language and Literacy Outcomes Among Disruptive Preschoolers: Task Engagement as a Mediator. *Early Child. Res. Q.* 36, 136–144. doi:10.1016/j.ecresq.2015.12.011

Wiegersma, P. A., Stellinga-Boelen, A. A. M., and Reijneveld, S. A. (2011). Psychosocial Problems in Asylum Seekers' Children. *J. Nervous Ment. Dis.* 199, 85–90. doi:10.1097/nmd.0b013e31820446d2

Williams, D. R. (1995). US Socioeconomic and Racial Differences in Health: Patterns and Explanations. *Annu. Rev. Sociol.* 21, 349–386. doi:10.1146/annurev.soc.21.1.34910.1146/annurev.so.21.080195.002025

Yoleri, S. (2016). Teacher-child Relationships in Preschool Period: The Roles of Child Temperament and Language Skills. *Int. Electron. J. Elem. Edu.* 9 (1), 210–224.

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