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**Relationships between teachers and disruptive children in kindergarten : an exploration of different methods and perspectives, and the possibility of change**

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## 7 General discussion

Relationships between teachers and disruptive children have received considerable attention in the literature and research has consistently shown that disruptive children have more poor relationships with teachers than typical children. In the current thesis, we strived to advance understanding of the nature of the relational difficulties between teachers and kindergarten children with mild externalizing behavior problems. The research was largely motivated by the extended attachment perspective and the conceptual model of adult-child relationships of Pianta and colleagues (2003). Different methods and perspectives were studied, including measures for kindergarten children and teacher narratives. In addition, a relationship-focused reflection program for teachers was evaluated to explore the possibility of change.

In the previous chapters, we already discussed the results and limitations of each of the five studies of this PhD project in detail. Therefore, in this general discussion, we briefly summarized our main results and addressed only those aspects of the research that were not reflected on before. We first provided a brief overview of the new insights in relationships between teachers and kindergarten children with mild behavior problems. Next, the advances in measurement were highlighted. Other issues that we reflected on are the potential of relationship-focused reflection for supporting teacher-child relationships and the utility of the attachment framework. Furthermore, the practical implications of our research were discussed. We closed the discussion with some additional limitations, suggestions for future research and a general conclusion.

## **7.1 New insights in relationships between teachers and disruptive kindergartners**

Relationships between teachers and disruptive children are generally characterized by high levels of relational conflict (Birch & Ladd, 1998; Ladd & Burgess, 1999; Murray & Murray, 2004). Therefore, it did not come as a surprise that teachers expressed more anger in their narratives about relationships with disruptive children. Teachers' expressions of anger were generally associated with particular incidents and teachers did not appear to hold on to those feelings. Yet, such negative incidents were described relatively frequently by teachers. Intriguingly, though teachers' expressions of anger appeared largely child-driven, differences *between* teachers emerged in the degree to which they openly discussed such negative feelings. Teachers seemed to differ with respect to how well they integrated negative feelings in their mental representations of the relationship with a specific child. According to attachment research, especially a dismissive stance towards negative experiences may indicate inflexible and disorganized working models (Main, Kaplan, & Cassidy, 1985). Drawing parallels with mother-child studies, disorganization of mental representations could be related to limited sensitivity to the child's unique needs and may seriously hinder the formation of supportive relationships with students (Adam, Gunnar, & Tanaka, 2004; Button, Pianta, & Marvin, 2001). Neutralizing tendencies of teachers towards negative experiences are probably related to teachers' own attachment experiences (cf., George & Solomon, 1996). Pianta presumed for instance that teachers with a history of avoidant attachment who tend to dismiss negative emotions will respond less sensitive to emotionally needy children (Pianta et al., 2003). There is some evidence for a negative correlation between preservice teachers' recollections of harsh parental discipline and perceived closeness in their current relationships with students (Kesner, 2000), but more research is needed to test this assumption.

Another key finding is that teachers tend to experience more helplessness in relationships with disruptive kindergarten children. They feel less confident about whether they can assert influence on these children, and they are less likely to state clear links between their practices and the child's behavior. This seems consistent with the strong correlation found between child externalizing behavior

and teacher reports of distress (Greene, Beszterczey, Katzenstein, Park, & Goring, 2002).

A third interesting finding that was highlighted in Chapter 5 was that teachers did not report less closeness (STRS) nor narrated less positive feelings (TRI) for disruptive children in comparison to typical children. Relatively mild externalizing problems thus do not seem to hinder teachers in experiencing positive emotions and warmth for a child. This may be different, however, in samples with (sub) clinical levels of conduct problems. In a recent pilot study, kindergarten children were included whom were identified by teachers as behaviorally challenging. In teachers' narratives about these so-called problem children, we detected only modest levels of positive feelings and substantial difficulties in affording children socio-emotional support and guidance. This suggests that the severity of child behavior problems needs to be taken into account when studying relationships of teachers with at-risk children. Of course, replication in larger samples is needed first.

Together, our findings underscore the premise of Hargreaves (1998) that teaching is 'emotional labor' and that emotions are vital in teachers' relationships with kindergarten children. Considering the teacher's perspective, it is important to note that non-productive emotional coping has been identified as a key predictor of teaching stress and burnout (Montgomery & Rupp, 2005). Researchers, therefore, call for more attention to teachers' social-emotional competence and emphasize the importance of supportive resources for teachers (Clemente & Ramírez, 2008; Jennings & Greenberg, 2009). For behaviorally-challenging children, the results confirm that they are at-risk of conflictual relationships with teachers and may experience more, directly or indirectly expressed, anger (frustration) and dissatisfaction from teachers (Fry, 1983; Stuhlman & Pianta, 2002).

The picture that emerges from children's own accounts confirms that teacher-child relationships are related to the socioemotional and behavioral adjustment of young students. As predicted from attachment-based research, children who reported less warm relationships demonstrated gender-typical behavior problems in the classroom. Boys who reported low teacher care and acceptance were viewed as more physically aggressive, whereas girls displayed more socially-inhibitive behavior. No such associations were found with inattention-

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hyperactivity. Those results are in line with research into mother-child relationships and affirm the value of the extended attachment paradigm (Turner, 1991). Interestingly, tests of the same gender-specific hypotheses using teacher reports has yielded inconclusive results (Ewing & Taylor, 2009). This underscores that we need both young children's and teachers' reports to obtain a complete picture of teacher-child relationships.

The results also provide some support for the postulation discussed in the introduction that physical aggression may be more strongly associated with teacher-child relationship quality than other subtypes of externalizing behavior. Both inattentive-hyperactive behavior and physical aggression correlated positively to teacher and child ratings of conflict (see Chapter 4). However, in contrast to inattentive-hyperactive behavior, physical aggression was also negatively related to teacher and child reports of closeness and warmth, respectively. Probably, negative causal attributions of teachers and inclinations to respond with anger and punishment could explain the relatively strong link between physical aggression and teacher-child relationship quality (Lovejoy, 1996). An additional explanation could be that aggressive children have poorer social-problem solving skills than children with ADHD only (Matthys, Cuperus, & Engeland, 1999). Exploration of these assumptions was beyond the scope of the current research but merit attention in future research.

## **7.2 Advances in measurement**

### *Measurement of early physical aggression*

Research with the Dutch adapted version of the Preschool Behavior Questionnaire (PBQ; Behar, 1977; Goossens, Dekker, Bruinsma, & De Ruyter, 2000) supported the widely-accepted but for young children not yet stringently tested assumption that physical aggression constitutes a separate dimension from more generic antisocial behavior. Though substantial overlap between those subtypes of antisocial behavior was observed, the results do indicate that the two can be separated. The current results extended evidence to kindergarten boys and girls. They await replication, however, in samples of younger children aged 2-5.

Overall, the results supported use of the PBQ as a valid screening measure of physical aggression. The checklist is easy for teachers to complete for large numbers of children. In addition, prior research has shown that the checklist also differentiates between developmentally-relevant dimensions of internalizing behavior (Thijs, Koomen, De Jong, Van der Leij, & Van Leeuwen, 2004). The measure could therefore boost research into children's school development in regular education by making it possible to test hypotheses about linkages between teacher-child relationship quality and specific problem behaviors of young students. Another recommendable measure is the Child Behavior Scale (CBS; Ladd & Profilet, 1996) that has been frequently used by other researchers (e.g., Hughes et al., 1999; Ladd & Burgess, 2001). However, to our knowledge, there has been no research that has examined measurement invariance across gender for this teacher-report scale.

*Measurement of teacher-child relationship quality*

In early grade school, research into teacher-child relationship is mostly limited to teacher report questionnaires. Since the start of this PhD project 5 years ago, attempts have been made to address this concern. Nowadays researchers increasingly examine teacher-child relationships in elementary school from different perspectives including not only reports of children but also 'outsider' perspectives of peers and independent observers as well as biological stress measures (Doumen et al., 2009; Doumen, Verschueren, Koomen, & Buyse, 2008; Hughes & Villarreal, 2008; Lisonbee, Mize, Lapp Payne, & Granger, 2008). In the current thesis, two child measures for kindergartners and teacher narratives were explored. *Child measures.* The research presented in Chapter 4 contributed to the evidence for the Y-CATS as a measure of young children's perceptions of teacher-child relationships. Despite several limitations of the measure it could be concluded that the scales Warmth and Conflict of the Y-CATS are sufficiently reliable and valid to be used in scientific research. The availability of this measure may aid research into theoretical questions about the divergence between teacher and child perceptions of relationship quality that is consistently found in research involving both younger and older children. For instance, a child's attachment history may explain low teacher-child agreement. In addition, future research

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could examine to what extent kindergarten children's relationship appraisals guide their actual behavior towards teachers.

We chose to include the KLIC in the study of young child measures because of its innovative measurement method using a computer and the two-step ratings scale adapted from the Harter scale of young children's self-concept. In support of the method, the reliability of children's reports on the KLIC appeared exceptionally high. Limited evidence was found, however, for the construct and convergent validity. Additional research, not reported in the current thesis, provided some support for validity of the KLIC (Spilt & Koomen, 2009). Modest convergence was found between children's reports on the KLIC and teacher-reported Closeness (STRS) and narrated Sensitivity in pedagogical practices (TRI). The difference in teacher-child agreement between the two studies probably results from the selection procedure. In Chapter 4, children were randomly selected, whereas in the other study, a similar selection procedure was employed as in Chapter 5, including typical and disruptive children. More than typical children, disruptive children seemed sensitive to how their teachers felt about the degree of closeness and trust in their relationship as shown by more teacher-child agreement. In sum, it could be concluded that the measurement format of the KLIC is reliable but there is currently insufficient evidence for the validity of the instrument.

Recently, a new adapted version of the KLIC comprising 22 items has been piloted. The first results with this adapted version were promising. The measure comprised three dimensions highly similar to the internal structure of the Y-CATS and the STRS, and successfully discriminated between typical and disruptive children (Van Dijk, 2008). Yet, larger samples are needed for a more extensive examination of the improved psychometric qualities of the new KLIC. Of note, caution is warranted in ethnically-diverse samples. Though the photographs do not portray typically Dutch child actors, they could be less representative of children from non-western backgrounds.

Though we could derive reliable information from young children's own views using the KLIC and Y-CATS, other testing methods may prove successful as well. Taking into consideration that internal working models of relationships operate outside conscious awareness, priming methods could be a promising alternative (Maier, Bernier, Perkrun, Zimmermann, & Grossmann, 2004). Priming stimuli

can be used to activate specific mental representations. Once activated, the attachment model will affect the participant's behavioral response, for instance reaction time. In this way, it could be possible to tap into children's mental representations of the relationship with their teacher.

*Teacher narratives.* Another contribution to the measurement of teacher-child relationships is made in Chapter 5. Our research provided further evidence for the validity of the Teacher Relationship Interview (TRI; Pianta, 1999a; Stuhlman & Pianta, 2002). As expected, this semi-structured interview revealed more indirect qualities of teacher-child relationships and highlighted the salient role of teacher emotions. The findings with the TRI draw attention to some possible weaknesses of the STRS, specifically the limited validity of the Dependency subscale and susceptibility to social desirability response bias.

One noteworthy finding that was not discussed in previous chapters was the limited convergence between the TRI and the STRS subscale Dependency. High Dependency scores indicate that the child tends to react strongly to separation from the teacher and is constantly seeking reassurance (Pianta, 2001). According to attachment theory, overly dependent and clingy behavior could be regarded as overactivity of the attachment behavioral system such that children excessively seek support and security even in non-stressful situations. Overdependence on the teacher may also reflect failure of the teacher-child relationship to function as a secure base, as it implies a lack of autonomous exploration of the classroom environment (Ladd, Birch, & Buhs, 1999). Therefore, a negative association between Dependency and the Secure Base subscale of the TRI could have been expected. Also, linkages with Helplessness or Anger could have been presumed because overly dependent behavior of children could be disagreeable or annoying to teachers. Dependency, however, was not significantly correlated with Sensitive Practices ( $r = .13$ ) not with Secure Base ( $r = .15$ ). In addition, no significant associations emerged in the multilevel regression analysis while controlling for child externalizing behavior (see Chapter 5).

It is possible that the specific set of items by which Dependency is measured accounts for this lack of convergence with the TRI. The Dependency scale comprises items that refer to the child's feelings and behaviors (e.g., 'This child is overly dependent on me'; 'This child asks for my help when he/she really does not need help'). In contrast, Closeness and Conflict are both measured by items

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that reflect both teachers' and children's feelings and behaviors within relationships (e.g., 'I share an affectionate, warm relationship with this child'; 'If upset, this child will seek comfort from me'; and 'Dealing with this child drains my energy'; 'This child feels that I treat him/her unfairly'). Therefore, Dependency may be less reflective of the dyadic relationship than Conflict and Closeness (cf., Doumen et al., 2009). The subscale may be a marker of children's adjustment problems; yet one that does not seem to be very important for teachers' relationships with kindergarten children. Noteworthy, the sample involved typical and disruptive children with low levels of internalizing behavior. It is possible that research in other samples will yield different results with respect to Dependency.

Second, it could be that the TRI yields less socially desirable information from teachers than the STRS. Inspection of the distribution of scores may substantiate this suggestion. Teachers generally rate their relationships with students fairly positive on the STRS as indicated by skewed distributions of scores (Koomen, Verschueren, & Pianta, 2007; Pianta, 2001). Figure 1 presents the distributions of scores of the Positive Affect subscale of the TRI and the Closeness subscale of the STRS obtained from Chapter 5, while Figure 2 depicts the subscales Anger of the TRI and Conflict of the STRS. It can be seen that the distribution of Anger is somewhat less skewed in comparison to Conflict. In contrast to Closeness, Positive Affect showed a normal distribution. Although it should be noted that Closeness and Positive Affect are not conceptually similar constructs and neither are Conflict and Anger, it is possible that the TRI is less susceptible to social desirability bias than the STRS.

Figure 1 Distribution of scores of Positive Affect (TRI) and Closeness (STRS)

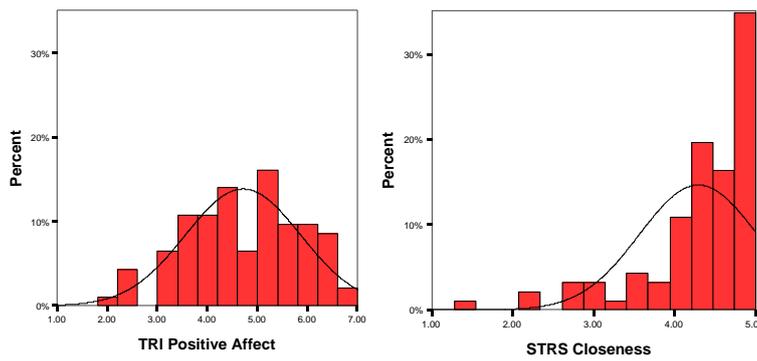
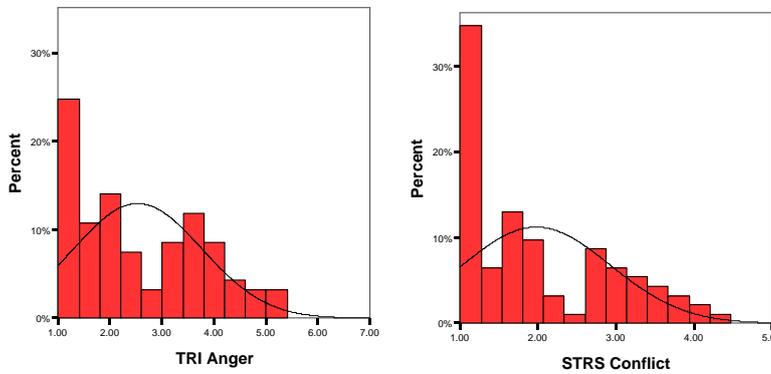


Figure 2 Distribution of scores of Anger (TRI) and Conflict (STRS)



In sum, it could be argued that the STRS yields valuable yet incomplete descriptions of the teacher-child relationship. More indirect measures such as the TRI could make an essential addition, especially by revealing emotional processes. The relatively normal distributions of the TRI scales add to the

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statistical power and are considered a strength of the TRI. In future research, especially the subscale Positive Affect may advance our understanding of the protective value of positive qualities of teacher-child relationships. Of course, the pros and cons of the TRI (i.e., the burden of data collection) need to be weighed against each other in light of the research purposes. Moreover, it remains to be tested whether the TRI truly taps into teachers' mental representations (cf., Maier et al., 2004). In addition, predictive validity needs to be established in further research.

### **7.3 Fostering supportive teacher-child relationships**

Guided by attachment research, the Relationship-Focused Reflection Program (RFRP) was developed to engage teachers in a reflective process aimed at enhancing representational models of relationships with specific children. The RFRP was evaluated against a more general approach that aimed at changing teacher behavior (i.e., IST; Interpersonal Skills Training) in order to test the attachment-based assumption that reflection on underlying beliefs and affective experiences is more powerful than attempts to directly improve behavior of teachers. As expected, the results provided first support for the relative efficaciousness of the RFRP. Though some substantial changes were found in teacher cognitions as well as improvements in observed behavioral sensitivity of teachers, we do not know whether this has influenced children's development. From a dynamic systems perspective, it is expected that changes in one part of the system affect the system as a whole (Pianta, 1999b). Thus, changing teachers' belief patterns and reorganizing their mental representations will produce changes in teacher-child dyadic systems causing new emergent interaction patterns over time, which in turn affects children's functioning. However, this assumption cannot be proven without repeated follow-up assessments of children's adjustment.

The intervention study addressed the call of researchers to develop and test intervention programs aimed at teachers' relationships with specific children. The focus on the dyadic micro-system is in line with ecological models that emphasize how children both shape and are shaped by their social environment. Improving

teacher-child relationships is important because these relationships could function as resources and resilience mechanisms that counteract the social and academic risks associated with early disruptive behavior (e.g., Hamre & Pianta, 2005). Of note, teacher-child relationships may also be indirectly affected by interventions that target socioemotional competence of teachers, professional development and/or classroom climate (Jennings & Greenberg, 2009; Pianta, Mashburn, Downer, Hamre, & Justice, 2008). Still, we believe that in educational practice there is a need for a dyadic approach that can be easily incorporated in teacher consultation models. As notified in recent commentary on teacher consultation involving children with ADHD, effective consultation ultimately yields changes in teachers' beliefs and attitudes, and there is still a need for research that addresses these changes in teachers' functioning (Nadeem & Jensen, 2009). We trust that our evaluation of the RFRP intervention contributes to such questions.

It is important to note that the study did not include children with clinical behavior problems. Rather the study was conducted from a preventive orientation. Hopefully, the RFRP could help prevent relatively mild behavior problems from growing into clinical problems through social processes that involve teachers such as self-fulfilling prophecies, labeling effects, and cognitive-affective reactions of interaction partners (Caprara, Dodge, Pastorelli, & Zelli, 2007). This needs to be examined in intervention trials with repeated follow-up measurements that include information about children's functioning. Also, instead of examining intervention success in terms of 'improvement', it may be interesting for future research to shift the focus to prevention of *failure*. The question then is: 'Does the RFRP prevent teachers and disruptive children from developing *poor* relationships?'. In other words, could the RFRP help sustaining 'good-enough' relationships? To address this question, intervention differences in the number of dyads that develop subclinical or clinical levels of relational problems over time could be examined. This could be a useful approach especially in samples involving students with more serious conduct problems. A recent study of Schultz and colleagues (2009) illustrates the utility of such an approach.

The development of our intervention program RFRP was largely guided by recommendations of Pianta as implemented in the STAR program (Pianta, 1999). Teacher consultation is one part of the program, yet another appealing element of the STAR program is Banking Time. Banking Time has the potential to indirectly

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alter teachers' mentally represented relationship beliefs because it interrupts routine teacher-child interactions by constraining the behavior of the teacher (i.e., teachers behavior are restricted to child-initiated requests and are not contingent on the child's good behavior). New feedback and exchange processes may emerge that indirectly affect the teacher's representational beliefs about the relationship. In our intervention study, it was shown that attempts to change teacher behavior by a more general approach showed limited effects on teachers' perceptions and no improvements in teacher responsiveness in dyadic interactions with specific children. However, because Banking Time is focused on changing teacher behavior towards a *specific* child, it could be a more powerful way to change a teacher's mental representation of his or her relationship with a child than the IST. This would be an interesting question for future research.

#### **7.4 Reflections on the usefulness of the attachment framework**

The current research in kindergarten classes was largely driven by the extended attachment perspective on teacher-child relationships. In line with attachment research and the notion of internal working models, we argued in Chapter 4 that it would be important to study children's own perceptions, in Chapter 5 that narratives are the obvious mean to tap into teachers' mental representations of relationships with specific children, and in Chapter 6 that relationship-focused reflection rather than changing actual behavior would be the key to enhance teacher-child relationships. The results supported the value of children's own reports as well as the interview method used in Chapter 5. In addition, we found that, similar to results found for mother-child relationships, kindergarten children with non-close or distant teacher-child relationships displayed gender-specific problem behavior (Turner, 1991). Furthermore, negative emotions appeared the most salient aspects of teachers' narrative accounts in relationships with disruptive children, which paralleled findings from maternal narratives (Button et al., 2001). Also, the results supported our expectation that enhancement of reflective functioning of teachers is more powerful than behavioral training to support teacher-child relationships.

However, based on attachment theory, a stronger association could have been expected between teacher-child relationship quality (STRS) and process variables, such as Neutralizing of Negative Affect and Coherence of the narrative (TRI; see Chapter 5). In the attachment paradigm, the capacity to form a coherent and flexible representation of a relationship and to discuss negative aspects in an open and honest way is a key indicator of attachment quality (Main et al., 1985). Therefore, an incoherent narrative and a dismissive stance of teachers to discuss negative affect could be expected to be main indicators of poor teacher-child relationships. The results of Chapter 5, however, did not substantiate this. Instead, neutralizing of negative affect was just a small predictor of relational conflict, while the coherence of the narrative even showed a positive association with conflict. We speculated that this latter finding was a result of teachers having more daily interactions with disruptive children, and therefore could present more coherent answers to the interview questions. This explanation was corroborated by the finding that the positive correlation between coherence and conflict emerged only in the group of disruptive children. Yet, it must be noted that it was not in line with predictions based on attachment research. This draws attention to the differences between parent-child and teacher-child relationships. Relationships between teachers and children are considered *secondary* attachment relationships. As explained in the introduction, teacher-child relationships are not exclusive, lasting, or predominantly affective, and the separation effect often does not occur (Koomen & Thijs, 2004-2005). In addition, teachers are professionals who have received education in child development. For these reasons, we may have found moderate evidence for the importance of preoccupation with negative affect (i.e., high scores on anger) or, the seemingly opposite approach, of neutralizing negative affect (i.e., dismissing attitude). Importantly, the results should be considered preliminary given the relatively low reliabilities of the subscales of Coherence and Neutralizing of Negative Affect.

## **7.5 Practical implications following the current research findings**

The current studies yielded several important implications for both kindergarten teachers and mental health consultants. It is imperative for children's school

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adaptation, that teachers engage students in a personal relationship in which children feel known and valued. Many teachers in early education do consider relationships as central to their teaching as could be inferred from their relationship narratives. Teachers appear to have, at least, an *implicit* understanding of the importance of nurturing relationships with children. Yet, we noticed that teachers did not communicate well thought-out ideas about how their relationships with children may foster children's development. Teachers could profit from more thorough knowledge of scientific theories that explain the value of interpersonal relationships for children's development. In addition, we believe that teachers need to be attentive to their own feelings as emotions appear an inescapable part of their teaching experiences. For many teachers, teaching is busy energy demanding labor and not many teachers have the 'luxury' of time to reflect on their relationships with specific children or on what emotions children's personality and behaviors solicit in them. Integration of reflective practices in the services and trainings available for teachers is therefore warranted.

School psychologists and other mental health professionals are encouraged to consider the use of the Teacher Relationship Interview (TRI) for needs-based assessment. The recent focus on ecological models in school psychology has led to a shift from more clinically-based assessment activities to consultation models and a practice-oriented assessment approach (e.g., Dawson et al., 2003). In this new approach, assessment activities are aimed at understanding and problem solving rather than labeling and diagnosing (Pameijer, 2006). Consulting school psychologists are now increasingly seeking to empower teachers to intervene effectively on behalf of the children. The key question for them is how to influence or alter a teacher's understanding and behavior. The TRI has potential to facilitate a practice-oriented approach to teacher-child relationship difficulties. Whereas the STRS is particularly useful for screening, the TRI could aid the explanatory phase because it provides insight in unfavorable teacher perceptions that could maintain or increase problems. Also, the TRI explores both strengths and difficulties of the relationship and teachers' potential for change, enabling consultants to assess and elaborate on positive factors to may facilitate intervention success. Lastly, based on our experiences with teachers who participated in the RFRP, we believe that the TRI is very helpful to set up teacher consultation (see Chapter 6).

## **7.6 Final considerations, limitations, and recommendations for future research**

Some comments on the samples could be made. The samples may be subject to selection bias because participation of teachers was voluntary. Furthermore, when interpreting or comparing results from the different studies, it must be noted that the samples varied with respect to the number of participating children per classroom, ethnical composition, and distribution of behavior problems of children. The research did not focus on clinical levels of behavior problems. Given norms established from a Dutch validation sample, few of the participating teacher-child dyads demonstrated clinical levels of relational problems (Koomen et al., 2007).

In particular with respect to the research presented in Chapter 4 and 5, it must be noted that the cross-sectional nature of the data precludes causal inferences about the association between externalizing child behavior and teacher-child relationship quality. Recent research suggests reciprocal influences between externalizing behavior and conflicts in teacher-child relationships, suggesting a negative cycle of exacerbating problem behavior and conflict throughout the course of a school year (Doumen, Verschueren, Buyse et al., 2008). This negative cycle, importantly, seems to be driven by elevated levels of child problem behavior in the beginning. Of note, this research used teacher reports only.

Within the time-frame and the available resources of the current PhD project, it was unfortunately not possible to conduct the 'ideal' study; that is to examine the Y-CATS and KLIC as well as the STRS and TRI in the same sample. Such a study would have added to the empirical evidence on the validity of the instruments and could be considered in future research. This is in particular interesting as there is now an extended and adapted version of the KLIC (Koster, 2007) and a norm-referenced Dutch version of the STRS (Koomen et al., 2007).

In the introduction, it was discussed why it would be useful to distinguish between subtypes of externalizing behavior in research into teacher-child relationships. It may be noted, however, that when an explicit focus on physical aggression is adopted, girls with conduct problems could be easily overlooked. For the purposes of the two final studies, a gender-mixed sample was considered most suitable. We therefore did not focus on physical aggression in this research

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(see Chapter 5 and 6). Instead, we used the broadband scale of externalizing behavior to select children as suggested in the literature (Webster-Stratton, 1996). Future research could study forms of antisocial behavior that are more typical for girls such as relational aggression (Archer & Coyne, 2005).

According to Pianta's conceptualization of adult-child relationships (2003), it is a flaw to be narrow-focused on one or two components of the dyadic system. Instead, the system should be studied as a whole. However, we first need measures that make it possible to adequately assess all separate components before the dynamic interaction processes between those components can be investigated. In the current PhD project, we contributed by evaluating relatively new measures of mental relationship representations of teachers and young student's perceptions of teacher-child relationships. Considering ecological models, it should also be emphasized that dyadic systems function in a larger context. Teacher-child relationships are developed in the classroom and school community. Classroom and school climate, policy, administrator support, in-service support, and colleagues can either positively contribute or put constraints on teachers' ability to form supportive relationships with students.

Another important step forward would be to further investigate the third component of Pianta's model that is feedback processes between child and teacher. To date, these processes have received relatively little attention. Especially the emotional tone of interactions is believed to be important. Research suggests that teachers convey anger in their interactions (Stuhlman & Pianta, 2002), which is noted by children even when teachers try to conceal their anger (Babad, 1990). In addition, the research presented in Chapter 5 and 6 calls attention to teacher characteristics such as coping with negative emotions and teaching efficacy. More research is needed to understand how teacher characteristics relate to teachers' capabilities to build supportive relationships with students (Hamre, Pianta, Downer, & Mashburn, 2008; Mashburn, Hamre, Downer, & Pianta, 2006).

## **7.7 General conclusion**

The central focus of this PhD project was the relationships between teachers and kindergarten children with mild behavior problems. The research contributed to the measurement of teacher-child relationships by exploring relatively new instruments for kindergarten children and through the exploration of teacher narratives elicited with the Teacher Relationship Interview. Through these instruments, new insights were obtained in relationships between teachers and disruptive children. The results showed that children's beliefs and feelings about the relationships with their teachers were related to classroom adjustment problems. Considering the teacher's perspective, it could be inferred that most kindergarten teachers consider relationships with children central to their teaching. These relationships solicited unique emotions in teachers that were related to teachers' perceptions of relational conflict and closeness. Especially in relationships with children who exhibit externalizing behavior, teachers experienced elevated levels of anger and helplessness that can be interpreted as frustration and uncertainty about their efforts to provide children what they need to succeed in the classroom. In addition, enhancement of teachers' awareness and understanding of emotional processes and affective experiences through relationship-focused reflection appeared relatively effective to improve teachers' sensitivity to children's socioemotional and academic needs. Lastly, this research supported the study of physical aggression as a separate construct from more general antisocial behavior in early childhood. For future research, it was put forward that physical aggression may be stronger related to and influenced by teacher-child relationship quality than other dimensions of externalizing behavior.

In conclusion, kindergartners with behavior problems are at risk of conflictual relationships with teachers, eliciting feelings of frustration and helplessness in teachers, which could increase risks of socioemotional difficulties and academic failure. Yet, positive changes appeared possible when teachers are engaged in in-depth reflection on their relationship with a specific child.

