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Assessing Child-Teacher Relationships: A Review Study

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ABSTRACT

Understanding and documenting how young children negotiate their relationships with their teachers is crucial, considering that early teacher–student relationships have important long-term implications for children’s school success (Hamre & Pianta, 2001). However, the existing studies on teacher–child relationships focus primarily on the teacher’s perception of the relationship and have predominantly relied on the STRS, a 28-item teacher self-reported Likert-type (5-point) scale developed to assess a teacher’s feelings about her or his relationship with a particular student, her or his beliefs about the student’s feelings toward the teacher, and a student’s interactive behaviors with the teacher (Pianta, 2001; Saft, 1994). The majority of the evidence about the teacher–student relationship comes from studies conducted in the United States (e.g., Birch & Ladd, 1998; Hamre & Pianta, 2001; Pianta & Nimetz, 1991). Therefore, an examination of the cultural sensitivity of assessment methods of child–teacher relationships is crucial. This review of the literature focuses on methodologies used to assess or measure child–teacher relationships and the effects of culture on the assessment of this significant relationship during the elementary and primary school years.

Key Words: assessment, teacher, student, relationship

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Öğretmen-Öğrenci İlişkilerinin Değerlendirilmesi: Alan Taraması

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ÖZET

Öğrenci-öğretmen ilişkilerinin uzun süren etkilerinin olduğu düşünüldüğünde, genç öğrencilerin öğretmenlerle olan ilişkilerini nasıl yürüttüklerini anlamak oldukça önemli olduğu görülür (Hamre & Pianta, 2001). Fakat, öğretmen-öğrenci ilişkisi ile ilgili yapılan çalışmalar yalnızca öğretmenlerin bakış açılarını yansıtmaktadır ve STRS adı verilen öğretmenlerin belirli bir öğrenci ile olan ilişkileri, öğrencilerin öğretmeni nasıl gördüğüne dair görüşleri veya öğretmenin öğrenciyle etkileşimine dair öz yansıtmasına dayanan 5li Likert tipi ölçekle yapılmıştır (Pianta, 2001; Saft, 1994). Öğretmen-öğrenci ilişkisindeki çoğu veri Amerik Birleşik Devletleri'nde yapılan çalışmalardan gelmektedir (e.g., Birch & Ladd, 1998; Hamre & Pianta, 2001; Pianta & Nimetz, 1991). Bu yüzden, öğrenci-öğretmen ilişkilerinin kültürel hassasiyete bağlı değerlendirme yöntemlerinin incelenmesi zaruridir. Bu alan taraması ilkökul ve ortaokul düzeylerinde öğrenci-öğretmen ilişkilerine ve bu önemli ilişkinin ölçülmesinde kültür etkisine odaklanmaktadır.

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Introduction

Schools and classrooms are composed of individuals who are embedded in a social matrix; thus, the education process itself is a largely interpersonal endeavor, at the heart of which lies the teacher–student relationships. When children enter school for the first time, they encounter a variety of new challenges that include creating positive relationships with peer groups and adults as well as learning to meet the demands of a wide range of cognitive, social, and academic tasks (Baker, 2006; Birch & Ladd, 1997; Pianta, Steinberg, & Rollins, 1995).

Teacher–child relationships play a prominent role in the development of competencies in the preschool and early school years (Hamre & Pianta, 2001; Pianta & Walsh, 1996). Though a large body of literature has examined interactions among teachers and students (e.g., Brophy & Good, 1986; Zeichner, 1995), most studies have focused almost entirely on instruction. Moreover, these previous studies have integrated a social component into understanding instructional interactions (e.g., Rogoff, 1990), but the social, emotional, and relational qualities of these interactions have been neglected in the majority of the studies. Furthermore, until the mid-1990s, most assessment tools for examining teacher–child

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interactions lacked a relationship perspective. In addition, although some studies have looked at certain aspects of the relationships between teachers and students, researchers have only recently begun to integrate knowledge about teachers' attributes, expectations, attitudes, and interactions with children into the context of social development theories (e.g., attachment and self-system theories). Therefore, there is a need for development of valid and reliable measures of teacher–child relationships in the context of social, emotional, and relational qualities of teacher–child dyadic interactions.

In the last 20 years, the effects of teacher–student relationship quality have received considerable attention in the literature, with a focus on older children and adolescents (Mantzicopoulos & Neuharth-Pritchett, 2003). Recent studies support the significance of child–teacher relationships for (a) developing skills in peer relations (e.g., Elicker, Englund, & Sroufe, 1992; Howes, Hamilton, & Matheson, 1994); (b) developing school adjustment competencies including attention, motivation, problem-solving, and self-esteem (Baker, 2006; Birch & Ladd, 1997); and (c) predicting and preventing behavioral problems and psychopathology (Birch & Ladd, 1998; Campbell, 1994; Pianta, 1999, 2001). Studies have shown that positive teacher–student relationships establish a warm environment that facilitates successful adaptation in school. Conversely, conflictual teacher–student relationships are associated with lower achievement as well as ongoing relational conflict with both teachers and peers (Buyse, Verschueren, Doumen, Van Damme, & Maes, 2008; Hamre & Pianta, 2005). Research has further indicated that children with whom teachers report positive relationships are outgoing and socially competent (Birch & Ladd, 1998; Pianta, et al., 1995). These findings support the key role that teacher–student relationships play in children's school adjustment.

Understanding how children negotiate this experience and documenting the relationships that they build with teachers is crucial, considering that early teacher–child relationships have important long-term implications for children's school success (Hamre & Pianta, 2001). However, the existing studies on teacher–child relationships have focused primarily on the teacher's perception of the relationship and have predominantly relied on the Student–Teacher Relationship Scale (STRS; Pianta, 2001), a 28-item teacher self-reported Likert-type (5-point) scale developed to assess a teacher's feelings about her or his relationship with a particular student, her or his beliefs about the student's feelings toward the teacher, and a student's interactive behaviors with the teacher (Pianta, 2001; Saft, 1994). Few studies, in contrast, have examined children's perceptions of their relationships with teachers in the early school years (e.g., Connell & Wellborn, 1991; Lynch & Cicchetti, 1992; Mantzicopoulos & Neumitzz, 2005). Little is known regarding young children's perceptions of the teacher–student relationship. Relationships in this context are more than simply the sum of the parts. Instead, they are conceptualized as dyadic systems that consist of interactions, representations, and the characteristics of the two individuals involved (Pianta, 1999). Therefore, description and assessment of relationships will be more valid and reliable when informed by multiple perspectives and when built upon multiple methods across diverse contexts.

The majority of the evidence about the teacher–student relationship comes from studies conducted in the United States (e.g., Birch & Ladd, 1998; Hamre & Pianta, 2001; Pianta & Nimetz, 1991). Fewer studies have been conducted with Western European samples (e.g., Buyse et al., 2008; Gregoriadis & Tsigilis, 2008) or samples from developing countries, such as Turkey (e.g., Beyazkurk & Kesner, 2005). In the context of Turkey, Beyazkurk and Kesner (2005) showed that Turkish preschool teachers perceived their relationships with their students as closer and more dependent than U.S. teachers did. Similarly, Gregoriadis and

Tsigilis (2008) reported that the STRS Dependency subscale was positively related to the Closeness subscale in Greek educational settings, in contrast to studies conducted with samples in the United States (e.g., Pianta, 2001; Saft, 1994). These findings can be attributed to differences in the cultural meanings of dependence within collectivistic social structures (i.e., Turkish and Greek cultures), which, in contrast to the U.S. culture, view interdependence as a form of nurturing and caring.

In this paper, I will explain and discuss the applicability and limitations of methods, such as interviews, questionnaires, and observations, employed to assess child–teacher relationships from the perspective of both the child and the teacher. I will also examine the effects of culture on the assessment of the teacher–student relationship. Topics will be presented in the following order: (a) theoretical framework, (b) the importance of teacher–student relationships, (c) teachers’ perspectives on teacher–student relationships, (d) children’s perspectives on teacher–student relationships, (e) cultural considerations in measuring teacher–student relationships, and (e) conclusions.

Theoretical Background

The literature review that follows features a discussion of two theoretical frameworks. The first section presents a brief overview of theories that have postulated the importance of feelings of belongingness, relatedness, or social support, with an elaborated discussion of self-determination theory (Connell & Wellborn, 1991; Deci & Ryan, 1985). The construct of relatedness is described, including its significance as a basic human need and its implications for children’s emotional and behavioral engagement. I will also discuss attachment theory and its use of the notion of internal working models to explain how early relationship patterns developed during mother–child dyadic interactions may influence children’s relationships with their teachers (Pianta, 1999).

Self-System and Self-Determination Theories

Five decades ago, Maslow (1962) proposed that belongingness as a basic human need must be met before other needs (i.e., learning) can be addressed. Similarly, Baumeister and Leary (1995) pointed out that human beings have pervasive motivation to maintain and form at least a minimum quantity of lasting, positive, and warm interpersonal relationships. Deci and Ryan (1985) proposed a construct similar to belongingness and social support, which they called “relatedness.” According to self-systems theory (Connell, 1990), the need for relatedness, the need for competence, and the need for autonomy are central psychological needs within the framework of self-system processes. Self-determination theory shares this perspective and has also contributed to the construct definition of relatedness by positing that the need for relatedness must be fulfilled to achieve self-regulation, motivation, and personal well-being. Specifically, Deci and Ryan (1985) defined the need for relatedness as feelings of security or belongingness in the social environment that motivate individuals to follow norms and rules. Relatedness provides the security that is necessary for student initiative, independence, and autonomy in completing tasks that promote competence. Central to the relatedness construct is the notion of involvement. Deci and Ryan (1991) pointed out that children feel related to their teachers when they believe that their teachers are involved with them. Moreover, the degree to which the need for relatedness is met influences whether a person will be engaged or disaffected, and people look for experiences that will fulfill and satisfy their need for relatedness through school, work, and family. For example, when children experience emotional security in their interactions with their social partners (i.e.,

teacher) in school settings, the resulting feelings of relatedness foster children's engagement in school tasks. Moreover, Lynch and Cicchetti (1992) investigated the relationship between children's perception of relatedness to their teachers and the quality of the teacher–student relationship. They showed the importance of meeting children's basic need for relatedness and the positive teacher–child relationships for children who are coping with particularly difficult circumstances (i.e., negative life events and depression). Similarly, Skinner and Belmont (1993) examined both teacher and student perceptions of teacher involvement with third- through fifth-grade students to understand the relationship between children's need for belongingness and motivation to learn. They used the term “involvement,” which referred to the quality of teacher–student interaction. They found that there is a direct link between teachers' reports of their involvement and students' behavioral engagement in the classroom settings. A body of research, based on samples of older children and adolescents, has also documented that within the school context, teachers who support children's basic psychological needs and provide a healthy classroom environment also promote more positive teacher–student relationships (Connell & Wellborn, 1991; Deci & Ryan, 2002; Standage, Duda, & Ntoumanis, 2005; Urda & Schoenfelder, 2006). However, despite the compelling and intuitively appealing discussion proposed by previous researchers (Connell & Wellborn, 1991; Deci & Ryan, 1991) regarding the value of positive teacher–child relationships, relatively few studies have examined kindergarten or young children's relationships with their teachers or considered how the construct of relatedness applies specifically to young children.

Attachment Theory

Whereas self-systems and self-determination theories have guided research with older children, attachment theory has been the primary framework for conceptualizing the teacher–child relationship in the early school years (Pianta & Nimetz, 1991; Saft, 1994; Sroufe, 1983). Developed by John Bowlby (1969), attachment is an affectional bond between child and caregiver (Ainsworth, Blehar, Waters, & Wall, 1978). Since Bowlby generated an ethological theory of mother–child attachment relations over 30 years ago, attachment theory has become an instrumental guide both for research in emotional development and in clinical intervention. Attachment theory holds that the child's recurrent interactions with caretakers contribute to the development of an internal working model (IWM): an internal representation of relationships that includes affect, beliefs, and expectancies based on past relationships (Bowlby, 1969, 1982; Sroufe, 1983). Bretherton (1985) suggested that the child's IWM is derived from the generalization of schemas of specific interactions into general beliefs regarding caregivers' behaviors and characteristics. Over time, these beliefs develop into a theory of self that influences the child's working model for future relationships. As a result, IWMs include views of the self in relationships and expectations for current and future relationships. Accordingly, early experiences with the caregiver are crucial in developing secure attachment relationships. Children with secure attachment histories are more likely to develop internal representations of the self as competent and worthy of respect and are likely to view others as supportive, helpful, and close (Jacobsen & Hofmann, 1997). Securely attached children tend to relate more positively to both peers and adults, engage in more complex play, and receive higher sociometric ratings than children classified as insecure (e.g., Howes, Hamilton, & Matheson, 1994). Similarly, securely attached adults report more supportive and satisfying interpersonal relationships and demonstrate greater trust in others (Larose & Bernier, 2001). On the other hand, children with an anxious-avoidant attachment style tend to resist seeking help from others and demonstrate less dependence on their social network (Larose & Bernier, 2001). In this process, they limit access to their own feelings and perceive others as undependable and rejecting. Therefore, anxious-avoidant children are not

able to develop trusting relationships with others and see others as unable to provide emotional closeness and trust. In comparison, children with an anxious-resistant attachment style may lack self-confidence, and they may sacrifice exploration of both social and learning environments in order to maintain the proximity and the attention of the caregiver. Sroufe, Fox, and Pancake (1983) pointed out that anxious-resistant children can be easily overstimulated and exhibit reactivity, impulsiveness, restlessness, and frustration. Accordingly, these children are more likely to show higher frequencies of internalizing behavioral problems. On the other hand, disorganized attachment predicts the poorest developmental outcomes in infancy and beyond (Hamre & Pianta, 2001). Carlson (1998) demonstrated that there is a significant correlation between disorganized-controlling attachment and later behavioral problems such as aggression and social isolation. Therefore, various patterns of parent-child interaction, especially the mother's sensitive and contingent responses, affect the development in early childhood of secure or insecure IWMs and predict social and academic competence (Pianta & Harbers, 1996; Sroufe, 1983).

Development of Student-Teacher Relationships

A considerable body of research (e.g., Howes, 1999; Pianta, 1999) has used attachment theory to explain the development of relationships beyond the family environment that provide emotional support and protection. Using the Ainsworth Strange Situation (Ainsworth et al., 1978), Ainslie and Anderson (1984) found that the same patterns of avoidant, secure, and resistant attachment that have emerged in studies of mother-child relationships are also evident in teacher-child relationships. For example, Sroufe (1983) used teacher Q-sorts to examine a variety of child outcomes in a study of the effects of parent-child attachment on teacher-child relationships in preschool. Sroufe found that children with anxious-avoidant attachment histories to their mothers were most likely to seek less contact with their teachers, and their teachers demonstrated anger toward these children.

Howes (1991) suggested three criteria to identify attachment figures beyond the parent-child attachment relationships: (1) provision of physical and emotional care, (2) a consistent presence in one's life, and (3) an emotional investment in the individual. Thus, relationships with daycare providers (e.g., Howes, 1999) and school teachers (e.g., Pianta & Steinberg, 1992) may be qualitatively similar to those created through the mother-child dyadic interaction.

The child's IWM, developed through early experiences with primary caregivers, structures expectations and attachment behaviors regarding relationships outside the family. Pianta and Steinberg (1992) pointed out that the quality of teacher-student relationships is related to the quality of the parent-child relationship. Moreover, children who experience more positive, closer, and more supportive relationships with their teachers tend to demonstrate greater social and academic competence, have fewer behavioral problems, and have closer relationships with teachers as compared to peers with insecure attachment relationships (Howes et al., 1994).

Similar to the relationship with the primary caregiver, children also can form attachments to significant adults other than their parents, and these relationships can affect children's socioemotional development (Oppenheim, Sagi, & Lamb, 1988; Sroufe, 1983). In addition, the student-teacher relationship develops as a dynamic and interactive system over time and across multiple situations (Pianta, 1999). In other words, both teachers and students bring to the classroom patterns that reflect their feelings, expectations, and motivational goals associated with their own attachment history. For example, individuals with dismissing status typically resist establishing close and warm relationships with others. Accordingly, previous research has found that adults differ in their ability to act as a secure base for the children who

they are in a relationship with, depending on their attachment style (Kesner, 2000; Pianta & Steinberg, 1992). For instance, secure adults are typically more able to evaluate realistically their own relationship histories and to act as secure caregivers as opposed to adults with insecure attachment histories. As a result, relational patterns rooted in parent–child relationships can affect the development of new relationships including teacher–child dyadic interactions (Wood, Kiff, Jacobs, Ifekwunigwe, & Piacentini, 2007). Therefore, the student–teacher interaction is a new important relationship, partially born out of the original child–caregiver relationship, and it is a major developmental milestone, as the child moves from the protection of the home into the wider world of schooling. Much like parent–child relationships, teacher–student relationships serve a regulatory or supportive function for children’s emotional, social, and cognitive development (Pianta, 1999). Student–teacher relationships involve dynamic psychological structures (schemas) that are distinct from individual behaviors, values, and beliefs. As they evolve in school settings, these rich schemas do, in reciprocal ways, interact with and influence both individual and context characteristics. For example, teachers, who tend to be preoccupied, with a preoccupied status may be more supportive of the anxious-resistant student and, on the other hand, may reject the students who are more avoidant-disorganized because of their own dependency needs, and this can bolster the negative IWMs of relationships for these children. Therefore, the quality of the teacher–student relationship is affected by both the child’s and the teacher’s IWM.

Based on the premise that there is continuity between the quality of parent–child and teacher–child relationships comparable to that reported in the parenting literature, three dimensions have been used to define the teacher–child relationship quality that also represent important themes in attachment relationships: warmth/security (secure attachment), resistant/conflict (anxious-resistant), and ambivalence/dependency (anxious-avoidant). Regardless of the assessment method (e.g., child, teacher, or observer report), underlying relationship dimensions include these themes.

To sum up, self-determination and attachment theory assume a biological basis driving the need for positive interpersonal relationships. Both theories propose that positive interpersonal relationships have particular importance for students’ successful and healthy participation in school settings. Both assume that interpersonal relationships have special significance for children since they are keys to school adjustment.

Assessing Child–Teacher Relationships

Description and assessment of relationships is best when informed by multiple perspectives and methods in diverse contexts. In this section, I will discuss two critical perspectives on the assessment of relationships: the insider’s view and the outsider’s view.

The teacher’s view. Thus far, studies of young children’s relationships with their teachers have relied on methods that include (a) observational techniques (e.g., Howes & Hamilton, 1992; Howes et al., 1994; Ladd, Birch, & Buhs, 1999; Pianta, Nimetz, & Bennett, 1997), (b) self-reports from teachers based on data from interviews or rating scales (e.g., Pianta, 1996, 2001; Pianta & Nimetz, 1991), and (c) self-reports from children (e.g., Harrison, Clarke, & Ungerer, 2007; Mantzicopoulos & Neuharth-Pritchett, 2003; Murray, Murray, & Waas, 2008; Patrick, Mantzicopoulos, Samarapungavan, & French, 2008; Spilt, Koomen, & Mantzicopoulos, 2009). Regardless of the method used, underlying relationship dimensions include warmth/security, resistance/conflict, and ambivalence/dependency, which are important themes in attachment relationships. Of all available measures, the STRS is the most extensively validated with early elementary samples.

Guided by attachment theory, most previous research on the teacher–student relationship has primarily used the teacher as the informant and has relied on the teacher’s perception. Across studies, various methods have been used to examine the quality of the teacher–student relationship in early childhood contexts such as preschool and kindergarten classrooms. A common method of measuring the quality of teacher–child relationships is through teachers’ reports of their perceptions of their relationships with a particular child in their classrooms (Pianta, 1999).

Much of the research regarding teacher–student relationships has used the STRS (Pianta, 2001), a measure identifying three distinct dimensions of teacher–child relationships conceptually derived from attachment theory (Pianta, 1999, Saft & Pianta, 2001): conflict, closeness, and dependency. *Conflict* refers to relationships characterized by discordant and coercive interactions or affect; *closeness* concerns the extent to which the teacher’s perception of her or his relationship with the child is warm and positive; and *dependency* includes a clingy and dependent relationship between the child and the teacher.

Pianta and Nimetz (1991) first developed and piloted the STRS to assess teacher–child relationships from the teacher’s perspective. Based on attachment literature, this scale was intended to reflect teachers’ internal working models of their relationships with students. The 16-item measure tapped the teachers’ feelings about individual children, their beliefs about the children’s feeling toward them, and the teachers’ observations of the children’s specific behavior in relation to them. The pilot instrument was written based on the Attachment Q-Set (Waters & Deane, 1985), which was designed to classify parent–child attachment patterns. Factor analyses of the pilot STRS yielded two factor solutions: a positive relationship factor reflecting warmth and open communication and a dependent factor reflecting overdependence and vulnerability. Pianta and Nimetz (1991) found that subscales based on these factors were moderately correlated to concurrent measures of teacher ratings of adjustment in first-grade and retention decisions. After the pilot study, Pianta and colleagues dropped several items and used an expanded 31-item version of the STRS in a larger sample (Pianta, 1994; Pianta & Steinberg, 1992; Pianta, Steinberg, et al., 1995). Pianta and Steinberg (1992) used the STRS with 436 kindergarten children and their 26 teachers. Their initial factor solution yielded five factors: Conflict/Anger, Warmth/Closeness, Open Communication, Dependency, and Troubled Feelings. They found strong associations with teachers’ ratings of children’s classroom behavior (e.g., conduct problems, social skills, and task engagement) in early school years. Furthermore, Pianta and Steinberg pointed out that a teacher’s decision to retain a child in kindergarten was related to the STRS dimensions. For example, children who were retained had relationships characterized by higher scores on conflict, dependency, and troubled feelings dimensions than nonretained children. In addition, Pianta, Steinberg, and Rollins (1995) looked at the effects over time, which showed that children with highly warm and close relationships with their kindergarten teachers had fewer behavioral problems. Also, children with positive relationships with their teachers in kindergarten had closer and warmer relationships with their second-grade teachers. Pianta (1994) used a cluster analysis to investigate kindergarten teachers’ perception patterns of their relationships with their students, using the 31-item STRS. Six clusters were created (e.g., Dependent, Positively Involved, Angry, Functional/Average, Angry/Dependent, and Uninvolved). This analysis helped the researchers consider the types of teacher–child relationships in each class. For example, some students at high risk of failure because of maltreatment may benefit from placement with a teacher who would show respect and acknowledge and encourage open communication.

Pianta, O’Connor, Morog, Button, Dimmock, & Marvin (1995)) and Saft (1994)

showed that a three-factor solution is most meaningful and practical with respect to the criteria of (a) variance accounted for, (b) alpha reliability, (c) construct validity, and (d) the ease of use and interpretation. This three-factor solution was derived from more than 1,400 child participants and more than 200 teachers from preschools and classroom in the U.S. states of North Carolina, Wisconsin, and California. Key relational dimensions were Closeness (the degree of warmth and open communication), Conflict (anger and conflict), and Dependency (clingy and dependent behaviors).

After completing all pilot studies, Pianta (2001) designed the STRS as a 28-item teacher self-reported Likert-type (5-point) scale developed to assess a teacher's feelings about her or his relationship with a particular student, the student's interactive behaviors with the teacher, and the teacher's beliefs about the student's feeling toward the teacher (Pianta, 2001; Saft, 1994). The STRS comprises three subscales—conflict, closeness, and dependency—which are confirmed and supported by a sample of more than 1,500 preschool through third-grade students and more than 200 teachers in the classrooms across the United States (Pianta, 2001). The Conflict subscale measures the degree to which a teacher perceives his or her relationship with a particular student as negative and conflictual (Pianta, 2001). This subscale is made up of 12 items such as “This child and I always seem to be struggling with each other,” “This child easily becomes angry with me,” “This child feels that I treat him/her unfairly,” and “This child remains angry or is resistant after being disciplined.” Additionally, this subscale contains one reverse item: item 19, “The child responds well to my look or tone of voice.” Scores on this subscale range from 12 to 60 (Pianta, 2001). The Closeness subscale measures the degree of warmth, open communication, and affection that exists between the teacher and the child (Pianta, 2001; Pianta & Steinberg, 1992; Saft, 1994; Steinberg, 1993). This subscale includes 11 items such as “I share an affectionate, warm relationship with this child,” “This child spontaneously shares information about himself/herself,” and “This child openly shares his/her feelings and experiences with me.” Scores range from 11 to 55 (Pianta, 2001). The Dependency subscale measures the degree to which a teacher perceives a particular student to be clingy and overly dependent. This subscale comprises five items (e.g., “This child is overly dependent on me,” “This child reacts strongly to separation from me,” and “This child appears hurt or embarrassed when I correct him/ her”). Dependency scores range from 5 to 25. The STRS also yields a total scale score that indicates the degree to which a teacher perceives his or her relationship with a particular student as overall positive and effective (Pianta, 2001).

Validity studies have shown that there is a predictable and significant correlation between the STRS and concurrent measures of behavior problems, academic skills (including performance on standardized tests; Hamre & Pianta, 2001; Pianta, Steinberg, et al., 1995), and peer relations (Birch & Ladd, 1997). For example, moderate concurrent relationships have been reported between the STRS and teacher-rated behaviors with peers on the Child Behavior Scale in both kindergarten and first-grade samples (Birch & Ladd, 1998; Ladd & Profilet, 1996).

The STRS appears to be an instrument that is sensitive to teacher–child relationships and teachers' decisions or perceptions regarding children's current and future school adjustment. The instrument was developed using a normative base of more than 1,400 children of varying ages as well as backgrounds, which makes it the most psychometrically advanced and valid instrument for the assessment of relationships among teachers and children in the United States. Despite its widespread use, the STRS is a limited instrument due to the fact that it assesses the relationship from only the teacher's perspective and ignores the child's perspective. Furthermore, reliance on teacher ratings on the STRS as the only

indicator of teacher–child relationship quality can lead to some methodological concerns. For example, the data can be confounded when the same teacher rates the relationship quality and the child’s social and academic competence (Harrison et al., 2007). For instance, Howes (2000) found a moderate correlation between the second-grade measures of behavior problems and relationship quality. This may indicate that the ratings of the STRS can be influenced by the ratings of children’s behavioral problems, and vice versa. In short, the STRS describes the relationship from one perspective, that of the teacher, and therefore it does not present a complete picture of the child–teacher relationship (e.g., Hamre & Pianta, 2001).

Despite its widespread use, little research has investigated the factorial validity of the STRS, and only a few studies have examined the factor structure of the previous versions of the instrument (Pianta & Steinberg, 1992; Saft, 1994; Steinberg, 1993). In addition, no study has examined the factorial validity of the current 28-item version of the STRS in the United States. The aforementioned studies seem to provide support for the STRS as a potentially reliable and valid measure of teachers’ perceptions of child–teacher dyadic interactions. However, research testing the relationship between an instrument like the STRS and school outcome measures to show external construct validity does not guarantee homogeneity between the items and the dimensionality of item-structure (Loevinger, 1957).

Thus, previous validation studies of the STRS have demonstrated some methodological limitations. For example, the factor structure of the STRS has been investigated using only principal component analysis. The goal of factor analysis is to explain the relationship among the variables. Principal component analysis and common factor analysis (CFA) are used for different purposes. Widaman (1993) pointed out that principal axis factoring or maximum likelihood factor analysis is used to examine the theoretical constructs underlying the measurement. Research on exploratory factor analysis suggests that principal component analysis is a more appropriate method for data reduction; however because of its assumption of variables as error-free, which is not a logical assumption in the social sciences (Neuharth-Pritchett, & Webb, 2008). In contrast, CFA is a more powerful approach to evaluate the factorial validity of the instrument because it enables the researcher, in advance, to specify an exact factor model to be tested. The postulated three-factor solution and structure of the 28-item STRS has never been tested in the United States. In addition, previous research has shown that the Dependency subscale has a more moderate level of internal consistency because of the relatively small number of the STRS items it encompasses. The Dependency subscale also is occasionally omitted or combined with the Conflict subscale. Therefore, Dependency should be used with caution, and users should not interpret scores on the Dependency subscale in isolation from the other subscale scores.

Interviews. Interviews that are validated and designed primarily with parents are used by researchers to elicit teachers’ descriptions of their relationships with their students (Pianta, 1999). Pianta (1997) developed the Teacher Relationship Interview (TRI) on the basis of work with the Parent Development Interview (Pianta, O’Connor, Morog, Button, Dimmock, & Marvin, 1995). The TRI (Pianta, 1999) is a semi-structured interview developed to assess teachers’ internal working models of their relationship with a particular child. This interview requires teachers to describe examples of specific types of interactions with individual children and to depict their own and the children’s affective responses to their interactions. The interview takes approximately 30 minutes. The TRI comprises 12 standard questions (“Please choose 3 words that tell me about your relationships with [name]. Now, for each word please tell me a specific experience or time that describes that word.” and “Tell me about a specific time you can think of when you and [name] really ‘clicked.’” How did you

feel? How do you think [name] felt?") answered by the teachers to describe their relationships with their students. Teachers give specific examples of incidents in which the teacher and the child had positive or negative interaction. The interviewers also use standard follow-up questions about the emotional state of the teacher and the child at the time of interactions. Thus, interviews designed to assess teacher–child relationships provide an additional window through which to gain insight regarding patterns of teacher–child relationship quality that may not be available through other methods of assessment such as questionnaires or observations. For example, Stuhlman, Hamre, and Pianta (2002) used the TRI to examine teachers' narratives regarding their relationships with students. They found that teachers' reports during the interview were significantly linked to several aspects of observed child behaviors toward their teachers as well as observed teacher behaviors toward the children. Similarly, Pianta (1999) pointed out that the TRI is designed to provide as comprehensive a description as possible of teachers' mental representations without sacrificing detail. Additionally, this interview protocol provides maximum flexibility for both analysis and research that can be applied to almost any semi-structured interview. Whereas the STRS is most useful as a screening measure to identify relational difficulties or strengths, Koomen, Verschueren, and Thijs (2006) found the TRI to provide a more differentiated picture that can be particularly useful as a starting point for relationship-focused consultation with teachers. Pianta, Harare, and Stuhlman (2003) pointed out that teacher–child relationships as dyadic systems are not only affected by actual behaviors and qualities of partners but also by each individual's mental representation of the relationship. Evidence shows that interview methods are useful for tapping unconscious operating processes (Maier, Bernier, Perkrum, Zimmermann, & Grossmann, 2004). Moreover, representational measures may provide additional insight into teacher–child relationships and document more implicit qualities including emotional processes.

Pianta (1999) explained that the TRI can elicit a wide range of individual differences, which can be useful for practitioners facilitating a discussion of relationships while working with a teacher. However, interviews are very time-consuming and cannot be used with a large number of people. Furthermore, the interviewer can influence the data if he or she is not consistent. Therefore, the use of the TRI should be embedded in a battery of measures that examines aspects of classroom behavior (e.g., instruction and behavior management) (Pianta, 1999).

The child's view. Can young children make reliable and valid ratings of their relationships with their teachers? Several child-reported questionnaires and interviews are available for assessing students' perceptions and representations of their relationships with their teachers. Most of these measures tap similar constructs, although some focus on child emotional and psychological experiences while others examine child perceptions of teacher behavior (Pianta, 1991). Previous research on teacher–student relationships among kindergarten children has focused exclusively on the use of teacher-reported measures of teacher–student relationships (e.g., Birch & Ladd, 1997; Howes et al., 1994; Kesner, 2000; Ladd et al., 1999; Pianta, 1994; Pianta & Steinberg, 1992). Although these studies have provided a framework for understanding and documenting these relationships, reliance on only teacher reports can limit our understanding of the teacher–student relationship in early school years. Accordingly, Spilt, Koomen, and Mantzicopoulos (2010) concluded that teacher reports are prone to be influenced by the teacher's professional stance based on experiences with many children as a caregiver, teacher, and socializer. Moreover, self-reports, including the STRS, can be colored by the teacher's psychological functioning. For example, Hamre, Pianta, Downer, and Mashburn (2008) showed that teachers with lower self-efficacy beliefs

and higher levels of depressive feelings were more likely to report more conflictual relationships with preschoolers than teachers with higher self-efficacy beliefs. Similarly, Little and Kobak (2003) concluded that according to reports by 9- to 13-year old children, the trustworthiness and psychological availability of teachers is affected by teachers' social responsiveness and their stress reactivity to negative interpersonal relations.

Over-reliance on teacher-reported instruments could entail negative repercussions (Murray et al., 2008). Murray and colleagues (2008) proposed potential issues pertaining to rater bias among the teachers. Children's demographic characteristics and children's behavioral problems can influence teacher perceptions of children (e.g., Dobbs & Arnold, 2009; Kesner, 2000; Saft & Pianta, 2001). For instance, Dobbs and Arnold (2009) used attribution theory as a framework to better understand the quality of the teacher-student relationship, examining the linkage among teacher perceptions of child behavior and teacher behavior toward the child. They found that teachers gave more commands to children whom they perceived as having more behavior problems. Therefore, extensive use of and reliance on teacher reports for the assessment of the quality of teacher-student relationships and outcome variables might produce inflated estimates of the importance of these relationships (Murray et al., 2008).

Pianta and his colleagues (2003) showed that both teacher and child perceptions of shared dyadic interaction are affected by a relational history with significant attachment figures. Both teachers' and students' IWMs uniquely contribute to the teacher-student relationships, and they function as frameworks for interpreting and understanding relationships with each other (Bowlby, 1969). Accordingly, teachers and children appraise their dyadic interaction quality in the face of a shared interpersonal relationship. For example, previous researchers found that both teacher and student reports were related to their concurrent relationship or their attachment history (Howes & Hamilton, 1992; Kesner, 2000).

Additionally, there is often a lack of concordance between children's perception and the perceptions of parents and teachers. For instance, Achenbach, McConaughy, and Howell (1987) found an extremely low correlation ($r=.20$) among teacher and child self-reported measures of children's emotional health. Bost (1995) also showed that mothers and young children had different perceptions of structural and functional aspects of children's social support network. Similarly, a few recent studies that examined the children's perception of the quality of the relationship with their teachers found modest child-teacher agreement in early school years even when parallel teacher and student assessment are used (Mantzicopoulos & Neuharth-Pritchett, 2003; Murray et al., 2008; Rey, Smith, Yoon, Somers, & Barnett, 2007). The convergence between teacher and student reports is small; thus, both teachers and students make unique contributions in the assessment of the quality of teacher-student interactions (Hughes & Villarreal, 2008). Accordingly, IWMs of relationships with others make unique contributions to the quality of dyadic interactions between teachers and students (Bowlby, 1969; 1982). In this context, it is vital to document and understand children's behavior toward their teachers and their perceptions about their dyadic interactions with their teachers.

In sum, previous studies have shown that reliance only on teacher reports can limit our understanding of teacher-student relations (e.g., Harrison et al., 2007, Howes & Hamilton, 1992; Kesner, 2000; Mantzicopoulos & Neuharth-Pritchett, 2003). Insight into child perceptions of teacher-student relationships is vital to understanding and documenting children's feelings and behaviors in teacher-child dyadic interactions. In line with this argument, I will discuss the assessment methods of child perceptions of the teacher-student relationship.

Interviews. Although, several informal interview methods have been used to ask children about classroom life, in these interview, only a few questions are typically included that relate to their interaction with teachers (Pianta, 1999). A few formal interview protocols focus on children's perceptions of their relationships with teachers (e.g., Goldstein, 1993). Goldstein (1993) developed the Clinical Interview Form, which comprised a wide range of questions related to a child's experiences at home, at school, and with peers. In 1999 Pianta pointed out that adaptations to this protocol can expand these interviews to encompass teacher-student relationships. For instance, a section on family in Goldstein's protocol includes questions about the quality of the parent-child relationship. These questions can be easily adapted for the assessment of the classroom and teacher behaviors (e.g., "Who is the teacher you spend the most time with?" and "What are some things this teacher does that make you feel good?"). Pianta (1999) pointed out that this interview assessment can be used to gain insight into the views of elementary and middle-school children about their relationships with their teachers. Unfortunately, many younger children simply cannot perform the requests made in this interview protocol. In addition, in interviewing children about relationships with teachers, researchers or practitioners should observe several principles: (a) children may not readily respond to direct questions; (b) as the child responds, the interviewer should affirm the child's view and should gently elicit specific examples of the experience in question; and (c) the interviewer should approach the interviews as opportunities to gain information about the child's representational model of relationships with teachers.

Child self-reported measures. Wellborn and Connell's (1987) relatedness scale has been used in several studies with children of different ages and risk levels (e.g., Lynch & Cicchetti, 1992). For instance, Lynch and Cicchetti (1992) examined school-aged children's perceptions of their relationships with their teachers by asking direct questions (i.e., "I wish my teacher paid more attention to me," "I wish my teacher knew me more."). Their relatedness scale consisted of emotional items that assess emotional quality, such as feeling happy, sad, or scared and items tapping psychological proximity, such as the child wishing the teacher paid more attention to him or her (Pianta, 1999). Alpha reliabilities for these scales ranged from .74 to .88 (Lynch & Cicchetti, 1992).

Valeski and Stipek (2001) used self-system theory to develop a measure of young children's feelings about school, which includes a 3-item subscale asking children to rate their perceptions of their teachers (i.e., how much the teacher cares; how the teacher feels) and feeling about the teacher (i.e., how much the child likes the teacher). Children's responses were assessed on a 5-point Likert scale. The researchers found that kindergartners' and first-graders' feelings about school were related to their academic skills, as measured by direct assessment and teacher ratings. Moreover, they compared student ratings on this instrument and teacher ratings on the STRS and found a significant correlation between child-rated feelings about the teacher and teacher-rated closeness with first-grade children ($r=.28$, $p<.05$). However, there was a weaker correlation among the kindergarteners ($r=.14$, $p<.10$).

Mantzicopoulos and Neuharth-Pritchett (2003) developed the Young Children's Appraisals of Teacher Support (Y-CATS) to assess young children's perceptions of teacher-child relationships. The Y-CATS uses descriptive statements to assess children's perceptions of teacher warmth/support (i.e., "My teacher likes me" and "My teacher is my friend."), the teacher's granting of autonomy (i.e., "My teacher lets me choose work I want to do."), and negative interaction and conflict (i.e., "My teacher gets angry with me."). Children's reports were modestly correlated with teacher-rated relationship quality and school adjustment measures (Mantzicopoulos, 2005; Mantzicopoulos & Neuharth-Pritchett, 2003). Although

many measures have described and explained affective qualities of the teacher–student relationship, only the Y-CATS clearly differentiated between warmth and conflict and comprised a three-dimensional framework that was theoretically similar to that found in teacher reported instruments (Spilt et al., 2010). On the other hand, although the Y-CATS has shown relatively good reliability and validity support when used with Head Start children, its factor structure should be examined with different samples because the factor structure could be restricted to the sample (Spilt, et al., 2009). This study also showed that the three-dimensional structure of the Y-CATS largely corresponds with the theoretical construct of underlying teacher reports. However, Spilt and her colleagues (2010) argued that the Y-CATS provides a relatively rough measure of child perceptions because of its dichotomous response format. This format explains the relatively limited variability in mean subscale scores and accounts for the negatively skewed distribution. Therefore, they suggested the solution of adopting a two-stage process by first presenting the child two opposing statements (e.g., “My teacher likes me” vs. “My teacher does not like me”) that represent opposite ends of a continuum. After the first step, the child’s statement is followed by a dichotomous response option to get a finer assessment of the child’s perception. In addition, previous researchers have pointed out that the presentation of items together with corresponding pictures could improve young children’s understanding of test items (Eiser, Mohay, & Morse, 2000). For example, Spilt and her colleagues (2010) have used a similar method to examine children’s perceptions about their relationships with their teachers. They found that the Kindergarten–Teacher Interaction Computer (KLIC; Spilt et al. 2010) instrument proved highly reliable and had valid results for further construct development. Similarly, Murray et al. (2008) examined child and teacher reports of teacher social support using an adapted version of the widely used measure My Family and Friends-Child (MFF-C). The first part of each question asked the children to affirm or deny whether the teacher provides a certain type of support (e.g., “When you need help putting on your shoes or coat, do you go to your teacher for help?”). The response format for the first part is “Yes” or “No.” The second part of each question is designed to assess children’s satisfaction with the support (e.g., “If you go to your teacher for help putting on your shoes or coat, how helpful is he or she?”). They found that only the MFF-C total scale was significantly and modestly correlated with children’s positive views of school but that it was not related to the quality of the teacher–student relationship.

Spilt and her colleagues (2010) developed the KLIC, a computer test that employed photographs of teacher–student interactions to facilitate children’s comprehension. Child ratings on the Y-CATS and the KLIC confirmed that kindergarten children had a good conceptual understanding of the test items and the test formats of two instruments. Although there was a modest agreement among the teacher ratings on the STRS and child reports on the Y-CATS, this small agreement could be the result of limitations in young children’s social information processing and could stem from the teacher and child measures having different test and item formats (Spilt et al., 2010). Furthermore, the relational perceptions of teachers and children can be different from each other because of mental representations that are based on their unique attachment histories with significant others (Kesner, 2000; Lynch & Cicchetti, 1992). On the other hand, the KLIC had a unidimensional structure that reflected an affective quality of teacher–student interaction. High scores on the KLIC indicate warm and supportive relationships characterized by teacher support and mutual cooperation, whereas low scores on the KLIC indicate conflictual and discordant teacher–student relationships. Although the KLIC had high internal consistency and stability over time, item content, and test format, support for the validity of the scale was limited. On the other hand, this study did uncover some important factors. Spilt et al.’s (2010) findings highlighted the importance of children’s

perceptions of the quality of teacher–student interactions, and they established that kindergarten children are capable of providing reliable and valid information regarding their relationship experiences.

Observations of Teacher–Child Relationships

Observational methods are used commonly to examine the nature and quality of dyadic interactions and relationships that children and teacher experience within early classroom settings. During observations, an outside observer uses a standardized coding system or rating scale to rate and evaluate the quality of teacher–child interaction in early school years (Pianta, 1999). The quality of instructional interactions and emotional relationships established between teachers and children influences the child’s social and academic competence (Pianta, 1999, 2003). Therefore, although individual child assessment information is critical for aligning educational standards for learning and for developing curricula, it is equally important to assess the quality of the early childhood (birth to age 8) classroom environment through standardized classroom observation systems.

A high-quality classroom environment is a valuable and crucial mechanism for ensuring positive child outcomes. Gathering information on both individual child assessment outcomes and the quality of the classroom environment is vital because children’s developmental outcomes are often dependent on the quality of their experiences in educational settings (Pianta, 2003). Moreover, understanding and documenting classroom quality through standardized classroom observation systems can assist researchers in a variety of ways, including measuring and noting teachers’ strengths and weaknesses, planning and providing professional development, planning for and evaluating programs, and evaluating policy initiatives.

The Caregiver Interaction Scale (CIS) developed by Jeffrey Arnett (1989) examines the quality of a teacher’s interactions with preschool children. This widely used tool is completed by an observer who rates the teacher’s behavior in a child care– or home-based setting. The primary use of this instrument is to examine a teacher’s interactions with children and to assess the teacher’s emotional tone, discipline style, and responsiveness in the classroom. The CIS consists of 26-items that are rated on a 4-point scale that includes: 1 (not at all), 2 (somewhat), 3 (quite a bit), or 4 (most of the time). The items are usually organized into the following four subscales: sensitivity, harshness, detachment, and permissiveness (Kruif, McWilliam, Ridley, & Wakely, 2000). When combined, these four scales give an overall caregiver quality score.

The Teacher Attachment Q-Set (Howes et al., 1994) is an adaptation of the Attachment Q-Set (Waters, 1987; Waters & Deane, 1985), which is a well-known measure to assess attachment organization in young children with their mothers. The Attachment Q-Set comprises 90 descriptions of child behaviors derived from attachment theory, and the research focuses on different aspects of child’s attachment (Pianta, 1999). The Q-set methodology most commonly is used to assess child–teacher relationships in early childhood settings (e.g., Howes, et al., 1994; Pianta et al., 1997). The researcher (e.g., Howes, et al., 1994; Pianta, 1999) eliminated some items that had relevance only to a mother–child relationship and not to a teacher–student relationship (e.g., “Child often cries or resists when mother takes him to bed for naps or at night.”). After rewriting the remaining items, Howes and his colleagues used this methodology with several hundred teachers and several thousand children in child care and preschool settings (Pianta, 1999). However, the Q-set method was shown to not be well-suited for use in applied settings because it is fairly complex and the scoring procedure is not practical.

Other observational measures focus on teachers’ interactions with children, such as the

Observational Record of the Caregiving Environment (ORCE) and the Classroom Observation System developed by the NICHD Early Child Care Research Network (2002). These instruments were among the first observational measures that focused on teachers' relations with their students. Similarly, the Classroom Assessment Scoring System (CLASS; Pianta, La Paro, & Hamre, 2007) was adapted and designed from the scales of the ORCE and the Classroom Observation System. Instruments that examine classroom quality tend primarily to focus on the physical and organizational aspects of the classroom (Pianta, La Paro, Payne, Cox, & Bradley, 2002). In other words, the CLASS examines what teachers do with the materials as opposed to what is available in the physical environment (La Paro, Pianta, & Stuhlman, 2004). However, the definition for quality also includes the kind of teacher-child interactions that occur in preschool and elementary settings. In conjunction with the classroom environment, research has shown that the type of interactions with adults and the instruction that takes place in pre-kindergarten and early elementary school can affect children's achievement and social competence (see La Paro et al., 2004). For instance, in classrooms with high-quality interactions, teachers promote children's learning through scaffolding and support, and provide appropriate questioning and feedback (La Paro et al., 2004). The CLASS consists of nine constructs related to three theoretical dimensions of the quality of teacher interactions with children: emotional climate, instructional climate, and classroom management. *Positive climate* refers to the degree of enthusiasm, enjoyment, and emotional connection that the teacher has with children, whereas *negative climate* includes evidence of hostility, aggression, and anger displayed by teachers and students in the classroom setting. *Sensitivity* refers to the degree to which the teacher can be viewed as a secure base for children and the responsiveness of the teacher to the children's academic and emotional needs.

The NICHD (National Institute of Child Health and Human Development) Study of Early Child Care (2002) and the NCELD (National Center for Early Development and Learning) use extensive observational methods to assess the quality of teacher-child relationships in early school settings. These studies showed that emotional climates characterized by positive interactions are emotionally warm and caring (e.g., Pianta & La Paro, 2003). Similarly, Peisner-Feinberg and Burchinal (1997) found that high-quality experiences are positively related to children's concurrent academic and social competence.

As shown in this section, teacher-child relationships are contextually very important for development and learning in the early school settings. Therefore, observational, child-reported, and teacher-reported assessment methods provide valuable information needed for assessing these relationships. Thus, a multi-format package of instruments is crucial to extend our understanding of the teacher-student relationship.

Cultural Considerations in Assessment of Teacher-Student Relationships

Although attachment theory is one of the most influential conceptual frameworks, its universal applicability and appropriateness across different cultures has not been established (Wang & Mallinckrodt, 2006). Bowlby (1969) claimed that the key attachment concepts and frameworks are culturally universal and can apply to all human beings, regardless of cultural differences. Nonetheless, although today's attachment researchers posit the universality of the core concept of attachment, they have also acknowledged that some attachment behaviors and patterns vary across cultural contexts (Grossmann, Grossman, & Kepler, 2005; Pasado & Jacobs, 2001; Wang & Mallinckrodt, 2006). For instance, Rothbaum, Weisz, Pott, Miyake, and Morelli (2000) investigated the applicability of attachment theory in the Japanese culture and argued that attachment constructs and patterns are not culturally universal. In subsequent

research Rothbaum, Kakinuma, Nagaoka, and Azuma (2007) observed cultural differences between Americans and Japanese, despite similarities in the manifestation of secure and insecure attachment behaviors. Japanese mothers linked security with more accommodative behaviors, whereas U.S. mothers associated security with more exploration and less aggression and anger. Moreover, the child's inappropriate behaviors in Japanese mother-child dyads were attributed to the need for security and interdependence. Additional research has raised questions about the cultural universality of teacher-child dyadic relational patterns (Beyazkurk & Kesner, 2005; Gregoriadis & Tsigilis, 2008; Koca, 2010). Considering the theoretical and empirical parallels between parent-child and teacher-child relationships (Howes & Hamilton, 1992; Pianta, 1999, 2001), it is reasonable to expect that relational patterns between teachers and children also are perceived and expressed differently across cultural contexts. Recent studies have found cultural differences in the patterns of teacher-child relations, suggesting that secure and insecure attachment patterns may have differential behavioral manifestations across cultures (Beyazkurk & Kesner, 2005; Gregoriadis & Tsigilis, 2008). For example, Beyazkurk and Kesner (2005) showed that Turkish preschool teachers perceived their relationships with their students as closer and more dependent than U.S. teachers did. Similarly, Gregoriadis and Tsigilis (2008) reported that the STRS Dependency subscale was positively related to the Closeness subscale in Greek educational settings, in contrast to studies conducted with samples in the United States (e.g., Pianta, 2001; Saft, 1994). Similarly, Koca (2010) found a positively significant correlation between the STRS Dependency and Closeness subscales. This study result suggests that Turkish first-grade teachers perceive their students' dependency on them as less of a negative characteristic than do their peers in the United States. Turkish first-grade teachers may consider the dependent behavior of their students as an indication of closeness rather than of conflict, because some dependent behaviors (e.g., demonstration of unconditional love and acceptance) may be considered a positive reinforcement of the teachers' effectiveness and self-esteem. As further evidence of differing cultural beliefs around the concept of Dependency, items 12 ("This child tries to please me"), 15 ("It is easy to be in tune with what this child is feeling"), and 21 ("I have noticed this child copying my behavior or ways of doing things") on the STRS, which were expected to load on the Closeness scale, instead loaded on Factor 2 (Dependency) along with other Dependency items (Koca, 2010). Similarly, Gregoriadis and Tsigilis (2008) reported that the original Closeness item 21 loaded on the Dependency scale in Greek educational settings. These findings can be attributed to differences in the cultural meanings of dependency within collectivistic social structures (i.e., Turkish and Greek cultures), which, in contrast to the U.S. culture, view interdependence as a form of nurturing and caring.

Conclusion

As discussed throughout this paper, a child's early school experience is often significant for his/her educational life well beyond these first years of formal instruction. Especially in the preschool and kindergarten years, social experiences have consequential implications for a child's socioemotional development and academic competence. Relationships play a significant role in organizing children's emotional and cognitive functions by helping them maximize their social abilities and academic performance (Hamre & Pianta, 2001; Pianta, 1999). Thus, teacher-child interaction is central to the development of competencies during preschool and the early school years (Hamre & Pianta, 2001; Pianta & Walsh, 1996). Recent studies have shown that positive teacher-student relationships establish a warm environment that facilitates successful adaptation to school. In comparison, conflictual teacher-student relationships can impede the child's general well-being and his/her academic success (Buyse et al., 2008; Hamre & Pianta, 2005). These findings indicate

the key role of teacher–student dyadic relationships on children’s school adjustment. Therefore understanding and documenting the key role of teacher–student relationships in early school years is crucial. To date, studies of young children’s relationships with their teachers have relied on methods such as observational techniques (e.g., Howes & Hamilton, 1992), self-reports from teachers based on interviews and scales (e.g., Pianta, 1999, 2001), and self-reports from children (e.g., Harrison et al., 2007; Mantzicopoulos & Neuharth-Pritchett, 2003). Of all available measures, the Student–Teacher Relationship Scale (STRS; Pianta, 2001) is the most extensively validated with young children. Although much of the research discussed throughout this paper has used the STRS, reliance on teacher ratings on the STRS as the only indicator of teacher–student relationship quality can lead to some methodological concerns. For instance, the data can be confounded when the same teachers rate the relationship quality and the child’s social and academic competence (Harrison et al., 2007). In addition, previous studies have shown that reliance solely on teacher reports can limit our understanding of teacher–student relations (e.g., Harrison et al., 2007, Howes & Hamilton, 1992; Kesner, 2000, Mantzicopoulos & Neuharth-Pritchett, 2003). Insight into child perceptions of teacher–student relationships is vital to understanding and documenting children’s feelings and behaviors in teacher–child dyadic interactions. Promisingly findings in these studies highlighted the importance of children’s perceptions of the quality of teacher–student interaction, and they established that even young children are capable of providing reliable and valid information regarding their relationship experiences. However, there remains a dearth of research pertaining to children’s perceptions of the quality of teacher–student relationships.

In addition, despite the STRS’s (Pianta, 2001) widespread use, little research has been done to investigate the factorial validity of the STRS, and only a few studies have examined the factor structure of the earlier versions of the instrument (Pianta & Steinberg, 1992; Saft, 1994; Steinberg, 1993). The factorial validity of the current 28-item version of the STRS in the United States has never been examined. Although, a substantial body of research has found the STRS to be a psychometrically sensitive, reliable, and valid instrument, research on the relationship between the STRS and school outcome measures for the external construct validity does not guarantee homogeneity between the items and the dimensionality of item-structure (Loevinger, 1957). Therefore, future studies should focus on the factorial validity of the 28-item version of the STRS in the United States.

Though adult–child key attachment concepts are a culturally universal phenomenon and can apply to all different relational patterns regardless of cultural differences, the way that attachment-related behaviors are perceived and interpreted can vary across cultural contexts (Grossmann et al., 2005; Pasado & Jacobs, 2001; Wang & Mallinckrodt, 2006). In line with theoretical and empirical parallelisms between adult–child attachment and teacher–child dyadic interactions (Howes & Hamilton, 1992; Pianta, 1999, 2001), cultural differences may play a part in the expression and perception of teacher–student relational patterns across different cultures. Accordingly, recent studies have pointed out that secure and insecure teacher–student relational patterns may have differential behavioral manifestations across cultures (Beyazkurk & Kesner, 2005; Gregoriadis & Tsigilis, 2008; Koca, 2010). However, these cultural differences can result from some perceptual and response biases embedded within the teachers’ relationships with their students. Therefore, further research is needed to understand and document the effects of the quality of teacher–student relationships in diverse cultural contexts. Though the aforementioned studies have provided initial evidence to support the applicability of the STRS in different educational settings and have shown the effects of culture on the assessment of child–teacher relationships, further research is needed.

The importance of the teacher–student relationship has been established in the United States, but new measurement tools and methods are still needed to investigate different dimensions of teacher–student dyadic interactions in early childhood education and the effects of a wide range of developmental, cognitive, and socioemotional inputs and outcomes. In line with this argument, future studies should focus on the fact that description and assessment of the teacher–student relationship is more reliable and valid when informed by multiple perspectives using multiple methods, across multiple occasions, and in multiple contexts.

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