Teacher-Child Dependency and Teacher Sensitivity predict Engagement of Children with Attachment Problems

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It is suggested that dependent teacher-child relationships are associated with emotional insecurity and a lack of autonomous exploration that interferes with children's school development. This might be especially observed among children with attachment problems who may have developed a profound sense of insecurity in relationships with others. In this study, the effects of dependency on children's classroom and peer engagement were examined as well as the protective role of teacher sensitivity.

The sample included 85 Belgian children with mild to severe attachment problems and 70 teachers from special education schools. Data on teacher sensitivity and teacher-child relationship quality (Dependency, Conflict, Closeness) were collected in the first trimester of the school year using independent observations and teacher questionnaires respectively. Teachers also completed questionnaires on classroom engagement (Independent Classroom Participation) and peer engagement (Social Withdrawal) in the first, second, and third trimester.

Dependency was uniquely associated with lower levels of independent classroom participation. Moreover, low teacher sensitivity predicted declines in independent classroom participation among overly dependent children, whereas high teacher sensitivity predicted growth in independent classroom participation. Dependency and teacher sensitivity did not predict social withdrawal.

This study highlights the importance of teachers being sensitive to the needs of overly dependent children to support the autonomous exploratory behavior of these children.

Keywords: Teacher-child relationships, dependency, teacher sensitivity, classroom engagement, social engagement

Public Significance Statement

This study corroborated the idea that children with attachment problems who are overly dependent on teachers may miss out on opportunities for learning because they do not use the teacher as a secure base for autonomous exploration of the classroom. Low sensitivity of teachers to the needs of these children exacerbated problems in classroom participation. However, children showed growth in autonomous classroom participation when teachers were sensitive to the children's needs.

Teacher-Child Dependency and Teacher Sensitivity predict Engagement of Children with Attachment Problems

Despite the increased attention for teacher-child relationships, little is known about dependency in these relationships. Dependency is characterized by a developmentally inappropriate degree of reliance on the teacher (Pianta, 2001). An overly dependent child constantly seeks out the teacher for attention and approval, and requests help and guidance when this is not needed. High dependency on teachers is considered an indicator of emotional insecurity and of an inability to use the teacher as a secure base from which to explore (Verschuere & Koomen, 2012). However, empirical research on dependency and its implications for children's school development is scarce (Doumen et al., 2009; Koomen, Verschueren, Van Schooten, Jak, & Pianta, 2012). In this study, we were interested in whether dependency interferes with children's classroom and peer engagement concurrently and longitudinally. Consistent with ecological perspectives on child development (Bronfenbrenner & Morris, 2006; Sutherland & Oswald, 2005), we also investigated how dependency and teacher sensitivity interacted to predict growth in classroom and peer engagement over the course of a school year.

Dependency in Teacher-Child Relationships

There is a growing recognition of the influence of teacher-child relationships on children's development (e.g., McGrath & Van Bergen, 2015). In the literature, the three-dimensional model of closeness, conflict, and dependency measured with the Student Teacher Relationship Scale (STRS) is dominant (Koomen et al., 2012; Pianta, 2001). Closeness is typically considered a positive relationship dimension, whereas conflict and dependency are considered negative relationship dimensions. Ample research has shown that teacher-child relationships that are characterized by closeness, openness, and warmth have positive effects on children's socio-emotional and academic adjustment (e.g., Brock & Curby, 2014; Roorda, Koomen, Spilt, & Oort, 2011). This appears especially true for at-risk children (Sabol & Pianta, 2012). Relationships characterized by conflict, distrust, and unpredictability, on the other hand, are associated with poorer adjustment and achievement over time (e.g., Doumen et al., 2008; Spilt, Hughes, Wu, & Kwok, 2012). Much less is known, however, about child dependency on the teacher. The dimension dependency encompasses possessive and clingy child behaviors that reflect a degree of reliance on the teacher that is not age-appropriate. The majority of studies have left dependency out and other studies have combined dependency with conflict to obtain a global indicator of negativity in teacher-child relationships. Reasons for this may be the low internal consistency score of the (original) Dependency scale of the STRS or perhaps because conflict is considered more important (Koomen et al., 2012). Given the lack of empirical studies, dependency is commonly excluded from meta-analytic and theoretical reviews (Lei, Cui, & Chiu, 2016; McGrath & Van Bergen, 2015; Roorda et al., 2011).

However, there is theoretical ground to suggest that dependency may interfere with children's social and academic development (Coplan & Prakash, 2003). According to attachment theory, overreliance on caregivers indicates a lack of developmentally-appropriate independent exploration of the environment that is detrimental for children's development (e.g., Sroufe, Fox, & Pancake, 1983). Dependency in teacher-child relationships may indicate an inability to use the teacher as a secure base for independent exploration (Verschuere & Koomen, 2012). Children who cling to their teachers may engage less in interactions with peers thereby missing out opportunities to socialize with peers and develop basic social skills. In addition, a lack of exploratory behavior may be associated with fewer learning experiences. However, there is a lack of research on the developmental consequences of high dependency on teachers.

The handful of studies on teacher-child relationships that did include dependency has been conducted among preschool and kindergarten children. These studies found that dependency is concurrently associated with less classroom engagement, more emotional problems, more conduct problems, more social withdrawal, and more peer problems (Birch & Ladd, 1997; Howes, Hamilton, & Matheson, 1994; Koomen et al., 2012; Palermo, Hanish, Martin, Fabes, & Reiser, 2007). Doumen and colleagues (2012), for example, found that children's average level of dependency on the teacher

across the year was uniquely associated (above and beyond conflict and closeness) with children's independent classroom participation at the end of the school year.

Longitudinal research on the unique effects of dependency (relative to closeness and conflict) on children's development is virtually absent. To our knowledge, there are two notable exceptions. Birch and Ladd (1998) examined the effects of teacher-child relationship quality on the development of prosocial, asocial, and aggressive behavior from kindergarten to first grade. Only conflict was found to uniquely predict changes in prosocial and aggressive behavior. Troop-Gordon and Kopp (2011) examined the influence of teacher-child relationship quality on the development of peer victimization and aggression in late childhood. They found dependency to be a unique predictor of increases in victimization (but not aggression), suggesting that dependency on teachers may hinder children's social development. These studies did not examine longitudinal effects on classroom engagement.

Attachment Problems and Dependency on Teachers

High dependency on caregivers indicates an imbalance between proximity seeking and exploratory behavior (Sroufe et al., 1983). This may be observed especially among children with attachment problems that are related to insufficient caregiving and neglect. Children with symptoms of attachment disorders show maladaptive interpersonal functioning and have difficulties establishing selective attachments with others. This is seen in abnormal social interactions with others either responding to others with withdrawn and hypervigilant behavior or by indiscriminately friendly behavior (Minnis et al., 2007; Zeanah & Gleason, 2015). Relying on attachment theory, these behaviors may be explained by insecure internal working models of interpersonal relationships (Zajac & Kobak, 2006). Due to insufficient caregiving and neglect, these children may have developed internal working models of themselves as unworthy of attention and care and of others as untrustworthy, producing a profound sense of emotional insecurity in interpersonal relationships (Schwartz & Davis, 2006). This guides their expectations and behaviors in subsequent relationships. In this way, negative internal working models may have detrimental effects on children's future relationships with (non-familial) caregivers, including relationships with teachers (Buyse, Verschueren, & Doumen, 2011; O'Connor, Collins, & Supplee, 2012;).

There is some evidence that insecurely-attached children fail to use their teachers as a secure base for exploration. Sroufe et al. (1983) found that preschool children with insecure parent-child attachments are more over-reliant on teachers and use more negative ways to seek a teacher's proximity, attention, and approval. In contrast, children with secure parent-child attachments demonstrated situational-appropriate or effective dependency, which creates a foundation for developing self-confidence and autonomous functioning (Sroufe et al., 1983). Although the association between dependency and attachment disorder is not clear, similar findings may be observed for children who have difficulties in establishing selective attachments.

The Protective Role of Teacher Sensitivity for Vulnerable Children

Attachment theory asserts that internal working models, although relatively stable, are open to new information. This implies that new relationships with adults who are responsive to the child's needs may provide the child with corrective attachment experiences that can disconfirm and modify initially insecure working models (Sabol & Pianta, 2012; Zajac & Kobak, 2006). It is also possible that children develop differentiated internal working models for different relationships in different contexts that have unique effects on their adjustment in that context (Sabol & Pianta, 2012; Verschueren, Doumen, & Buyse, 2012). Thus, if a teacher is sensitive to the child's needs, the child may develop a specific and secure internal working model for the relationship with that teacher (or perhaps also for teachers in general). The internal working model of the relationship with the teacher may consequently have a unique (domain-specific) effect on the child's adjustment at school (Verschueren et al., 2012). We thus expect promotive or protective effects of teacher sensitivity on the development of initially highly dependent children. Low sensitivity, on the other hand, may confirm children's negative internal working models and add to their inability to use the teacher as a secure base, thus predicting decreases in autonomous exploratory behavior and social engagement.

The Present Study

We examined the influence of dependency and teacher sensitivity on growth in engagement in a sample of children with mild to severe attachment problems in special education. We expected that children with attachment problems would be at risk of developing overly dependent relationships with teachers due to strong feelings of emotional insecurity in interpersonal relationships. We expected that dependency would interfere with children's autonomous exploration resulting in less independent classroom engagement and less social engagement with peers across the school year. We also predicted, however, that teachers who were sensitive to children's unique needs could help overly dependent children to become gradually more autonomously engaged.

Method

Sample

The sample included 85 Belgian children (83% boys, 99% Caucasian) with mild to severe symptoms of attachment problems and 70 teachers from 20 special education schools for children with emotional and behavioral problems in Flanders, the Dutch-speaking region of Belgium. Children's mean age was 8.32 ($SD = 0.97$). Most children (83%) had one or more psychiatric diagnoses with more than half of them (67%) having received more than one diagnosis. Examination of the children's clinical files indicated that about 30% of the children were diagnosed with or suspected to suffer from a Reactive Attachment Disorder according to the DSM-IV criteria (American Psychiatric Association, 2000). For 48% of the children, school psychologists indicated (suspicions of) a history of pathogenic care (e.g., physical or emotional maltreatment or neglect, or sexual abuse). Respectively 29 and 28 children were diagnosed with Autism Spectrum Disorder (ASD) and Attention Deficit Hyperactivity Disorder (ADHD), which we controlled for in the analyses. Approximately 40% of the children stayed at a specialized boarding school during the week in which they were cared for by multiple caregivers.

Most teachers (90% female) were employed full-time (93%). Their mean age was 34.5 years ($SD = 8.08$) and they had on average 6.7 years ($SD = 7.35$) experience in special education for children with emotional and behavioral disorders.

Selection procedure

The sample was part of a larger project on children with mild to severe symptoms of attachment disorder in special education. All 38 special education schools in Flanders that serve children with emotional and behavioral disorders were invited to participate and 20 agreed to participate. Thirty-nine percent of the caregivers agreed on child participation ($n = 166$). Of these children, 85 were selected for participation based on the 75% highest scores on attachment problems and a maximum of two children per teacher, given the intensity of data collection for teachers. Attachment problems were measured with the Relationship Problems Questionnaire (RPQ; Minnis et al., 2007). The RPQ is a checklist of reactive attachment disorder behaviors based on the DSM-IV criteria. It measures disturbed social behaviors across situations, including inhibited behaviors (e.g., "Runs away when approached", "If you approach him/her, you never know whether he/she will be friendly or unfriendly") and disinhibited behaviors (e.g., "Too friendly with strangers", "There is a false quality to the affection he/she gives"). Of note, this study was conducted before the publication of the DSM-5, which distinguishes inhibited and disinhibited (sub)types as separate disorders (i.e., reactive attachment disorder and disinhibited social engagement disorder).

Data collection

Data on Dependency and Teacher sensitivity were collected at the beginning of the school year at Wave 1. Questionnaires on children's engagement were administered to teachers at Wave 1 (first trimester), Wave 2 (second trimester), and Wave 3 (third trimester). A verbal intelligence test (control variable) was administered individually at Wave 2.

Measures

Dependency, Conflict, and Closeness. An authorized Dutch translated and slightly adapted version of the Student-Teacher Relationship Scale (STRS; Koomen, Verschueren, & Pianta, 2007; Koomen et al., 2012) was employed to measure teacher perceptions of closeness (11 items), conflict

(11 items), and dependency (6 items) in relationships with individual students. Closeness refers to the degree of warmth and open communication. Conflict refers to negative and coercive teacher–child interactions. Dependency refers to possessive and overly clingy child behavior. Items were rated on a scale ranging from 1 (*definitely does not apply*) to 5 (*definitely does apply*).

The Dependency scale was adapted (e.g., 2 of the 6 items were newly developed) because of the mediocre internal consistency of the original scale (Pianta, 2001) in previous research (Cronbach's α ranging from .40 to .74; e.g., Doumen et al., 2009; Rey, Smith, Yoon, Somers, & Barnett, 2007). Cronbach's alpha coefficients have ranged from .88 to .93 for Closeness, .88 to .91 for Conflict, and .75 to .82 for Dependency in the adapted STRS (Doumen et al., 2012; Koomen et al., 2007; Koomen et al., 2012). In the present study, Cronbach's alpha coefficients were .81, .86, and .75 respectively.

Observed teacher sensitivity. Children's classroom teachers were observed in interaction with the target children in a dyadic setting outside the classroom during three structured tasks: a free-choice activity, a cognitive task activity, and an emotion task activity. The interactions were video-taped and afterwards coded by trained observers. Observers were not familiar with the participants. For each task, observers rated Sensitivity and Positive affect on scale from 1 (low) to 7 (high). Sensitivity denotes a teacher's provision of comfort, reassurance, and encouragement with respect to the child's academic and emotional needs. Positive affect refers to the teacher's enthusiasm, enjoyment, and respect displayed during interactions with the target child and is considered an indicator of closeness of the teacher-child relationship (Doumen et al., 2012). The scales were highly correlated ($r = 0.85$, $p < 0.001$) and averaged into a single score.

The scales were inspired by the subscales Sensitivity and Positive climate of the Classroom Assessment Scoring System (CLASS; La Paro, Pianta, & Stuhlman, 2002), but have been adapted to measure positive teacher behavior in dyadic teacher-child interactions (Doumen et al., 2012; Verschueren, Van de Water, Buyse, & Doumen, 2006) after consulting one of the authors of the original instrument (R.C. Pianta, personal communication, January 2004). In previous research, the scale has shown convergence with teacher reports of relationships with individual children in different samples in both structured and unstructured settings (Doumen et al., 2012; Spilt, Koomen, Thijs, & Van der Leij, 2012).

All data were double coded to examine interrater reliability. Intraclass correlations were 0.76 for Sensitivity and 0.81 for Positive affect, which indicates high interrater reliability.

Independent classroom participation. To measure autonomous exploration in the classroom, teachers completed the Independent Classroom Participation scale of the Teacher Rating Scale of School Adjustment (Birch & Ladd, 1997; Ladd, 1992). Nine items (e.g., "Is self-directive", "Works independently", "Seeks challenges") were rated on a Likert scale (1 = surely not; 5 = very surely). The scale is predictive of children's cognitive development and achievement (Bossaert, Doumen, Buyse, & Verschueren, 2011; Ladd, Birch, & Buhs, 1999; Valiente, Lemery-Chalfant, Swanson, & Reiser, 2008). Internal consistency scores in this study ranged between .78 and .79 across waves.

Social withdrawal. Teachers completed the Shy/withdrawn scale of the Teacher Assessment of Social Behavior questionnaire (Cassidy & Asher, 1992) to measure lack of social engagement. The three items (e.g., "Is shy/withdrawn") were rated on a Likert scale (1 = applies not at all; 5 = applies very strongly). Previous research reported moderate to high internal consistency scores (α s = .61-.89) as well as convergence with peer ratings of withdrawal and correlations with depressive symptoms, peer acceptance, and teacher-child relationship quality in the expected directions (Cassidy & Asher, 1992; Howes, 2000; Rudolph & Clark, 2001). In this study, Cronbach's alphas ranged between .66 and .67 across waves.

Control variables. Control variables were gender, age, autism spectrum disorder (ASD), attention deficit hyperactivity disorder (ADHD), and verbal intelligence (receptive vocabulary) measured with the Word Meaning subtest of the Revision Amsterdam Intelligence Test for Children (RAKIT). The RAKIT has good factorial and convergent validity (Bleichrodt, Drenth, Zaal, & Resing, 1988; Resing, Bleichrodt, Drenth, & Zaal, 2012).

Analyses

Linear growth models were estimated in Mplus 7 (Muthén & Muthén, 1998-2012). This was done separately for social withdrawal and independent classroom engagement. The intercept and slope

were allowed to correlate. The predictors (mean-centered) were added to predict variance in the intercept and slope (predictors were allowed to correlate). The significance of the parameter estimates was tested two-tailed ($p < 0.05$). Non-significant interaction terms were removed from the final models to estimate main effects. Standardized coefficients were reported to indicate effect sizes. The cluster option of Mplus in combination with the MLR estimator was used to account for non-independence of observations (as explained above, some teachers reported on two target children).

The covariance coverage matrix reports the amount of missing data: the proportion of data that were present ranged between 0.847 and 1.000. Full information maximum likelihood (FIML) estimation of missing data was used to retain the full sample.

Results

Table 1 presents the descriptive statistics. As expected, Dependency correlated negatively with Independent Classroom Participation but, somewhat unexpected, did not correlate significantly with Social Withdrawal. Teacher Sensitivity did not correlate with the other variables. Social Withdrawal and Independent Classroom Participation were negatively correlated.

Independent Classroom Participation. Table 2 presents the results of the growth models. Closeness but not Conflict predicted higher intercept levels. Of the control variables, only Receptive Vocabulary proved significant. The other control variables were therefore removed from the model.

The initial level (intercept) of Independent Classroom Participation was negatively predicted by Dependency. There was no main effect of Dependency on growth (slope) in Independent Classroom Participation.

No main effects of Teacher Sensitivity were found on the intercept and slope levels of Independent Classroom Participation. There was, however, a significant interaction between Dependency and Teacher Sensitivity on slope (Figure 1). This interaction effect indicated that dependent children exhibited growth in Independent Classroom Participation when Teacher Sensitivity was high (+2 SD). However, when Teacher Sensitivity was low (-2 SD), the already low levels of Independent Classroom Participation decreased further over time. The estimated standardized difference in Independent Classroom Participation at Time 3 between having a low or high versus average sensitive teacher was .47 for dependent children.

Social Withdrawal. Receptive Vocabulary, Closeness, and Conflict but not Dependency predicted lower intercept levels of Social Withdrawal (Table 2). We found neither main effects nor interaction effects on the slope of Social Withdrawal.

Discussion

Research on teacher-child relationships has grown rapidly over the past two decades. However, this research has mainly focused on the closeness and conflict dimensions of teacher-child relationships. Research on the influence of teacher-child dependency on children's development is virtually absent. The findings of this study indicate that, among children with mild to severe attachment problems in special education, high dependency on teachers has unique negative implications for at least some aspects of children's development, that is children's autonomous exploratory behavior or independent classroom engagement. Furthermore, the study highlights the role of teacher sensitivity as a moderating factor for overly dependent children.

Guided by attachment theory, we assumed that dependency or overreliance on teachers would reflect a lack of autonomous exploration of the classroom environment and we predicted that dependency would be associated with less classroom and peer engagement (Sroufe et al., 1983; Verschueren & Koomen, 2012). In line with this prediction, we found that overly dependent children were rated by teachers as less autonomously engaged or independent in the classroom across the school year. This effect was found above and beyond other predictors such as receptive vocabulary and teacher-child closeness and conflict. Previous longitudinal research has reported a negative effect of a lack of independent classroom participation on the development of cognitive competencies and achievement, suggesting that the cognitive development of these children is at risk (Bossaert et al., 2011; Ladd et al., 1999; Valiente et al., 2008).

Growth in independent classroom participation among overly dependent children was influenced by a teacher's sensitivity to the needs of the child. Overly dependent children with highly

sensitive teachers became more autonomously engaged over time, whereas overly dependent children with low sensitive teachers became even less autonomously engaged than they already were at the beginning of the school year. These effects were medium-large and in line with the protective effects of teacher sensitivity for vulnerable children and children with attachment problems specifically (Buyse et al., 2011; McGrath & Van Bergen, 2015; Sabol & Pianta, 2012) but also draw attention to the undermining effects of low sensitivity.

A possible explanation for the promotive effects of teacher sensitivity among highly dependent children is that sensitive teachers may be able to function as ad-hoc attachment figures for children with insecure working models (Schuengel, 2012; Verschueren & Koomen, 2012). This may contribute to children's adjustment in two ways. First, sensitive teachers may be able to modify children's initial insecure working models by providing corrective attachment experiences, thereby promoting beliefs of self-worth and trust in others (Buyse et al., 2011). A second possibility is that these children may form relationship-specific internal working models of relationships (Sabol & Pianta, 2012; Verschueren et al., 2012): Although they may have limited trust in their primary caregivers, they may learn to rely on ad-hoc caregivers such as teachers. Both explanations need to be tested in future research.

Another possibility is that teacher sensitivity contributes to children's self-regulation skills. Overly dependent children may lack the self-regulation skills necessary for autonomous engagement such as the capacity to regulate impulses and emotions, remember instructions, plan school work, and focus attention. This may be seen in particular among children with attachment problems (Bernier, Carlson, & Whipple, 2010; Schwartz & Davis, 2006). By responding to the child's unique needs, a sensitive teacher may be able to help a child to regulate his or her arousal states and to cope with stress in a more coherent and effective way (Buyse et al., 2011; Little & Kobak, 2003). Over time, the child may become increasingly capable to manage his or her own emotions and behaviors and to focus attention on school work and tasks.

Besides protective effects of high sensitivity, we also found detrimental effects of low sensitivity on independent classroom engagement. Insensitivity of teachers may further increase the child's emotional insecurity making it even more difficult for the child to use the teacher as a secure base for autonomous exploration. Such perpetuating cycles of negative child behavior and unresponsiveness of teachers have been seen in other research as well (Doumen et al., 2008; Sutherland & Oswald, 2005) and may become increasingly difficult to be amended by subsequent teachers.

We found no associations between dependency and engagement in the social domain. It is possible that peer engagement is influenced by other variables such as inhibited temperament, social skills, peer status (i.e., being liked or disliked by peers), and victimization (Palermo et al., 2007; Troop-Gordon & Kopp, 2011) or that the closeness and conflict dimensions are more important (e.g., Engels et al., 2016). In addition, future research could distinguish between different dimensions of social engagement (e.g., solitary behavior, social inhibition; Thijs, Koomen, De Jong, Van der Leij, & Van Leeuwen, 2004).

Limitations and Future Research

This study has several limitations that need to be considered. First, although we used a longitudinal design, we cannot draw causal conclusions given the non-experimental nature of the data. Second, this study included a special education sample of children with mild to severe attachment problems and the results may not be generalizable to other populations. There may also be cultural differences in dependency between populations. Research suggests that dependency is perceived as less negative by teachers in more collectivistic societies (Gregoriadis & Grammatikopoulos, 2013). Third, our measure of sensitivity was rather broad, including two scales representing teacher's behavioral responsiveness to the needs of the child as well as the emotional tone of the teacher's behavior in interaction with the child. These scales have been considered indicators of closeness in the teacher-child relationship (Doumen et al., 2012), which has been theoretically linked to the secure base function of teachers (Verschueren & Koomen, 2012). Fourth, teacher sensitivity was examined only at the beginning of the school year. It is not clear whether our observations are representative for teacher sensitivity in the subsequent trimesters of the school year. Fifth, we examined teacher sensitivity in a

dyadic setting outside the classroom, which has several advantages and disadvantages. In comparison to unstructured observations in the classroom, our observations may have relatively limited ecological validity. For example, it might be easier for teachers to respond sensitively to a child in a one-on-one setting than in classroom settings where teachers have to respond to the needs of many children. On the other hand, this approach allows for a more standardized assessment of teacher sensitivity and thus a more accurate assessment of differences between teacher-child dyads (cf. Zaslow et al., 2006). Furthermore, it may be noted that children's (maladaptive) behaviors during the dyadic situation might have influenced the sensitivity of the teachers. However, teachers are professionals who are expected to respond sensitively to children irrespective of whether children's behaviors can be qualified as adaptive or maladaptive, because every child needs a sensitive teacher. Thus, differences in teacher sensitivity are meaningful even if variance in teacher sensitivity can be explained by difficult behavior of children in the dyadic situation. Future research may examine how child behavior and teacher sensitivity influence each other over time and how these dynamics predict changes in children's autonomous classroom exploration and social participation. Finally, the results might have been influenced by gender mismatch as the majority of teachers in our sample were female, while most of the children were boys (Spilt, Koomen, & Jak, 2012).

Practical Implications

This study highlights the importance of teachers being sensitive to the needs of overly dependent children. However, for many teachers this may be difficult. Dependent children can be very demanding. Teachers may feel emotionally drained when they have the feeling that whatever attention they give the child, it is never enough. How teachers interpret and respond to clingy behavior, either by responding to the child's overt behavior or to the child's underlying insecurity, is key for building a positive relationship and for affording the child a secure base for exploration.

Through psycho-education and teacher consultation, school psychologists can support teachers in responding sensitively (Cappella et al., 2012). Spilt et al. (2012), for example, developed and examined the relationship-focused reflection program to help teachers purposely reflect on relational difficulties with a child. Teacher reflection was found to enhance teachers' sensitivity in interactions with the target children. Banking Time and Playing-2-Gether are other promising dyad-focused interventions to enhance teacher-child compatibility. Banking Time involves dyadic sessions of child-directed play and teacher facilitation techniques (Driscoll & Pianta, 2010). Playing-2-Gether combines principles of Banking Time with a component aimed at behavioral modification techniques grounded in learning theory (Vancraeyveldt et al., 2015). Although these programs have been initially developed for teachers and young students in regular education, the programs may be suitable for teachers of older students as well and in particular for students with attachment problems or students in special education.

In conclusion, this study indicates that high dependency on teachers interferes with children's autonomous exploratory behavior in the classroom. However, teachers who are sensitive to the needs of overly dependent children are able to foster autonomous exploration, whereas low sensitivity further decreases the already low levels of autonomous exploration. Dependency and teacher sensitivity did not predict children's social engagement in the classroom. These results were found for children with mild to severe attachment problems in special education and need to be replicated in other samples.

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Tables

Table 1. Descriptive Statistics (N=85)

	<i>M</i>	<i>SD</i>	Skewness	1	2	3	4	5	6	7
1. Teacher-Child Dependency _{T1}	2.67	.82	.04	1.00						
2. Teacher Sensitivity _{T1}	4.86	.58	.22	-.12	1.00					
3. Independent class participation _{T1}	3.01	.64	.16	-.38**	.10	1.00				
4. Independent class participation _{T2}	3.00	.66	.09	-.35**	.08	.78**	1.00			
5. Independent class participation _{T3}	3.01	.63	.05	-.32**	.06	.73**	.82**	1.00		
6. Social withdrawal _{T1}	2.29	.92	.87	-.08	.05	-.38**	-.40**	-.27*	1.00	
7. Social withdrawal _{T2}	2.23	.90	.48	-.09	.10	-.15	-.27*	-.09	.55**	1.00
8. Social withdrawal _{T3}	2.13	.87	.93	.02	.10	-.19	-.30**	-.32**	.64**	.53**

Note 1. ** $p < .01$. * $p < .05$ (two-tailed)

Note 2. T₁=trimester 1, T₂=trimester 2, T₃=trimester 3

Table 2. Prediction of intercept and slope levels

	Independent Classroom Participation						Social Withdrawal					
	Intercept			Slope			Intercept			Slope		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Receptive Vocabulary	.02	.01	.20	.00	.00	.11	-.03	.01	-.28*	.01	.01	.54
Teacher Sensitivity	.11	.12	.11	-.03	.04	-.12	.01	.15	.01	.06	.08	.36
Teacher-Child Closeness	.32	.10	.39**	.00	.04	.01	-.60	.17	-.56**	.04	.07	.32
Teacher-Child Conflict	.02	.08	.02	-.03	.04	-.16	-.25	.13	-.28†	-.02	.06	-.22
Teacher-Child Dependency	-.31	.08	-.42**	.04	.04	.21	.04	.13	.04	.08	.06	.64
Dependency x Teacher Sensitivity				0.16	.05	.40**						

Note 1. ** $p < .01$; * $p < .05$; † $p = .057$ (two-tailed)

Note 2. T₁=trimester 1, T₂=trimester 2, T₃=trimester 3

Figures

Figure 1. Growth Curves of Independent Classroom Participation for Dependent Children when Teacher Sensitivity is Low, Average, or High

Note. The standardized difference in Independent Classroom Participation at Time 3 between having a low or high versus average sensitive teacher was .47 for dependent children.