

**ARE TEACHERS' PERCEPTIONS ABOUT STUDENT-TEACHER
RELATIONSHIPS PREDICTABLE FROM ONE GRADE TO THE NEXT?**

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ABSTRACT

The quality of student-teacher relationships plays an important role in a child's educational experiences. Empirically, students who possess positive relationships with their teachers have an increased likelihood of positive school attitudes as well as positive school "outcomes" such as higher grades. Children with conflicted student-teacher relationships are at increased risk for academic problems such as poor grades and repeating a grade. It is therefore important to consider not only what the child brings into the classroom, but also what kind of relationship evolves in order to minimize factors contributing to lower student-teacher quality.

The current investigation uses an attachment theory perspective to look at student-teacher quality. It is longitudinal in design, with four goals relating to change in student-teacher relationships from one school grade to the next: (1) to document stability and change in teacher-reported relationship quality, (2) to test whether children who engage in more externalizing behaviors have poorer student-teacher relationships, as reported by the teacher, (3) to see if teachers rated higher in negativity and lower in social connectedness report poorer quality student-teacher relationships, and (4) to see if teachers rated higher in warmth and sensitivity report positive student-teacher relationships.

Participants are 24 first and second grade students from urban, low-income homes, attending a public elementary school. The investigation uses previously collected data from the 2004-2005 school year and follow-up data collected during the 2005-2006 school year. Data were collected via parent reports, teacher ratings, and classroom observations of teacher and student behavior.

Cluster analysis is used to describe results from Year 2. Three clusters emerged regarding student-teacher relationship quality: positive, average, and high conflict/low closeness relationships. Results are only descriptive in nature and need to be individualized; factors that may have shaped student-teacher relationship quality (e.g., student disruptive behaviors, teacher emphasis on control in the classroom, and “goodness of fit” between student and teacher interactions) in one case are not of equal importance in another one. Findings are discussed in terms of their implications for the empirical use of teacher-reported STR construct as well as their implications for future research and training.

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1.0 INTRODUCTION

The development of positive relationships between children and adults has long been an interest of researchers and developmental psychologists. Most of the work in the area of relationship development has a strong emphasis on understanding and describing the significance of child-parent relationships. In particular, the child-mother relationship has received much attention and has provided the focus for innumerable investigations over the past several decades.

At the core of many investigations, is a belief in the key role of security within the child-parent relationship, that is, an attachment perspective (Ainsworth, 1969; Bowlby, 1969; Howes, 1999). British psychiatrist, John Bowlby, completed the earliest work concerning attachment, as it is defined today, with respect to the child-mother relationship. According to Bowlby (1969), humans have an innate need to build close relationships with their primary caregivers for survival. Intuitively, this makes sense when you consider the vulnerability of a newborn and how an infant's survival is dependent on the care of those around him/her.

However, the need for attachment goes well beyond the need for physical health and safety at the bottom of Maslow's hierarchy of needs (e.g., food, shelter). Indeed, the quality of a child-parent attachment is believed to help shape a child's overall social, emotional, and even cognitive development and well-being. Bowlby and others have also contributed to the attachment perspective by suggesting that there is need for continuity in the child-parent relationship over time (Bretherton, 1987). In other words, the need for a close relationship is not specific to just one point in time and does not solely include

birth through early childhood, even though most would agree that this is a critical time period for the development of a healthy attachment. On the contrary, attachment theory defines attachment as the bond that is built between a caregiver and a child over time. Furthermore, the bond between the adult and the child will be more secure if sensitive, consistent, and appropriate caregiving occurs. As a result of this type of caregiving, a child is believed to have a greater likelihood of trusting in others to get his or her emotional needs met, developing a positive sense of self and of relationships, and exploring his/her environment.

The current investigation borrows the solid foundation and theoretical framework provided by years of research on child-mother attachment and applies them to the formal educational setting. Specifically, this investigation examines qualitative differences in student-teacher relationships and tests for continuity or stability in the relationship from one year to the next.

1.1 STATEMENT OF THE PROBLEM

Academic success depends on a variety of factors and these factors can have both a positive and/or negative influence on a child's ability to stay motivated and succeed in school. For children living in high-poverty, urban environments, there are increased challenges when it comes to succeeding in school (Murray & Malmgren, 2005). Numerous research investigations summarize the challenges faced by children growing up in high-poverty urban settings (Barton, Coley, & Wenglinsky, 1998; McLoyd, 1998; & Brooks-Gunn, Duncan, Klebanov & Seland, 1993). These investigations highlight the challenges posed by high rates of home and neighborhood violence and crime, increased levels of mental illness, poor-quality schools, and multiple family stressors that potentially interfere with children's adjustment and success in school as well as in other aspects of their lives.

Despite these challenges, some children are resilient and overcome the negative circumstances exposed to or thrust upon them. One would then ask – why do some children beat the odds while others experience poor outcomes such as school drop-out? Several investigations have attempted to answer this question and have found that positive school and community-related experiences, as well as child characteristics such as intelligence and sociability, serve as protective factors and help buffer the negative circumstances faced by children living in stressful environments (Garmezy, 1991; O'Donnell, Schwab-Stone, & Muyeed, 2002). Furthermore, there is evidence to suggest that a caring, supportive, child-adult relationship can also serve as a protective factor for overcoming the challenges presented by high-poverty, urban environments (Dubow, Tisak, Causey, Hryshko, & Reid, 1991; Smokowski, Reynolds, & Bezruczko, 2000). In

the school setting, a supportive child-adult relationship can be derived from the connection a student is able to form with his/her teacher.

Over the past two decades, there has been considerable research on the potential importance of student-teacher relationships as they pertain to student motivation and classroom learning experiences (Davis, 2003). Research suggests that students of color who come from low-income backgrounds enter school less prepared to develop secure, trusting relationships with their usually white, middle-class teachers (Davis & Dupper, 2004). Consequently, these students may have more difficulty building a positive student-teacher relationship and may struggle academically (Birch & Ladd, 1998). The combination can eventually lead to such outcomes as school failure and/or dropout. However, if a teacher is able to build positive relationships with his/her students, this can help motivate the student not only to stay in school, but also to do well academically (Davis & Dupper, 2004). Proponents of attachment theory (Howes, 1999) further argue that students who have open, trusting relationships with their teachers will have a secure base in the classroom from which to take on new challenges and set realistic goals, as well as to have better regulation of their behavior and emotion in the classroom (Davis, 2003). If this is the case, it is important to identify, and eventually strengthen, factors that may enhance the quality of student-teacher relationships, especially for those students who come from higher risk environments.

The current investigation is an effort to better understand student-teacher relationships among children who come from a low-income urban environment. It focuses on student-teacher relationships, their correlates, and other factors associated with change in relationship quality across the early grades in school, more specifically,

from kindergarten to first grade or first grade to second. By understanding factors that shape this relationship, we make progress toward helping teachers forge positive student-teacher relationships even with difficult students. This will improve the latter's chance of success in the early grades of school.

2.0 LITERATURE REVIEW

In this section, the literature pertaining to attachment theory, student-teacher relationships, and variables that appear to contribute to the development or deterioration of the student-teacher relationship will be reviewed, including student behavior, teacher behavior, and the interaction between students and teachers.

The review begins with literature to understand why attachment theory is a useful framework for understanding adult-child relationships, and how it can be applied to help in understanding early student-teacher relationships. Findings from research on child-parent relationships will be cross-referenced to aid in understanding early student-teacher relations from an attachment theory perspective. Finally evidence concerning the stability of student-teacher relationships over time will be presented and discussed.

2.1 ATTACHMENT AND STUDENT-TEACHER RELATIONSHIPS

Attachment theory provides one explanation for aspects of early socioemotional and personality development (Thompson, 2000). Although there is voluminous research on mother-child attachment, and a growing body of research on nonmaternal caregiver-child attachment relationships, less is known or has been inquired about student-teacher relationships. However, several researchers have given recent attention to ways in which child-parent relationships resemble early student-teacher relationships (Howes, 1999; Pianta, La Paro, Payne, Cox, & Bradley, 2002). Like the child-parent relationship, the early student-teacher relationship is one in which the child needs the social, emotional and, at times, even physical support of a primary caregiver. Teachers' interactions with

young children incorporate aspects of care giving and this is especially true for students in the early elementary grades (Baker, 1999, Howes & Hamilton, 1992). Developmentally, children in this age range need the emotional support and guidance from the adults around them. Furthermore, the introduction into a formal school setting is a time of transition for children and teachers serve as a support system for a child to explore and learn within the classroom (Howes & Ritchie, 2002). As students begin to form relationships with their teachers, they can use their teachers as a resource or as a secure base from which to explore the environment. In addition, proponents of attachment theory argue that teachers, like parents, provide emotional support to children when difficulties or challenges occur. As a result, children form attachments to significant adults other than their parents (Bowlby, 1984), and these relationships can help shape their development.

According to attachment theory, child-adult relationships may be secure (close and trusting), resistant (conflicted and/or needy), avoidant (business-like and emotionless or “overbright”) (Ainsworth, Blehar, Waters, & Wall, 1978), or disorganized (a mixture of both patterns of insecurity). The ideal pattern of attachment is conceived as a secure relationship in which a child trusts the adult caregiver to provide consistent, supportive care. Examples of secure attachments can include the following interactions: a child seeks and accepts comfort from the primary caregiver when he/she is upset or hurt, a child shows physical affection toward his/her primary caregiver, a child explores and undertakes new challenges in the company of the caregiver, a child asks for and uses help from the primary caregiver, a child checks in sometimes just visually with the primary

caregiver when uncertain, and a child follows directions and suggestions from the primary caregiver (Howes & Ritchie, 2002).

When children have secure relationships with their primary caregiver (typically their mother), it is expected that they are able to model a secure relationship in the school setting and use a supportive teacher as a secure base for learning in the classroom, as well as develop positive relationships with their peers (Erickson & Pianta, 1989; Howes, 1999). It may be that a child's secure relationship to his/her mother tends to support secure relationships to others; more fundamentally, the nature of a secure relationship to one's mother is expected to bear some functional resemblance to a secure relationship with one's teacher.

If a child builds a warm, supportive, secure relationship with an adult, in this case his/her teacher, the child should be able to use that relationship as an emotional support when encountering challenges or problems (Howes & Ritchie, 2002). The following example is taken from Howes and Ritchie (2002, p.13), and demonstrates how a child can use his/her relationship with his/her teacher when encountering a problem:

A child is on top of a slide and another student is halfway down the slide. The child at the top of the slide does not know how to wait just the right amount of time to both get her turn on the slide and not run into the other student. The child lets go with her hands and runs into the other student. Both students make surprised noises. The children are now tangled together and appear afraid to move. They turn and look at their teacher who is sitting next to the slide. Their teacher stands up and puts a calm hand on each child. The teacher gently lifts one of the students off the slide and the other student continues down the slide. The teacher then helps the student go down the slide again.

In this example, the students look to their teacher for help and the teacher is responsive to their needs. The teacher also helps the student who was at the top of the slide try again so that there is no reoccurrence of the incident.

In addition to the emotional support a teacher may provide a student, the child can use his/her teacher as a secure base to take on academic challenges (Howes, Matheson, & Hamilton, 1994). An example of this might occur when a teacher distributes an assignment to the class and a student raises his/her hand to ask the teacher a question about the assignment. If the student derives security from his teacher, then assurance from the teacher sometimes by simply answering the question, can give the student confidence to complete the assignment independently.

The insecure-avoidant pattern is evident when, at times of stress, the child turns away from the adult caregiver rather than seeking comfort. Ainsworth's explanation for this type of reaction is that the child has learned not to expect comfort in times of distress, but has experienced rejection and/or insensitivity from the adult (Ainsworth et al., 1978). As a result, children with an avoidant attachment maintain a calm, disinterested, or even enthusiastic demeanor at times when negative emotions or neediness would be an expected response. The insecure resistant child-adult attachment is believed to occur when there is inconsistency in child-adult interactions. At times, especially if the child is insistent enough, the adult is available for support; at other times the adult is psychologically unavailable or unresponsive to the child's attempts to seek comfort (Ainsworth et al., 1978). As a result, children with the latter type of attachment pattern tend to be described as being clingy, demanding or controlling, and difficult to manage (Howes & Ritchie, 1999). The disorganized pattern is observed when the effect of stress on the child's behavior is unpredictable, which includes unusual or inappropriate affect, uncontrolled and/or aggressive behavior, freezing or fearful behavior, and so forth.

Hesse and Main (1999) suggest these are responses elicited by frightened or frightening behavior on the part of the primary caregiver.

Within the classroom setting, insecure student-teacher relations are believed to withhold from the child a sense of confidence in the emotional safety of the classroom, of comfort in seeking help from others, and of motivation to cooperate with the teacher's socialization practices (Howes & Ritchie, 2002). If the student-teacher relationship is described as being insecure-resistant, the child may well be in direct conflict with the teacher. In all cases of insecurity, the teacher will be used less effectively to support child competence in the face of difficulty and the teacher is likely to experience the child more negatively than his or her secure peers in the classroom.

2.2 STABILITY OF ATTACHMENT

Early experiences with the primary caregiver are believed to provide a child with a relationship model or filter from which he/she understands at least some aspects of the social world. As a child grows, additional experiences are added to his/her relationship understanding and social perceptions. These experiences can either confirm or change the way a child thinks and responds to his/her social environment. Therefore, it is not surprising to discover that there is a degree of variability in the consistency of child attachment patterns over time. Infant attachment assessment provides us with one data point to describe a child's attachment with his/her primary caregiver. As the child matures and encounters other adults (e.g., other caregivers inside or outside the home, preschool teachers, elementary school teachers), his/her attachment pattern may change, depending on whether the new encounters confirm or deny what the child has

experienced with his/her primary attachment figure. In other words, the consistency of a child's attachment depends on the extent to which subsequent experiences confirm or disconfirm what the child has already encountered or experienced to be true.

Most of the work on stability of attachment has been conducted in the area of mother-child relationships. In general, findings from the literature indicate that mother-child attachment quality shows some stability over time (Howes, Hamilton, & Phillipsen, 1998). However, as Thompson (2000) pointed out, there are many studies demonstrating that children's attachment security with mother is not necessarily consistent or stable over time. Some investigations report that infants changed security classification over a 6-7 month period of time (Vondra, Dowdell-Hommerding, & Shaw, 1999; Belsky, Campbell, Cohn, & Moore, 1996). Others have found a surprising degree of consistency between the attachment security in infancy and assessments measuring attachment made years later (Howes, Matheson, & Hamilton, 1994; Main & Cassidy, 1988; Wartner, Grossman, Fremmer-Bombik, & Sues, 1994). Stability appears to be greater in intact, middle-class families experiencing fewer negative life events (Hamilton, 2000; Waters et al., 2000; Zimmerman, Fremmer-Bombik, Spangler, & Grossman, 1997).

Although the research emphasis on attachment stability has been the child-mother relationship, occasional investigations have looked at continuity between the quality of children's attachments to mother in toddlerhood and that of concurrent and subsequent relationships with caregivers/teachers. Howes, Hamilton, and Phillipsen (1998) compared relationship security of 55 9-year-old children with their mothers, teachers, and friends to the child's attachment pattern in toddlerhood. The sample consisted of primarily European American (90%) families who were middle class.

Although the Howes, Hamilton, & Phillipsen's sample was not similar to the current sample, their procedures and methods resembled the current investigation. The investigation was longitudinal in design and data were collected at three different intervals (12 months, 4 years of age, and at 9 years of age). Similar to the present investigation, teachers used the *Student-Teacher Relationship Scale* to report the quality of student-teacher relationships at the last interval of data collection when students were nine years of age.

In addition, the student's perceptions of their relationships with the mother and teacher were assessed by the *Children's Expectations of Social Behavior Questionnaire*. The children were presented with 20 hypothetical vignettes involving interpersonal situations and they are given three possible responses: a supportive/comforting response, an indifferent response, or a hostile/rejecting response. Although the measure was originally intended to assess parent and peer relationships, teacher vignettes were created that paralleled the structure and content of the mother/peer items. Results of the children's expectations produced Cronbach alphas of .78 for the mother and .83 for teachers.

As a result of their findings, Howes, Hamilton, and Phillipsen (1998) proposed that there is some consistency in attachment patterns or relationships over time. According to their data, the quality of student-teacher relationships can be predicted based on toddler attachment security with the caregiver, attachment with preschool teacher, and history of mother-child attachment. The authors of this study found that toddler-caregiver attachment security made a significant contribution to the statistical prediction of student-teacher relationship quality. There was considerable stability in

children's relationship quality, as 76% of the relationships remained stable in classification over the course of the study. The authors suggested that the study tapped into "a child's generalized representation of relationships rather than the current status of the relationship with a particular person" (Howes, Hamilton, & Phillipsen, 1998, p.420). Their data support the notion that a child is building a model or "psychosocial" filter regarding social relationships with adults, and that there is consistency in the patterns of attachment depending on the ongoing experiences encountered by the child. This concept is captured in the hypothetical construct of internal working models, a topic that will be given some in-depth attention in the subsequent section.

In comparison, the stability of children's relationships with teachers is complicated by the fact that, by design, a child typically is assigned a new teacher at the beginning of each school year. Thus, the relationship partners change year by year. However, even though students are typically assigned a different teacher each school year, proponents of attachment theory argue that children form expectations regarding the nature of the student-teacher relationship, as being positive or negative, based on his/her previous experiences with other teachers and, perhaps, related adults (Howes, 1999). Therefore, a child's perception is the constant factor from one school year to the next and a new teacher can either confirm or negate a child's perception regarding student-teacher relationships.

2.3 INTERNAL WORKING MODELS

In order to explain how early attachment patterns shape later relationships, Bowlby (1969) suggested that children develop internal representations of their relationships with significant others. Bretherton (1990) further conceptualized the internal working model as “more or less well organized webs of hierarchically structured information embedded in and connected to other schema hierarchies stored in long-term memory” (p. 248). The internal working model serves as a filter for a persons’ understanding of the social world around them. Thompson (2000, p.147) argued that the concept of an internal working model is a compelling hypothesis since this internal representation of relationships can “mediate the impact of changing family circumstances, or changing care giving quality, on attachment security and its correlates.” As a filter for interpreting social experiences, the internal working model helps explain how a child’s attachment remains consistent over time since past experiences shape how the child understands new experiences. It is proposed that the child learns to evoke responses from others that are consistent with his or her internal representations of self and others (Bretherton & Munholland, 1999; Sroufe et al., 1999).

Although little is known or even proposed regarding the way children organize their internal representations of multiple adult-child relationships especially multiple, often sequential, relationships with adults occupying the same role (e.g., parent, secondary kin, day caregiver, teacher), three organizational models have been proposed. Howes, Hamilton, and Phillipson (1998) described the three organizational models as hierarchical, independent, and integrative, and summarized empirical studies relating to each model. The hierarchical model proposes that the child-mother relationship has

precedence over and predicts the quality of all other relationships (Main, Kaplan, & Cassidy, 1985). The independent model suggests that relationship quality is independent of other relationships and one could expect different outcomes for each relationship with a different partner (Howes et al., 1994, Oppenheim et al., 1988). The third model takes an integrative perspective in which the child incorporates aspects of all his/her relationships with adults holding similar roles into a single model differing across children in degree of coherence and integration (van IJzendoorn et al., 1992).

Examining consistency of relationship quality from one teacher/year to the next provides one test of these three models. For example, strong associations in relationship quality across teachers support the hierarchical model: all subsequent relationships are derived from the model developed in relation to mother/the primary caregiver. Modest associations across teachers support the integrative model: each subsequent relationship alters the working model in (perhaps increasingly) modest ways. No association across teachers fits best with the independent model: each relationship has its own version of a working model based on experiences specific to that relationship.

What are the implications of the empirical findings and internal working model construct for student-teacher relationships? One could suggest that a student enters a classroom setting with a wealth of life experiences and information about the world around him or her. This then sets a tone for how the student perceives school: as either a primarily positive, neutral, or negative experience. In the findings by Ascher and Schwartz (1987), it was also found that student attitudes toward learning and patterns of academic performance began in the early grades of school. Therefore, a positive student-teacher relationship perhaps supplements a child's positive attitude toward academics.

Conversely, a negative student-teacher relationship could undermine a child's positive perceptions about school and academic performance. In summary, a child's experiences will either support or refute his/her internal working model regarding current as well as future experiences in school and life.

Based on arguments offered by Howes and her colleagues, it is proposed that children experienced with group caregivers begin school with a working model of the child-caregiver relationship based on their previous attachment relationships with the adult caregivers in their life. Presumably, the more these group care experiences resemble school, the likelier that the child's model will be applied, more or less intact, to early student-teacher relationships in school.

2.4 SOCIAL LEARNING THEORY

In addition to internal working models, there are other possible explanations why children and teachers engage in a variety of social behaviors. One such explanation stems from the work of Albert Bandura's social learning theory. Social learning theory emphasizes the importance of observing and modeling behaviors, attitudes, and emotional reactions of others (Bandura, 1977). Social learning theory focuses on learning in a social context. Thus, the theory is easily transferred to a classroom setting since students can learn a great deal by simply observing other students and teachers. The principles underlying social learning theory include: learning through observation of others' behaviors and the outcomes of those behaviors, learning can occur without a change in behavior, learning involves cognition (similar to the internal working model), and the environment plays a role in reinforcing or diminishing the modeling of behaviors

(Bandura, 1977). From this perspective, students learn how to behave or not behave in the classroom based on observations of other students' behaviors and corresponding teacher responses to these behaviors as well as the teacher's responses to the individual student's behaviors. Social learning theory introduces other variables (e.g., peer behavior, teacher responses to peer behavior, and teacher-peer relationships) to consider when examining differences in student-teacher relationship quality.

The internal working model and the principles from social learning theory provide complementary perspectives for understanding the dynamics of student-teacher relationships. On the one hand, teachers bring particular relationship models and sets of social behaviors to the relationship. On the other hand children's social behavior reflects not only their relationship model, but also peer group influences and classroom reinforcement patterns. Behavioral patterns of both student and teacher are included in the present investigation, with some emphasis on the kinds of behavior that are likely to be aversive to student-teacher relationships: children's disruptive externalizing behavior problems and teachers' level of positive/negativity and sensitivity/insensitivity to student needs. In the subsequent sections, the rationale for focusing on these child and teacher factors is provided.

2.5 AT-RISK STUDENTS

Children living in low-income homes may be at higher risk for displaying insecure attachments with teachers as well as having more negative student-teacher interactions. Given the demographics of their surroundings, children living in low-income homes face numerous obstacles such as higher rates of family and/or neighborhood violence, higher

rates of drug and alcohol addiction, daily stressors associated with poverty, limited opportunities for parental employment, and limited opportunities for literacy stimulation (Murray & Malmgren, 2005; Brooks-Gunn, Duncan, Klebanov, & Sealand, 1993). Investigations suggest that children who live in difficult life circumstances are more likely to possess insecure and disorganized parent-child attachments (Carlson, Cicchetti, Barnett, & Braunwald, 1989, Lyons-Ruth, 1996). Given the nature of attachment working models, children from low-income homes probably enter the school system more often with an insecure framework of relating to the world around them.

Unfortunately, at-risk students, on average, experience a more negative school experience (Hamre & Pianta, 2005; LoCasale-Crouch et al, 2007). In a study of student-teacher relationship quality among low-income African-American students, Baker (1999) examined student-teacher interactions for 61 third through fifth grade students. To understand relationship quality, multiple measures were used. Students as well as teachers completed questionnaires, were interviewed and were observed in the classroom. Students who identified their school experiences as less satisfying were more likely to receive assistance from their teachers as compared to their peers who were more satisfied with their school experiences. However, students who identified their school experiences as being less satisfying were also more likely to receive punishment in the form of verbal reprimands for behavioral infractions (Baker, 1999). In addition, Baker (1999) noted that classroom interactions tended to rely upon independent seatwork and she suggested that this could “exacerbate problems among students who are poorly affiliated to school or low-achieving students who may not have the behavioral or academic competence to succeed” (Baker, 1999, p.66). In essence, this could further strain a student-teacher

relationship and challenge a student's motivation to stay invested in school especially if the student is at-risk or is already disinterested in school and related experiences.

Overall, Baker's (1999) findings suggest several potential explanations for students' lack of social bonds with adults. First, children who are at risk may become discouraged or detached from their school experiences due to the frequency of teacher verbal reprimands. Secondly, the student-teacher relationship quality may be different for students who are considered high versus low achieving. In Baker's study, students perceived as low achieving were more likely to receive direct instruction and more negative attention. This coupled with the likelihood of higher amounts of verbal reprimands can undermine student-teacher relationship quality.

Howes and Ritchie (1999) explored attachment organizations in children with difficult life circumstances. About 50% of their sample consisted of children from low-income homes. Findings from this investigation indicated that "teachers rated their relationships with children as more conflicted when the children were classified as having resistant, avoidant, or unclassifiable, insecure student-teacher attachment organizations" (p.265). Another interesting finding from this investigation is that less than a third of the sample children from low-income homes were seen as having constructed secure child-teacher relationships. Overall, the authors proposed that teachers can benefit from learning different strategies when presented with challenging student behaviors in effort to improve student-teacher quality.

In summary, children from low-income homes appear to have an increased chance of developing insecure attachment patterns with adults. If the insecure attachment pattern remains unchallenged or, in other words, if the child does not experience a secure

attachment with other adults such as their teachers, he/she will likely continue to encounter and internalize life experiences within the home and the community that only reinforce an insecure pattern of attachment. In essence, there will be a cumulative pattern and it will be similar to a self-fulfilling prophecy in which a child and/or teachers come to anticipate a certain outcome. This will be discussed further in the review of the literature on internal working models.

2.6 CHILD BEHAVIOR AND STR QUALITY

Multiple investigations have examined various student behaviors believed to contribute to student-teacher relationships in a positive or negative manner (Kesner, 1999, Howes, 2000). This section will review research on student externalizing behaviors that have the tendency to create tension or conflict within the student-teacher relationship. Examples of externalizing behaviors include noncompliance, oppositional and/or aggressive behaviors.

Silver, Measelle, Armstrong, and Essex (2005) conducted an investigation examining child, family, and relationship factors in connection to children's externalizing behaviors at school. The sample consisted of 283 primarily White children from a variety of socioeconomic classes and information pertaining to classroom externalizing behaviors was collected during four time points: preschool, kindergarten, first grade, and third grade. At time point 2, the kindergarten teachers rated the quality of the student-teacher relationships through a shortened version of the *Student-Teacher Relationship Scale (STRS)*, and externalizing behaviors were reported by the teachers in the

kindergarten, first, and third grade classrooms from the Mental Health Subscales of the *MacArthur Health and Behavior Questionnaire (HBQ)*.

Results indicated that the children in this sample demonstrated slightly fewer behavioral problems on average than national norms but that there was a slow increase of behavioral problems across time. In addition, there were significant gender differences found for student-teacher relationship in the areas of conflict (1.54 mean score for males, 1.30 mean score for females, t-score of 3.21, $p < .01$), closeness (4.28 mean score for males, 4.44 mean score for females, t-score of -1.96, $p < .05$), and externalizing behavior problems in kindergarten, first grade, and third grade (e.g., .21 mean score for males in first-grade, .11 mean score for girls in first grade, t-score of 3.75, $p < .05$). The authors noted that the interaction between “children’s externalizing behavior at baseline and teacher-child closeness during kindergarten added significantly to the prediction of children’s externalizing trajectories” (Silver et al., 2005, p. 50). In other words, teacher reports of conflict in the kindergarten student-teacher relationship were associated with growth in externalizing behavior problems from kindergarten through first grade. In summary, Silver, and colleagues (2005) concluded that both low socioeconomic status (SES) and child’s externalizing behaviors in kindergarten significantly contributed to the prediction of later behavior problems and subsequent student-teacher conflict.

In another study, Murray and Murray (2004) examined associations among student externalizing behaviors and other child characteristics (e.g., academic effort as evidenced through grades). The children were in the third, fourth, and fifth grades. They were primarily from lower socioeconomic homes and attended school in a large, urban school district. The investigation used the *Student-Teacher Relationship Scale (STRS)*,

Pianta, 2001) to measure the student-teacher relationship as reported by the teacher and the *Child Behavior Checklist (CBCL), Teacher Report Form*, (Achenbach, 1991) to assess the children's emotional and behavioral symptomology. Results from this investigation indicated that teachers reported greater conflict as well as greater dependency in their relationships with African American students. In addition, both externalizing and internalizing behaviors/symptoms were associated with greater conflict in student-teacher relationships.

Pianta and Stuhlman (2004) examined associations between closeness and conflict in student-teacher relationships and student's social and academic skills. The investigation was longitudinal in design and assessments of the students' behaviors as well as the student-teacher relationship were completed at three different points in time: preschool, kindergarten, and first grade. Participants in the investigation consisted of 490 children and their families in which 16% of the families had been below the poverty threshold during the child's infancy and 14% of the children were nonwhite. Measures included teacher ratings of each child's academic performance, child vocabulary skill testing in pre-school and first grade, completion of the *Child Behavior Checklist (CBCL)* by the parents and the *TRF* (teacher's version of the *CBCL*), ratings of children's social competence, and teacher's perceptions of student-teacher relationships, using the shortened version of the *Student-Teacher Relationship Scale (STRS)*.

Results indicated that *STRS* scores from preschool to first grade were moderately correlated across the time intervals. Specifically, teacher ratings of conflict correlate .32 between preschool and kindergarten and .40 between preschool and first grade. Teacher ratings of closeness had a slightly lower correlation of .21 from preschool to first grade

and .31 between kindergarten and first grade. Furthermore, the overall mean levels of conflict and closeness “changed slightly but were statistically significant over time (Pianta & Stuhlman, 2004, p.451).

With respect to children’s behaviors, parents’ ratings of students’ externalizing problems were significantly related to teacher reports of student-teacher conflict. In addition, teacher-reported conflict with students was associated with student externalizing behaviors at $r = .48$, $p < .01$ for Grade 1 indicators, as reported by the teacher, in both kindergarten and first grade. Based on the results, Pianta and Stuhlman (2004, p.454) suggested that “relational conflict is stable across teachers (perhaps related to stable child characteristics such as temperament), whereas relational closeness may depend in greater part on the goodness-of-fit between the interpersonal styles of teachers and children.”

In an investigation conducted by DiLalla, Marcus, and Wright-Phillips (2004), associations between early student behavioral problems and student-teacher relationships were explored. The authors predicted that students with poor student-teacher relationships would have lower grades and that preschool behaviors would predict school performance in early adolescence. The *STRS* and the *CBCL* were used to measure the student-teacher relationship and student behaviors. Findings from the study indicated that boys had more dependent and conflictual relationships with their teachers as compared to girls. However, in contrast to the previous cited works, previous preschool behaviors were not predictive of later student-teacher relationships. The authors proposed the following explanations for this outcome: the time span between the assessments was too long (6 to 8 years) to result in any predictive effects and the low-risk status of the

children constrained variability in the student-teacher relationship and in child behavior problems.

Overall, these investigations suggest that students from low-income families displaying externalizing behaviors and to a lesser degree, internalizing behaviors are at higher risk for experiencing negative or poor student-teacher relationships. Student behavior problems can disrupt the classroom milieu and therefore, make classroom management more difficult for the teacher. This can then lead to a student-teacher relationship characterized by conflict and tension. However, common sense dictates that there is a cyclical relationship between student behaviors and teacher behaviors; student behaviors can evoke negative responses from teachers, but teacher responses can maintain or exacerbate student problem behavior. The response in each case (but especially on the teacher's part) can help address the problem at hand and promote a more positive student-teacher relationship, or can escalate the problem and potentially strain or damage the student-teacher relationship. The next section will explore the role of teacher behavior and how it may shape the student-teacher relationship.

2.7 TEACHER BEHAVIOR AND STR QUALITY

There is general agreement in the literature on teacher behaviors that help promote versus undermine student-teacher relationship quality (Howes & Ritchie, 2002). Teacher behaviors promoting positive relationship quality includes being positive, warm, sensitive, and responsive. The teacher provides a sense of continuity or predictability throughout the day and the teacher's words are kind and affirm the child. The teacher uses prompts to assist with transitions, active listening, and validation of the child's

feelings and experiences. Overall, the teacher appears genuinely interested and demonstrates a sense of caring through smiles, gestures, and words of encouragement. The teacher is an active participant in the classroom activities, being consistent, firmly setting limits but also being flexible, avoiding power struggles, supporting children's positive behaviors and learning, maintaining high expectations, and providing positive attention (Howes & Ritchie, 2002). Conversely, negative teacher behaviors that undermine relationship quality include threatening or yelling at the students, insensitivity or a lack of interest in the student's well-being, ignoring or refusing student requests for assistance, using sarcasm or making fun of a student, to name a few.

An investigation by Yoon (2002) offers empirical evidence for these teacher behaviors. The author examined teachers' perceptions of their own ability to manage challenging student behaviors (externalizing in nature) and the teachers' ability to create positive student-teacher relationships. The teachers were given a questionnaire designed to assess teacher stress, self-efficacy in relationship building and behavioral management, negative affect, and also report on student-teacher relationship quality. Results indicated that teacher stress was significantly correlated with negative affect, lower self-efficacy, and problematic relationships. Teachers reporting higher levels of stress, negative affect, and problematic relationships due to managing behaviorally difficult students, seem likely to have displayed anger, criticism, and negativity toward the students in the classroom. This was especially true when managing situations involving students whose behaviors were described as troublesome and/or negative. Furthermore, if the teacher perceived his/her stress to be related to a student's externalizing behavior, there were fewer exchanges of warmth and affection between the student and the teacher.

In another investigation, Pianta, LaParo, Payne, Cox, and Bradley (2002), examined the classroom environment in relation to various student, teacher, and family characteristics. In this investigation, observations of classroom quality and student-teacher relationship quality took place across three states. The investigators used not only observations of the kindergarten classrooms, but also teacher ratings of children's social and academic outcomes, descriptive information pertaining to the teacher, school, and classroom and family demographic information. Observers completed rating scales of the teacher's behavior along the following dimensions: sensitivity, responsiveness, intrusiveness, over-control, detachment, and disengagement. Results indicated that classrooms with a higher proportion of students with free or reduced lunches had lower ratings of a child-centered climate and an instructional climate. The teacher's interactions with the students were more directive in nature and less focused on the individual needs of each student when there were higher percentages of students from low-income homes.

The researchers identified qualitative dimensions that seemed to capture the classroom environment in two domains: an emotional, child-centered domain and an instructional domain. High ratings for child-centered classrooms were given when: the teachers allowed students freedom of movement within the classroom, there was a presence of positive teacher affect, there was an absence of negative interactions between students and their teacher(s), and there was a supportive, emotional connection between and among students and their teacher(s). High instructional support reflected a certain style of dialogue between teacher and students, for example, an emphasis on literacy instruction, not just reading aloud to the students.

In their quest to develop an effective tool to measure quality in the classroom, LaParo, Pianta, & Stuhlman (2004) created the *Classroom Assessment Scoring System (CLASS)*. The *CLASS* measures the emotional and instructional aspects of a classroom setting, but also highlights certain teacher behaviors that can facilitate or hinder student-teacher relationship quality. For example, the authors stated that effective teachers establish routines for themselves as well as their students. This helps create predictability in the classroom and helps keep the students on task. In addition, the authors found it is important to measure teacher sensitivity, emotional tone of the classroom environment, and the teacher's ability to manage student behavior. If a teacher displays certain characteristics such as sensitivity, warmth, and effective behavior management techniques, there is evidence to suggest that this facilitates positive student-teacher relationships (Pianta, 1994). In contrast, if a teacher lacks these characteristics, student-teacher relationships tend to be less positive.

Lastly, in another paper by LoCasale-Crouch and colleagues (2007), the researchers investigated correlates of classroom quality in 692, state-funded pre-kindergarten programs by examining associations among teacher, program, and classroom characteristics. To measure classroom process quality, observers used the *Classroom Assessment Scoring System (CLASS)* and cluster analysis was conducted to describe profile types of classroom process quality. The cluster analysis produced 5 profile types, ranging from highest quality (prevalence = 14.5%), to middle of the road (emotional climate, mediocre instructional quality, prevalence = 31.4%), to poorest quality (poor emotional climate, low instructional quality, prevalence = 18.8%). The

authors suggested that their cluster groupings were highly consistent with other studies from the same research group.

LoCasale-Crouch and colleagues (2007) noted that the profile for the lowest cluster (18.8 % of the sample), one characterized by poor student-teacher quality was their most concerning result. Classrooms in the poorest quality cluster scored low for positive climate and teacher sensitivity and high in negative climate or over control. In addition, instructional support indicators for quality learning environments were also 1 standard deviation below the *STRS* normative mean. The cluster also contained a high proportion of non-White students, students from low family incomes and poverty conditions, and lower levels of maternal education. LoCasale-Crouch and colleagues (2007) argued these already at-risk students had increased academic challenges due their poorer quality classroom environments.

Although classroom quality emerged as 5 profiles/clusters, there were no clear differences in terms of structural features of the programs or classrooms. Structural features relate to the number of students in the classroom, teacher education/certification, and location of the public school. Given the large sample size, the authors noted that differences of individual, classroom characteristics were lost in the analysis so caution must be used in any interpretations of the data. LoCasale-Crouch et al. (2007) concluded that studies describing classroom quality help identify classroom characteristics that enhance social and academic development especially for students at-risk for academic difficulties due to low family income or neighborhood demographics. More importantly, the authors stated that there is a need to standardize quality programs so that children at-risk are presented with the same academic opportunities.

2.8 INTERACTIVE NATURE OF STUDENT-TEACHER RELATIONSHIPS

A relationship requires interaction among two or more individuals who have the ability to influence one another. In other words, there is a back and forth dynamic to the relationship. Ross and Lollis (1989) summarized Kenny's Social Relations Model (Kenny & La Voie, 1984), in their description of a relationship as:

... having an impact that goes beyond the characteristic influences of either member: in the social relations model, relationship effects reflect the special adjustment of an actor to a particular partner. When two people bring out qualities in one another that are neither exhibited nor elicited in their other relationships, then their behavior cannot be predicted based on knowledge of actor and partner effects.

To add to this definition, Sroufe and Fleeson (1988) outlined the following principles on relationships:

Relationships are wholes – relationships should be measured as a whole and not reduced to each characteristic of the participating parties.

Relationships exhibit coherence and continuity - relationships exhibit coherence or continuity over time. Despite change in behaviors, the quality of a relationship tends to persist.

Individuals internalize (represent) relationships – not only does an individual possess an internal model for understanding the relationship, he/she also learns to expect or understand the other individual's responses.

Represented relationships are carried forward – relationship models influence or shape a person's ongoing selection of social interactions and expectations.

Like all human relationships, student-teacher relationships are considered bidirectional or reciprocal in nature. Therefore, researchers need to examine the “whole” relationship and not simply focus on one component (e.g., student behavior). For this

reason, it is important to explore student contributions, teacher contributions, as well as specific combinations of the two that alter its' overall quality or function.

Pianta (1994) examined patterns of relationships between children and their kindergarten teachers. Pianta used cluster analysis to categorize 436 student-teacher relationships in a sample that 65% was white, 31% was black and 4% Asian. Clusters were created based on the teacher self-reports of student-teacher relationships on the *Student-Teacher Relationship Scale (STRS)*. Six clusters of student-teacher relationships were identified: dependent, positively involved, dysfunctional, functional/average, angry/dependent, and uninvolved. Although there was considerable classroom variability in the distribution of positive and negative relationship clusters, clusters contained teacher's perceptions of student behavior and teacher's perceptions of the overall relationship. Interestingly, "eight teachers (31 % of the sample) accounted for 51% of the child-teacher relationships classified as generally difficult" (Pianta, 1994, p.23).

Pianta (1994, p.25) argued that the student-teacher relationships are similar to child-parent relationships since they are "asymmetrical with respect to responsibility, power, and skill, and they involve the dependency, protection, and teaching/learning needs of the child." Similar to child-parent relationships, the implication of this statement is that both teacher and student behaviors/attitudes contribute to the overall relationship quality.

In another study conducted by the National Institute of Child Health and Human Development; Early Child Care Research Network (2002), 827 first grade classrooms were observed in terms of structural classroom features as well as student and teacher behaviors. Observations took place during the spring of the student's first grade school

year and the *Classroom Observation System* was used. Teacher behaviors with children were observed in large groups, small groups, and individually with a targeted student. Overall, the investigation pointed to both student and teacher behaviors as contributing to student-teacher relationship quality.

Similarly, Jeremyson and Miller (1993) argued that student-teacher relationship is a function of both the teacher's reaction to the student as well as the student's reaction to the teacher. As a result, neither teacher behaviors nor student behaviors operate in a vacuum and both play an important role in the overall relationship. Therefore, we need to look at the bigger picture and incorporate both student and teacher behaviors as contributing the overall student-teacher relationship quality. Although a difficult task, ongoing investigations are needed to further understand student-teacher relationships.

2.9 SUMMARY

The literature review supports the assumption that relationships are modestly associated across time. This is true for parent-child relationships as well as for student-teacher relationships. The literature review highlights that the student-teacher relationship is similar to the parent-child relationship, especially for students in elementary grades due to the need for social/emotional support from a caring adult. With the support of a caring adult, a child is able to explore his/her environment and utilize the adult as a support when problems occur. This concept can also be applied to students in the classroom setting.

Ideally, warm, supportive relationships would exist for every student. However, this is not the case. Certain students, especially those displaying negative or challenging

behavior problems, typically do not have positive student-teacher relationships. Based on the literature review, these students are also at a greater risk for experiencing academic difficulties. So, it is argued that children who are at greatest risk need the support of a caring adult. In the school setting, this would be the child's teacher.

3.0 SIGNIFICANCE OF THE STUDY

There is growing evidence of the predictive value of early student-teacher relationship quality for subsequent child school functioning. For example, kindergarten teachers' perceptions of their relationships with children predict both academic and behavioral skills in students through the eighth grade (Hamre & Pianta, 2001). In addition, teacher perceptions of conflict with a student are relatively stable from preschool through kindergarten (Howes, Phillipsen, & Peisner-Feinberg, 2000) and on through second grade (Pianta, Steinberg, & Rollins, 1995). However, most of this research conducted exclusively by developmental psychologists has focused on only the child's role in student-teacher relationship conflict. Few studies examine both student and teacher contributions to relationship quality and change in relationship quality over time.

Students who exhibit classroom behaviors that are disruptive or high in conflict (Kesner, 1999; Howes, 2000) are at risk for strained student-teacher relationships. They are also at risk the following school year for displaying similar patterns of behavior and, therefore, continuing the cycle of a strained student-teacher relationship. Acting out student behavior creates tension between student and teacher so there are fewer interactions characterized by closeness and/or warmth. (Birch & Ladd, 1998; Hamre & Pianta, 2001). Studies have shown that coercive interactions between teachers and students are similar to those between children and their parents (Shores, Gunter, & Jack, 1993; Van Acker, Grant, & Henry, 1996). Thus, students' negative behavioral patterns from the home can be replicated in the classroom with their teacher.

Both student and teacher have a role in determining the quality of the student-teacher relationship (Sroufe & Fleeson, 1988). Student behaviors that tend to be negatively associated with student-teacher relationship quality are disobedient, acting out behaviors that are visible to observers and disruptive to class. Examples include disobeying teacher directions and/or rules, having a high activity level and/or distractibility that interfere with staying seated and keeping one's hands to one's self, and off-task behavior such as talking to or arguing with peers at inappropriate times, and so forth.

Teacher behaviors also play a role in the overall quality of the relationship. Teachers who appear more approachable and display warm, supportive interactions with their students are more likely to report better student-teacher relationships. Conversely, negative teacher behaviors (e.g., yelling, threats) tend to correlate with negative student behaviors (e.g., not following directions, noncompliance) (Pianta, 1994; Silver et al., 2005). Therefore, negative teachers are more likely to report strained student-teacher relationships. In addition to teacher behaviors, some studies have found that teacher perceptions are also correlated with student-teacher relationship quality. Howes, Phillipsen, Peisner (2000) found that teacher ratings of preschool behavior predicted kindergarten student-teacher relationship quality. Specifically, children perceived to be more sociable in preschool were rated as having closer relationships with their kindergarten teachers. Furthermore, teacher perceptions remained stable across grades as well as across school transitions. In summary, teacher behaviors as well as teacher perceptions correlate with student-teacher relationship quality.

The purpose of the current investigation is to replicate existing associations between STR and both student and teacher characteristics, and also examine stability and change both within a school grade and from one grade to the next. With that in mind, the following hypotheses will be tested for this project:

3.1 RESEARCH OBJECTIVES

3.1.1 Hypotheses

1. It is hypothesized that (2005/2006) student-teacher relationship quality in first or second grade can be modestly estimated from previous (2004/2005) kindergarten or first grade student-teacher relationship quality.
2. Overall, student behaviors as well as teacher behaviors will be associated with student-teacher relationship quality.
 - a. It is hypothesized that students who have higher levels of current (2005/2006) externalizing, acting out behavior will have poorer quality student-teacher relationships, as reported by the teacher.
 - b. It is hypothesized that teachers rated higher in negativity and lower in social connections will report poorer quality student-teacher relationships.
 - c. It is hypothesized that teachers rated higher in warmth and emotional sensitivity will report positive student-teacher relationships.

4.0 METHODS

4.1 PARTICIPANTS

The sample for this investigation consists of 24 first and second graders attending an urban elementary school serving almost exclusively low-income families (99.3% free/discounted school lunches). Enrollment by race/ethnicity is 69% Black, non-Hispanic and 31% White, non-Hispanic. For this investigation, there were 14 boys and 10 girls; 13 students were Black, 11 students were White. This investigation involved the collection of follow-up (Year 2) information on the 24 children and their primary caregivers, who participated in a previous study (Year 1) on home-school connections (Postol, Hoge, Wolfson, Battista, & Vondra, 2006).

Children and parents were recruited for the original study, which involved a small-scale intervention to improve teacher-parent communication, through a combination of teacher and project staff selection processes. Kindergarten (and one 1st grade) teachers who agreed to participate in the intervention (involving phone calls and a face-to-face meeting with the primary caregiver, and brief, weekly skill-building activities by Project staff with the child in school) were asked to provide a list of 10 students from their class, which excluded both the highest performing, and severest problem students. Six students who represented as balanced a distribution as possible within each classroom of boys and girls, White and Black students, were initially targeted for recruitment. One of the six was then randomly selected to serve as a “waiting list” control. If parents refused (n=6) or moved (n=1), the waiting list child was recruited. In most cases, replacements for the waiting list child were then recruited from the remainder

of children on the class list (in two classrooms, no additional waiting list child was recruited). Baseline (end of fall) data and teacher follow-up data (end of school year) were collected on all children for whom written consent could be obtained (28 of 35 children, or 80%). Parent follow-up data from home visits over the summer were collected on 25 of the 28 children.

To recruit participants for the current study, a follow-up investigation during the subsequent school year, a recruitment letter was sent home with the student from school to parents of the 28 students, and the final sample consists of those students (N=24) whose parent and teacher consented to participate in the follow-up data collection. Two of the four students who did not participate in the follow-up moved and the other two children had challenging circumstances at home making it difficult to obtain parental consent to participate in the follow-up investigation.

4.2 DESIGN

The proposed investigation uses a longitudinal design relying upon previously collected data from the 2004/2005 school year during two time points (Fall, 2004 and the Spring, 2005), and follow-up data collection from the 2005/2006 school year (Spring, 2006). Previous data were gathered on a number of parent, teacher, and child variables relevant to children's performance and adjustment in school, with an emphasis on student-teacher relationship quality. Much of the same information, described in detail in the Measures section, was gathered during the current school year.

4.3 PROCEDURES

Parents were invited to participate in the follow-up project if their child participated in Year 1 of the project. Parents received a packet of information their child brought home from school describing the follow-up project and were asked to provide consent for their son/daughter to participate. Parents who agreed were asked to complete a measure of negative life events that had taken place during the 2005-2006 school year. Once parents completed and returned their consent, the child's current teacher was asked to participate. With their consent, teachers were asked to complete questionnaires on the target child. Finally, Project staff that had spent multiple periods assisting in the classroom completed ratings on teacher behaviors (e.g., sensitivity, control) and teaching style (e.g., teacher- vs. student-directed, encouraging or curtailing peer interaction, elaborating on or moving past student responses).

4.4 MEASURES

Parents were asked to complete a life events questionnaire. The reason for this was to learn if there had been disruptive events (e.g., loss of a job, parent separation, and death in the family) for the family during the current school year. If a child has experienced a series of difficult events, this might help explain a child's disruptive behavior in the classroom related to unexpected changes in student-teacher relationship quality.

Children's primary teachers rated the current quality of the teacher-child relationship and children's behavior problems at school. Trained observers rated overall teacher behavior in the classroom. It is expected that a blend of teacher-report data,

coupled with observations of teacher behaviors can describe the overall quality of student-teacher relationships for the first grade and second classrooms. The following measures were used in this investigation:

4.4.1 Parent Information

Parents were asked to complete the *Psychiatric Epidemiology Rating Scale (PERI) Life Events Scale* (Dohrenwend et al., 1982) in an attempt to capture important family changes and life stressors. The *PERI Life Events Scale* is a comprehensive measure of stressful events that may have occurred to family members. The life events contained in the measure range from the death of a parent, spouse, or a child, to violations of the law, to increased arguments with family members. The measure asks respondents to report on which event(s) have happened to them within a specific period of time, in this investigation within the past six months.

In Year 1 of the investigation, the *PERI Life Events Scale* was administered at the beginning and end of the 2004-2005 school year. For the purpose of the follow-up investigation, the *PERI Life Events Scale* was only administered in May of the 2005-2006 school year and the parents were asked to identify those events that occurred within the previous six months.

The *PERI Life Events Scale* is considered a self-report measure with the purpose of capturing the individual's perception regarding major stressful life events. So, the measure first asked parents to acknowledge whether a stress event has occurred and then they were asked to indicate the degree to which the event was stressful from "Not at all"

to “Very Upsetting”. The reliability and validity of the *PERI Life Events Scale* have been demonstrated in numerous studies (Dohrenwend & Dohrenwend, 1974, 1981).

The rationale for using this particular measure is that it is recognized as being a reliable measure for self-reported reactions to stressful events and it helps to explain another dimension of a child’s life. One can argue that if a child/family is experiencing stressful life events in the home, that the level of stress may impact the child’s performance at school. In particular, the child may act out more in the classroom and/or may otherwise appear to be distracted. This may then create conflict between the student and the teacher and as a result, the student-teacher relationship is strained. In essence, the *PERI Life Events Scale* allows us to understand the circumstances occurring in the home and through the child’s behavior have the potential outcome of carrying over into the school setting. Furthermore, a child’s life does not occur in a vacuum and so one must look at the bigger picture and recognize that home experiences, especially stressful ones, have the potential to play out in the classroom.

4.4.2 Teacher Ratings

The teachers were asked to complete two measures for the purpose of the current investigation. One measure focused on teachers self-reporting and/or rating the nature of their relationship with the identified students in their classrooms via the *Student-Teacher Relationship Scale*. The other measure asked teachers to rate the children’s behavior via the teacher-formatted version of the *CBCL*. It is important to note that the students changed teachers for different subjects beginning in first grade. Therefore, 1st and 2nd grade students were not with the same teacher for the entire day and the student’s

homeroom teacher was asked to rate STR quality as well as report on student's behavioral problems. Both measures are described in further detail below.

The *Student-Teacher Relationship Scale* (*STRS*, Pianta 2001) is used to measure teacher perceptions of their relationships with the target children. The *STRS* was developed to measure “a teacher's feelings and beliefs about her relationship with a student, and her feelings and beliefs about the student's behavior toward her” and the items were derived from attachment theory and a review of the literature on student-teacher interactions (Pianta, 1992). It is a widely used instrument and the scale scores can provide information on the teacher ratings of children's classroom behavior, academic outcomes, and with retention in school (Hamre & Pianta, 2000, Pianta, Steinberg, & Rollins, 1995). The *STRS* contains 28 items, such as “This child and I always seem to be struggling with each other,” and “I've seen this child copy me” and rated on a 5-point Likert scale, with responses ranging from 1- “definitely does not apply” to 5 – “definitely applies”. Validity for the *STRS* was established in relation to school success in subsequent years (Birch & Ladd, 1997; Pianta & Stuhlman, 2004).

The *STRS* consists of three subscales and they are conflict/anger, warmth/closeness and dependency (Pianta & Steinberg, 1991). The coefficient alpha for the total 28 items is .89 and alpha .92 is for conflict/anger, alpha .86 for warmth/closeness, and .64 for dependency scale. Studies using the *STRS* have reported low correlations (.20 to .30) between the subscales and parent's reports of child behavior at home but higher correlations (.40 to .67) for teacher reports of children's behaviors in the elementary grades, in particular kindergarten and first grade. For the purpose of this investigation, the *STRS* is used to compare and describe the differences between student-

teacher relationships across the different time points. The three subscales are utilized in a similar fashion and are only used to describe differences between the student-teacher relationships. The three subscales are conflict/anger consisting of 12 items (e.g., “This child makes me angry”), warmth/closeness consisting of 8 items (e.g., “I share an affectionate, warm relationship with this child”), and open communication consisting of 3 items (e.g., “This child spontaneously shares information about himself/herself”). Separate descriptions will be completed for each subscale.

The *Child Behavior Checklist-Teacher Report Form (CBCL-TRF)*, Achenbach & Edelbrock, 1991) requires teachers to rate student behavior problems. It is a well-standardized measure of child problems and pathology that has high test-retest reliability of .84 to .97 and cross-cultural stability (Achenbach, 1991; Achenbach & Edelbrock, 1983). Teachers rated 113 behavior items in terms of how often the child displays the behavior (never, sometimes, and frequently). The measure is scored against a normative criterion and results in a profile that highlights normal versus significant symptoms or behaviors suggesting mental health intervention. The ratings also produce a score for internalizing (e.g., anxiety) and externalizing behaviors (e.g., aggression). Finally, a total score is derived based on a combination of both internalizing and externalizing behaviors as well as problems related to attention, cognition, or social. *TRF* scores were collected to measure behavioral functioning for both the 2004-2005 and 2005-2006 school years.

4.4.3 Classroom Observations

The current teacher of each child in the study was observed in the classroom in order to rate her sensitivity and responsivity to students in general, as well as the supportiveness of her classroom style. These observations took place between April and May 2006, with each teacher observed for approximately one hour. Quality of teacher interaction was rated on the *Classroom Assessment Scoring System (CLASS, Pianta & La Paro, 2003)* by observers trained to reliability on use of the measure. Interrater reliability for the *CLASS* was established between the raters on 4 classroom environments prior to the start of the investigation. The ICC for the *CLASS* total raw score was .822, $p < .004$.

The *CLASS* is an assessment tool that measures classroom quality in preschool through third grade classrooms (Pianta, La Paro, Hamre, 2005). The *CLASS* contains multiple dimensions (e.g., positive climate, teacher sensitivity, etc.) to capture both instructional and socioemotional aspects of the classroom environment. Since the crux of the current investigation is examining student-teacher relationship quality, a modified version of the *CLASS* was used so items relating to instructional learning were not as critical in measuring and/or collecting. This means that all of the scales were not used in the instruction-learning domain and only a few items within each scale were measured.

The following scales were used for this investigation and Pianta's definitions as outlined in the *CLASS* manual, p.3 for each scale follows:

Emotional support

- Positive Climate – the enjoyment and emotional connection between teacher and students;
- Negative Climate – the level of expressed negativity such as anger;
- Teacher Sensitivity - teacher’s responsive to student’s needs;
- Regard for Student Perspective – the degree that the teacher’s interactions place a focus on the student’s interest;
- Behavior Management – how well a teacher prevents and redirects behavior;

Instructional Support

- Productivity – how well the classroom runs with respect to routines;
- Instructional Learning – how teachers engage students to maximize learning;

Student Outcomes

- Student Engagement – degree that the child is actively engaged in classroom activities;

Observers looked for student-teacher interactions that demonstrate certain behaviors within the designated scales and then observers rated the teachers as either scoring low, mid, or high levels for a certain behavior in the above mentioned dimensions. As an example, a low rating (1, 2) for the relationship scale is defined as

“There are few, if any indications that the teacher enjoys warm, supportive relationships with students.” A mid rating (3, 4, 5) for the same scale is defined as “There are some indications that the teacher enjoys warm, supportive relationships with students.” And lastly, a high rating (6, 7) is defined as “There are many indications that the teacher enjoys warm, supportive relationships with students.”

Construct and criterion validity for the *CLASS* dimensions and scales has been established in the early elementary grades (NICHD ECCRN, 2002; Pianta et al., 2002).

4.4.4 Qualitative Observations

In addition to the *CLASS* observations, two students characterized by the teachers as having positive student-teacher relationship and two students characterized as having high amounts of conflict and low closeness with their teachers were observed during Fall, 2005 Year 2. Students were observed for a total of two hours over multiple observations. Data were collected on student behaviors, teacher behaviors, and classroom characteristics as it pertains to student-teacher relationship. The observations provide a description of the current student-teacher relationship for students who are doing relatively well in school as well as for students whom teachers identify as having poorer student-teacher relationship quality.

4.5 DATA ANALYSIS

Cluster analysis is the main statistical technique used in this study. The term cluster analysis encompasses a number of different methods for grouping cases of a similar kind into respective categories (Hair & Black, 1998). Cluster analysis techniques attempt to identify relatively homogeneous subgroups of cases based on selected characteristics or traits. “The resulting clusters of objects should then exhibit high internal (within-cluster) homogeneity and high external (between-cluster) heterogeneity. Thus, if the classification is successful, the objects with the clusters will be close together when plotted geometrically and different clusters will be farther apart” (Hair & Black, 1998, p.147). Overall, cluster analysis is a descriptive, noninferential technique that is mostly exploratory in nature.

For the current investigation, hierarchical cluster analysis appeared to be the most appropriate method for exploring student-teacher relationship quality. In order to create clusters, a cluster variate(s) must be selected and for this investigation, the *STRS* total raw scores taken from Spring, Year 2 were chosen as the cluster variate. An initial cluster analysis suggested that three clusters captured the sample variation adequately. Given the small sample size, it was decided to set that three clusters as a given in the cluster analysis. The resulting cluster memberships consisted of positive student-teacher relationships characterized by high levels of closeness and low levels of conflict as reported by the teachers (n=11), average student-teacher relationships characterized by low levels of conflict and average levels of closeness as reported by the teachers (n=11), and student-teacher relationships characterized by high levels of conflict and low levels of closeness as reported by the teacher (n=2).

Cluster analysis is sensitive to outliers or scores very different from the rest of the group. The two students in the high conflict cluster had dramatically lower *STRS* total raw scores from the rest of the students so their scores were considered outliers and another cluster analysis was completed without their *STRS* scores to see if different patterns emerged. During the second cluster analyses, *STRS* raw total scores and *STRS* subscale scores were used to create the cluster memberships.

The resulting cluster analysis produced the following 3 groups/clusters: Positive Relationship cluster (n=11), Average Relationship cluster (n=7), and Negative Relationship cluster (n=6). As compared to the initial cluster analysis, the final cluster membership changed by including 4 more students (originally in the Average cluster) in the negative relationship cluster to the original students who had outlying *STRS* total raw scores. The composition of the Positive Relationship cluster remained highly consistent during the different analyses. The resulting final cluster centers are presented in Table 1 and an ANOVA of the final cluster analysis is provided in Table 2.

Table 1.

Final Cluster Centers (N=22)

	Positive Relationships	Average Relationships	Negative Relationships
<i>STRS</i> total raw scores	125.64	107.43	104.50
<i>STRS</i> Dependency	6.82	12.43	8.25
<i>STRS</i> closeness	43.73	41.43	32.50
<i>STRS</i> conflict	13.27	23.57	21.75

Note. The 2 original students in the negative relationship cluster were placed back in the negative, final membership cluster so their scores are not reflected in Table 1 or Table 2.

Table 2.

Cluster Analysis ANOVA (N=22)

	<u>Cluster MS</u>	<u>Df</u>	<u>Error MS</u>	<u>df</u>	<u>F</u>	<u>Sig.</u>
STRS total	1032.37	2	17.435	19	59.213	.000
Dependency	68.245	2	8.321	19	8.201	.003
Closeness	186.029	2	17.205	19	10.812	.001
Conflict	259.586	2	8.350	19	31.089	.000

Note. The F tests should only be used for descriptive purposes because the clusters have been chosen to maximize the differences among cases in different clusters. The observed significance levels are not corrected for this and thus cannot be interpreted as tests of the hypothesis that the cluster means are equal.

5.0 RESULTS

This chapter presents results of the investigation. First, a brief review of Year 1 results is provided. Second, clusters on student-teacher relationships are described. Third, a review of findings on measures relating to the study hypotheses is presented. Finally, overall results are summarized that address the research questions of the current investigation.

5.1 YEAR 1 SUMMARY

Year 1 results include data collected during the Fall of 2004 and the Spring of 2005. Results from Year 1 indicated teacher-reported relationship scores were moderately stable over a single school year (from fall to spring) for “closeness” ($r = .64, p < .01$) and “conflict” ($r = .58, p < .01$), but not for “dependency” (Postol, Hoge, Wolfson, Battista, & Vondra, 2006). A downward trend in student-teacher relationship quality within the school year was observed. The downward trend is defined as a decline in closeness and increased conflict over the school year and this was linked to teacher negativity in the classroom, an increasing number of anxious child behaviors at home, and combinations of child problems and teacher classroom behavior (e.g., controlling teacher and acting-out student). Overall, the data from Year 1 suggest that teacher ratings of their relationships with individual students are based on both teacher and child characteristics (Postol, Hoge, Vondra & Battista, 2006).

5.2 CLUSTERING METHODS

Given the multiple measures as well as the multiple time points of data collection, a decision was made to use the descriptive statistics (e.g., means scores) of the *STRS* to detect STR quality differences across teachers and time. To visually assess cluster memberships, scatter plots were completed based on the descriptive statistics (e.g., means) for *STRS* total raw scores and subscale scores within each cluster to assess differences in the student-teacher relationships across the three clusters. *PERI* results did not prove helpful in distinguishing student-teacher relationship quality so *PERI* scores were not used in creating clusters.

To test Hypothesis 1, that *STRS* scores in Year 1 will be modestly associated with *STRS* scores in Year 2, correlations from Spring, Year 1 to Spring, Year 2 were computed for the three *STRS* subscales: conflict (-.02), closeness (.08), and dependency (-.01). No stability or correlation was observed in the children's scores from one year to the next as shown in Table 3. This result may have been affected by the dependency of the *STRS* scores since multiple children were rated by the same teacher. Although correlations were not observed, *STRS* mean differences were found between the 3 clusters for the *STRS* total scores and subscale scores for Spring, Year 2. An overall summary of the *STRS* means for the total raw scores and subscale scores is presented for each cluster in Figure 1.

Table 3.

ANOVA Summary Table for STRS Spring Year 1 and Spring Year 2

Source of Variation	SS	df	MS	F	Sig.
Between-groups	402.521	1	402.521	1.468	.238
Within-groups	6306.979	23	274.216		
Total	6709.500	24			

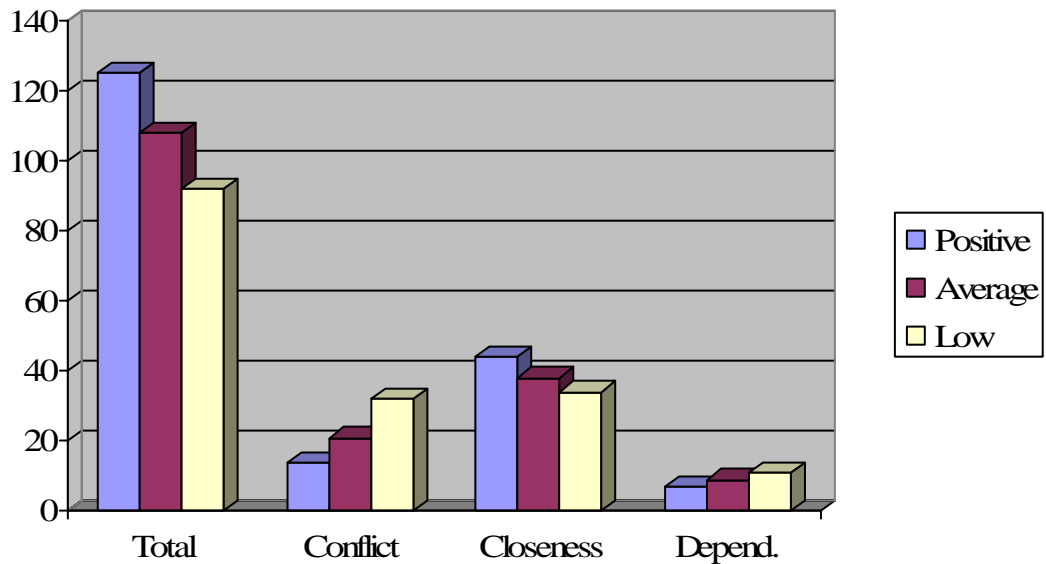


Figure 1. *STRS* Means for the 3 Clusters for Spring, Year 2 (N=24)

As seen in Figure 1, students in the Positive Relationship cluster had higher scores for student-teacher relationship total quality, the highest closeness scores, and the lowest conflict scores and dependency scores whereas the students in the Low Relationship cluster had the highest scores for conflict and slightly higher scores for dependency and

the lowest scores for total relationship and closeness. Further descriptions of the clusters are provided in the next section.

5.2.1 Cluster Descriptions

5.2.1.1 Cluster 1 (Positive Relationships) Cluster 1 contains 11 students and the student-teacher relationships are characterized by the teachers as being generally positive in nature. These students had mostly positive student-teacher relationships across the various time points as reported by their teachers. The *STRS* scores for the positive cluster are mostly within one standard deviation of the means for boys and girls from Pianta’s (2001) normative sample as seen in Table 4, consisting of 1,535 students (51% boys, 49% girls, 63% European Americans, 18% African Americans, and 19% Hispanic Americans).

Table 4.

STRS Scale and Subscale Scores for Total Normative Sample and Student Ethnicity

Scale/subscale	<i>Total</i>		<i>White</i>		<i>Black</i>	
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
Conflict	24.4	8.93	21.7	9.6	25.0	11.3
Closeness	42.01	6.22	45.1	7.2	42.8	7.1
Dependency	10.74	3.54	10.5	3.6	11.4	3.4
Total	114.23	15.47	114.9	15.1	108.5	16.4

In general, compared to the students in the other 2 clusters, the subscale scores for students in the positive cluster reflect lower levels of conflict and dependency and higher levels of closeness, and generally more positive student-teacher relationships. In fact, Spring, Year 2 scores for 3 students in this cluster fall more than one standard deviation above the total raw *STRS* means for both Pianta's normative sample as well as the current sample's mean (Pianta, 2001). The standardized means and standard deviations of each total raw *STRS* score are presented in Table 5 for each time point.

Table 5.

Total STRS Raw Scores (N=24)

Student Pseudonym	Fall, Year 1 (Fall 2004)	Spring, Year 1 (Spring 2005)	Spring, Year 2 (Spring 2006)
Cluster 1 (n=11) Positive Relationships			
Jeremy	122	102*	126
Shawna	82*	135*	124
Tina	125	113	121
Mark	114	133*	121
Nelissa	127	133*	131*
Nate	127	111	133*
Tyrone	132	77*	125
Connor	117	124	126
Jason	121	121	125
Mandy	131	133*	131*
Eric	128	134*	114
Cluster 2 (n=7) Average Relationships			
Joe	121	109	110
Odell	134*	109	108
Quinton	131	108	110
Ashley	121	113	119
Kara	132	113	105
Chase	108*	124	106
Amanda	120	125	103
Cluster 3 (n=6) Negative Relationships			
Taylor	115	133*	64*
Mike	131	124	74*
Allie	114	101*	104
Corey	129	129	105
Marvin	102*	123	100
Jordan	109	102*	105
Overall Totals			
Mean	120.54	117.88	112.08
SD	11.89	14.18	16.81
+/- 1 SD	(132.43, 108.65)	(132.06, 103.7)	(128.89, 95.27)

Note. * scores are outside +/- 1 SD of the sample mean

With the exception of one student, Eric, the *STRS* total raw scores for this cluster ranged from 121 to 140 for Spring, Year 2. Initially, Eric was placed in Cluster 2 (Average Relationship cluster) but after comparing his previous *STRS* scores to other students in the average cluster, it seemed more appropriate for Eric to be placed in the Positive Relationship cluster since his *STRS* raw scores from the previous year (128 and 134) are higher than most of the other students in both the positive and average clusters. In addition, his teacher for the follow-up year routinely reported lower student-teacher relationship quality for all students compared to the other teachers from that time point. Thus, Eric's somewhat lower scores from Spring, Year 2 may not particularly reflect an accurate picture of the overall student-teacher relationship quality. This was the only case where the previous data would have resulted in a different cluster membership.

Seven of the 11 students in the Positive Relationship cluster also had student-teacher profiles in the highest range (raw scores of 121-140) back in Spring, Year 1. Three of the 11 students scored in the average student-teacher relationship range back in Spring, Year 1. However, one student in the Positive Relationship cluster, Tyrone, scored high in conflict in Spring, Year 1. Because both Tyrone's Fall, Year 1 teacher and his Year 2 teacher rated their relationship with him as being generally positive, it seemed appropriate to keep him in the Positive cluster.

In summary, teachers perceived their relationships with Cluster 1 students as more positive and less negative than many of their other relationships. This occurred at least twice during the three time points.

5.2.1.2 Cluster 2 (Average Relationships) Cluster 2 consisted of “average” student-teacher relationships as reported by the teachers for 7 students. In the follow-up year, the total *STRS* raw score fell into the 100 – 120 range. Average student-teacher relationships in this investigation are those relatively low in conflict and dependency, but also lower in closeness than the positive student-teacher relationships in Cluster 1. Overall, the *STRS* scores for Cluster 2 are comparable to Pianta’s total normative sample means (including means for boys and girls) for the various scales/subscales of the *STRS* measure. Unlike the positive cluster, the students in this grouping had scores that stayed within ± 1 standard deviation of the total raw *STRS* mean score for Year 2.

The students in the Average Relationship cluster appeared to maintain at least average, and occasionally positive, relationships with their teachers for all three time points. For example, 2 of the 7 students scored in the positive student-teacher range for Fall, Year 1 and the remaining 5 students scored in the average student-teacher range. Similarly, 5 students scored in the positive range for Spring of Year 1 and 2 students scored in the average student-teacher relationship range. However, students in the Average Relationship cluster who scored higher in the Spring of the previous year were not the same students who scored higher in the Fall.

In summary, teachers tended to rate their relationships with students in Cluster 2 as more average or neutral compared to the students in the other clusters for this sample and these STR ratings were also similar to Pianta’s normative sample means (Pianta, 2001).

5.2.1.3 Cluster 3 (Negative Relationships) Cluster 3 consists of six students whose student-teacher relationships are characterized by their teachers as lower in quality or, in the case of 2 students (Taylor and Mike), extremely poor in quality as shown in Table 5. The six students either had a decrease in student-teacher quality over time and/or were consistently scored lower in relationship quality across the different time points. Given the sharp contrast in *STRS* total scores for Spring, Year 2, Taylor and Mike's profiles will be presented as a sub-group of Cluster 3 and the characteristics of the remaining four students will be reviewed following Taylor and Mike's results.

Taylor's and Mike's total *STRS* raw scores fall into the lowest two percentiles of Pianta's (2001) normative sample. The scores reflect a high level of conflict and dependency between the students and their teachers, at least according to their teachers. The total *STRS* raw scores for both students are well below the current sample's overall group mean of 112.08 (Taylor scored a 64 and Mike scored a 74). Surprisingly, their kindergarten teacher rated both students quite positively during the previous school year and it was a single teacher whom they shared in Spring, Year 2, who rated both so negatively. This was the teacher who routinely scored her relationships more negatively, but these were the two most negative relationships she reported.

With respect to the *STRS* Conflict raw scores as shown in Table 6, the mean score for the 24 students is 20.5 and the score for one *SD* above the sample mean is 30.39. In contrast, Taylor's conflict score is 52 and Mike's is 42, as reported by their teacher. Compared to Pianta's normative sample mean ($M = 24.40$), Taylor's and Mike's *STRS* Conflict raw scores are still well above the mean and even one *SD* from the mean (Pianta, 1991). Similar to the overall *STRS* total raw score, these two students appeared to score

at the extreme ranges, having higher conflict scores and lower overall student-teacher relationship quality scores.

It is not surprising, therefore, to find that the teacher reported low closeness scores for them, as shown in Table 7. Similar to their other ratings, these students scored outside 1 standard deviation of the current sample mean as well as of Pianta's (1991) normative mean of 42. Taylor scored a 23 for the closeness raw score and Mike scored a 26, as reported by the teacher. As previously noted, both students had positive student-teacher relationship quality from the previous school year. The scores from 2005-2006 reflect a completely different picture of student-teacher relationship quality.

The remaining 4 students in Cluster 3 also had a lower, though not as extreme, *STRS* total score. Three of them (Jordan, Marvin, and Allie) had relatively low STR reports for at least 2 of the 3 time points. In contrast, Corey had average STR scores from the previous school year but a sharp decline in the follow-up due to student-teacher conflict in the classroom. Indeed, the problems in social relationships that year became so extreme that Corey was removed from the 2nd grade classroom. First he was suspended on several occasions and then expelled from school; he was later readmitted and placed in a learning support classroom halfway through the school year. He thrived in the calmer, more supportive special education classroom before moving out of the school district after the conclusion of the school year.

On the *STRS* dependency subscale for the follow-up Year 2, as shown in Table 8, Jordan was the only student from Cluster 3 who had a higher than average score. Moreover, the high score seemed to be relatively stable from the previous years' scores. Compared to Taylor and Mike, teachers reported average levels of closeness for the other

four students in Cluster 3. For the *STRS* conflict subscale, all four students were rated as having higher than average conflict scores.

In summary, the students in Cluster 3 are similar because their teachers reported poorer student-teacher quality, to some extent across grades. In particular, two of the students had extremely poor student-teacher quality as reported by their teacher in Spring, Year 2. Other common characteristics for this group include: the same teacher for 4 of the 6 students and higher than average *STRS* conflict scores for all 6 students. With the exception of Taylor's and Mike's scores, the *STRS* closeness scores did not seem to significantly distinguish this cluster from the other two clusters.

Table 6.

STRS Conflict Raw Scores (N=24)

Student Pseudonym	Fall, Year 1 (Fall 2004)	Spring, Year 1 (Spring 2005)	Spring, Year 2 (Spring 2006)
Cluster 1 Positive Relationships			
Jeremy	12	26	12
Shawna	43*	12	13
Tina	13	12	16
Mark	23	12	14
Nelissa	17	13	12
Nate	14	15	12
Tyrone	12	38*	15
Connor	14	16	12
Jason	19	16	12
Mandy	17	12	12
Eric	12	12	20
Cluster 2 Average Relationships			
Joe	14	26	20
Odell	12	25	23
Quinton	13	26	19
Ashley	16	22	16
Kara	13	13	16
Chase	26*	19	28
Amanda	18	15	26
Cluster 3 Negative Relationships			
Taylor	21	12	52*
Mike	13	13	42*
Allie	13	35*	26
Corey	15	12	25
Marvin	20	19	26
Jordan	21	26	23
Overall Totals			
Mean	17.13	18.63	20.5
SD	6.76	7.68	10.09
+/- 1 SD	(23.89, 10.37)	(26.31, 10.95)	(30.39, 10.21)

Note. * scores are outside +/- 1 SD

Table 7.

STRS Closeness Raw Scores (N=24)

Student Pseudonym	Fall, Year 1 (Fall 2004)	Spring, Year 1 (Spring 2005)	Spring, Year 2 (Spring 2006)
Cluster 1 Positive Relationships			
Jeremy	45	37	42
Shawna	35*	53	49*
Tina	41	30*	40
Mark	43	54*	39
Nelissa	52*	54*	47
Nate	47	35*	51*
Tyrone	48	22*	46
Connor	43	49	41
Jason	50	52	40
Mandy	52*	54*	46
Eric	47	54*	43
Cluster 2 Average Relationships			
Joe	49	45	38
Odell	51*	44	48*
Quinton	49	44	32*
Ashley	46	45	40
Kara	49	29*	26*
Chase	47	49	44
Amanda	44	46	36
Cluster 3 Negative Relationships			
Taylor	44	52	23*
Mike	52*	41	26*
Allie	36*	44	39
Corey	49	50	38
Marvin	32*	51	36
Jordan	39*	41	40
Overall Total			
Mean	45.42	44.79	39.58
SD	5.52	8.82	7.22
+/- 1 SD	(50.94, 39.9)	(53.61, 35.97)	(47.03, 32.27)

Note. * scores are outside +/- 1 SD

Table 8.

STRS Dependency Raw Scores (N=24)

Student Pseudonym	Fall, Year 1 (Fall 2004)	Spring, Year 1 (Spring 2005)	Spring, Year 2 (Spring 2006)
Cluster 1 (n=11)			
Jeremy	13*	11	6
Shawna	12	8	14*
Tina	5	7*	5*
Mark	8	11	6
Nelissa	10	10	6
Nate	8	11	8
Tyrone	6	9	8
Connor	14*	11	5*
Jason	12	17*	5*
Mandy	6*	11	5*
Eric	9	10	11
Cluster 2 (n=7)			
Joe	16*	12	10
Odell	7	12	19*
Quinton	7	12	5
Ashley	11	12	7
Kara	6*	5*	7
Chase	15*	8	12
Amanda	8	8	9
Cluster 3 (n=6)			
Taylor	10	9	9
Mike	10	6*	12
Allie	11	10	11
Corey	7	11	10
Marvin	12	11	12
Jordan	11	15*	14*
Overall Totals			
Mean	9.75	10.29	9
SD	3.04	2.63	3.64
+/- 1 SD	(12.79, 6.71)	(12.92, 7.66)	(12.67, 5.25)

Note. * scores are outside +/- 1 SD

5.2.2 STRS CLUSTER SUMMARY

Despite the small sample size for the present investigation, there was STR variability among students across the total *STRS* Scale and Subscales. General findings regarding similarities within relationship clusters as well as differences between relationship clusters have been presented. Students' scores in this sample fell within the normal distribution Pianta (2001) reported across the *STRS* subscales except for the Closeness subscale. A chi-square statistic was used to compare the expected versus observed frequencies of each cluster membership. Results indicate that the distribution of both child gender and race was not systematically different across the 3 clusters as seen in Table 9 and Table 10.

Table 9.

Chi-Square for Gender

	Positive Cluster	Average Cluster	Negative Cluster
Chi-Square	.091	.143	.667
df	1	1	1

Note. $p \leq .05$

Table 10.

Chi Square for Race

	Positive Cluster	Average Cluster	Negative Cluster
Chi-Square	2.273	1.286	.000
df	1	1	1

Note. $p \leq .05$.

Because the current sample is at demographic risk for school-related problems, it could be argued that a normative distribution would not be expected since the current sample reflects only a portion of Pianta's normative sample (the lower tail of the distribution curve). Instead, the current sample could be expected to have less positive and more negative student-teacher relationships. However, this generally was not the case. For the conflict *STRS* subscale, student's scores fell between the 5th percentile and the 99th percentile. For the dependency *STRS* subscale, student's scores fell between the 1st and the 97th percentile. For the total *STRS* raw score, the students' raw scores fell between the 1st and 97th percentile. The only subscale for which this did not occur was closeness. Student scores on the closeness subscale fell between the 3rd and only the 75th percentile. Thus, teachers for this small sample of low-income school children tended to rate their student-teacher relationships as less close than did teachers in the normative sample. This could reflect the social class differences between teachers (middle class) and students (working to lower class), a sample specific difference in how the teachers interact and/or perceive their relationships with their students, or simply a coincidence given the small size of the sample. However, given that the other subscales showed a more normal distribution, it is an interesting finding that may warrant further attention.

5.3 STUDENT EXTERNALIZING BEHAVIORS

As previously discussed, the *TRF* measure was administered to assess student behavior problems (internal and external) as reported by the teacher. Given the creation of three clusters based upon varying levels of student-teacher relationship quality, it was anticipated that the *TRF* scores would further qualify differences between student-teacher

relationships, as noted in Hypothesis 2(a). It was predicted that students who were rated by their teachers as having higher levels of externalizing, acting out behavior in the 2005/2006 school year would also have poorer quality student-teacher relationships, as reported by the same teacher.

Results from the *TRF* time point 2 data are provided in Table 11. Overall, teachers described 4 of the 24 students as having high externalizing behavior scores (scoring between the 93rd and 98th percentile) and 4 students were also described as displaying high internalizing behaviors (scoring between 90th and 97th percentile). Three of the four students in each category were assigned to the lower relationship cluster. These are the students whose teachers report a relationship that is high in conflict and low in closeness. The fourth student, Odell, who scored high on both internalizing and externalizing behavior, was assigned to the Average Cluster (2), where his overall *STRS* total raw scores reflected an average relationship. Possible explanations for these variations will be explored later in the discussion section of the paper.

Five students (4 from the Lower Relationship cluster and 1 from the Average Relationship cluster) scored so high on internalizing and/or externalizing behaviors that their scores placed them in the clinical range of the *TRF*. This means that, according to their teachers, these students engaged in high enough levels of externalizing behaviors and/or internalizing behaviors (e.g., rule breaking, aggression, arguing, defiance, anxious/depressive symptoms, etc.) that from a clinical perspective, intervention is warranted.

In comparison to the Low in Closeness/High in Conflict cluster, teachers tended to report lower behavioral issues for students from the Positive Relationship cluster. As

compared to their peers in the other two clusters, the students in the positive relationship category displayed lower frequencies of internalizing and externalizing behaviors as reported by their teachers on the *TRF*. Furthermore, with the exception of one student, Shawna, the students from the Positive Relationship cluster scored below the 21st percentile on the *TRF* total problem score. Compared to the measure's normative mean, the students from this group scored roughly below 80% of students, indicating low scores for internalizing and/or externalizing behavior as reported by their teachers.

Table 11.

TRF Profiles –Teacher Ratings on Student Behavior for Spring, Year 2

CHILD ID	Int. total score	Int. T-score	Int. %	Ext. total score	Ext. T-score	Ext. %	Total Problem Score	Total Problem T-score	Total Problem %
Jeremy	0	36	8	0	39	14	0	31	3
Shawna	4	51	54	4	55	69	10	50	50.3
Tina	0	37	10	0	42	21	0	32	4
Mark	3	48	42	0	39	14	3	39	14
Nelissa	0	37	10	0	42	21	0	32	4
Nate	0	38	12	0	41	18	0	32	4
Tyrone	0	36	8	1	46	34	4	40	16
Connor	0	37	10	0	42	21	0	32	4
Jason	0	36	8	0	39	14	0	31	3
Mandy	0	37	10	0	42	21	0	32	4
Eric	2	46	34	3	50	50	5	42	21
Joe	2	46	34	3	50	50	19	51	54
Odell	19	69*	97	50	82*	98	84	71*	98
Quinton	8	57	76	11	58	79	32	56	73
Ashley	10	60	84	4	55	69	22	55	69
Kara	6	54	65	0	42	21	9	49	46
Chase	3	48	42	5	52	58	16	49	46
Amanda	6	54	65	6	57	76	17	54	65
Taylor	17	67*	96	45	79*	98	114	79*	98
Mike	2	46	34	36	72*	98	72	67*	96
Allie	21	68*	97	7	58	79	34	60	84
Corey	2	48	42	22	67*	96	87	71*	98
Marvin	13	63*	90	27	65*	93	75	68*	97
Jordan	4	51	54	7	58	79	14	52	58

Note. * scores reflect T-Scores in the clinical range.

5.4 TEACHER CHARACTERISTICS

As a measure of classroom quality, *CLASS* (observation) ratings were obtained during the follow-up year for the seven classrooms (4 first grade, 3 second grade) attended by study children. The *CLASS* requires multiple ratings of each teacher and the average score for each domain is used to create an overall score for the *CLASS* rating scale. Because a shortened version of the *CLASS* was used, all of the nine classroom-level scales were not scored. Table 12 lists a summary of the *CLASS* ratings based on the measure's normative sample, consisting of 244 children in state-funded kindergarten programs, compared to the mean scores of each cluster in the current sample. Overall, the *CLASS* normative means for most of the nine scales are in the mid-range (between 4 and 5) but the means for some of the scales (e.g., negative climate) are in the low range (between 1 and 2) (Pianta, La Paro, & Hamre, 2005). Based on Pianta's normative sample, a lower score on the negative climate scale is good since it reflects an absence or a lower amount of negative teacher behavior (e.g., teacher does not yell, use sarcasm or threats). The *CLASS* means for the current investigation will be presented in the next section.

Comparisons were made between the means of Pianta's normative sample and five of the nine classroom scales: positive climate, negative climate, teacher sensitivity, behavior management, and productivity. The ratings for the teachers were averaged to create a teacher *CLASS* mean for each classroom scale. As seen in Table 12, two of the five scales from Spring, Year 2 (positive climate and negative climate) do not correspond to the means of the normative sample. Specifically, the overall mean for classroom environments in this investigation tended to reflect lower positive climates and higher negative climates. In other words, the overall emotional tone of the classrooms and

connections between the teachers and the students fell into the low to mid range on the *CLASS*, interpreted on the scale as meaning that some student-teacher interactions were characterized as warm and supportive but there were also instances when teacher(s) displayed anger, sarcasm, or disrespect toward the students.

To see the emotional tone of each individual classroom, the reader can reference Table 13 for additional detail and/or differences between the classroom ratings.

Table 12.

CLASS Normative Means vs. Cluster Means, Spring Year 2

Scale	Normative Mean (N=244)	Positive Cluster (n=11)	Average Cluster (n=7)	Low Cluster (n=6)
Positive Climate	5.06	3.88*	3.53*	3.67*
Negative Climate	1.83	3.55*	4.33*	3.67*
Teacher Sensitivity	4.46	4.2	3.79	3.87
Behavior Management	4.76	3.97	3.8	3.95
Productivity	4.38	4.39	4.33	4.5

Note. Each scale contains 7 points. Normative sample N=244 classrooms and for Spring, Year 2, N=7 classrooms, and * scores are +1/-1 *SD* from the *CLASS* normative means.

Table 13.

CLASS Mean Scores for each Classroom Teacher

Classroom	1	2	3	4	5	6	7
Students in each class	(n=6)	(n=2)	(n=1)	(n=4)	(n=1)	(n=7)	(n=3)
Positive Climate	3.6*	3.8*	4.8	5.6	3.4*	2.9*	3.2*
Negative Climate	3.5*	4.5*	1.1	1.7	4.4*	4.8*	5.3*
Teacher Sensitivity	4.3	3.4	6*	4.8	4.7	3.1*	4.3
Behavior Management	3.7	3.1*	6.3*	5	3.9	3.1*	5.3
Productivity	4.2	3.8	5.7*	4.9	3.7	4.2	5.3

Note. Each scale contains 7 points. N=7 classrooms and * scores are +1/-1 *SD* from the *CLASS* normative means provided in Table 8.

As seen in Table 13, two of the classrooms scored around the mean for positive classroom environment and the same two classrooms also scored low in classroom negativity. The remaining five classroom environments scored higher in negative classroom student-teacher interactions and lower for positive climate.

With respect to the three clusters and the *CLASS* ratings, one teacher (Mrs. S.) only reported positive relationships with her students so all 6 of her students were in the Positive Relationship cluster. This is interesting since the *CLASS* ratings for Mrs. S.'s classroom (labeled as Classroom 1 in Table 13) resulted in positive climate scores below the normative mean and higher than average negative climate. These scores were average for this sample. Since Mrs. S. had 6 of the 11 students in the Positive Relationship cluster, the *CLASS* mean scores for this cluster tended to reflect Mrs. S.'s individual *CLASS* mean scores. However, overall the continuity of child behavior and learning challenges among this sample of low-income students continue to pose potential challenges for academics as well as student-teacher relationships.

In the Average Relationship Cluster, 6 of the 7 teachers reported average student-teacher relationships. All of the teachers, with the exception of Mrs. S. had students in the average cluster.

In the Low Closeness/High Conflict cluster, one teacher, Mrs. H., reported negative student-teacher quality for 4 of the 6 students in this cluster. Similar to the results for the Positive Relationship quality, the *CLASS* results for the Low Closeness/High Conflict cluster tended to reflect Mrs. H.'s *CLASS* scores. Compared to the other 6 classrooms, Mrs. H.'s *CLASS* scores are the lowest for positive climate and the highest for negative climate.

In summary, the *CLASS* results helped describe classroom quality on different dimensions (e.g., positive climate, negative climate). Results showed that the teacher rated highest in negativity had the most students in the Low Closeness/High Conflict cluster. The two teachers who were rated higher in warmth and positive climate mostly had students in both the Average Relationship and the Positive Relationship clusters (one teacher rated higher in warmth reported a low student-teacher relationship).

5.5 NEGATIVE LIFE EVENTS

The *PERI*, a checklist of negative or stressful life events at home, was administered to the parent of each child in the follow-up study to see whether negative changes in the home had any relation to student-teacher relationship quality in the second year of the study. However, *PERI* scores did not help discriminate the cluster membership, as shown in Table 14. High *PERI* total scores occurred in all three cluster memberships.

Two students from the Positive Relationship cluster, Jeremy and Tina, had the highest *PERI* scores for Spring, Year 2. Compared to their peers, these two students experienced higher levels of stressful situations at home during the follow-up school year. Parents of both children reported stressful events related to economic challenges such as new jobs, work conditions worsening, lost jobs, beginning welfare, and marital challenges. Nevertheless, these students were engaged in positive student-teacher relationships as reported by their teachers. These types of students deserve more in-depth, descriptive attention, as they seem, at least superficially, to show evidence of resilience in development.

Table 14.

PERI Life Events Scale – total scores for Spring, Year 2 and demographic variables

	CHILD	PERI total	Gender	Race
Cluster 1 Positive Relations	Jeremy	30	M	W
	Shawna	0	F	B
	Tina	25	F	B
	Mark	0	M	W
	Nelissa	2	F	B
	Nate	6	M	B
	Tyrone	10	M	B
	Connor	1	F	B
	Jason	4	M	W
	Mandy Eric	9 0	F M	B B
Cluster 2 Average Relations	Joe	11	M	W
	Odell	11	M	B
	Quinton	20	M	B
	Ashley	9	F	W
	Kara	9	F	W
	Chase	1	M	W
	Amanda	4	F	W
Cluster 3 Negative Relations	Taylor	4	M	B
	Mike	2	M	W
	Allie	14	F	W
	Corey	18	M	W
	Marvin	18	M	B
	Jordan	4	F	B
	Total	212		
	Mean	8.83		
	SD	8.31		

Note. M=male, F=female and B=Black, W=White

5.6 QUALITATIVE RESULTS OF STUDENT-TEACHER RELATIONSHIPS

The students in the following observations were identified by their kindergarten teachers as being highly active children in the 2004/2005 school year (Delaney, 2005). Highly active behaviors consisted of fidgeting, getting out of one's seat, being distracted and/or not engaged in the assigned activity, among other behaviors. Based on their kindergarten experiences, these four students had the potential to display a high degree of externalizing behaviors as compared to their peers. However, two of the students Tyrone and Jeremy seemed to be doing well in first grade and had positive student-teacher relationships as reported by the teachers. In contrast, Taylor's and Marvin's teachers reported higher levels of externalizing behaviors as well as lower or strained student-teacher relationship quality. Additional descriptions regarding the student-teacher relationships are provided in the next section.

5.6.1 Positive Relationship Cluster

5.6.1.1 Tyrone's Observations

Tyrone is in Mrs. K.'s 1st grade classroom. Tyrone is a Black male who is average size for his age. Tyrone appears to have a positive relationship with his teacher and his teacher confirmed this as well. His interactions with his teacher are appropriate and he utilizes his teacher for support when needed.

Tyrone was observed one afternoon in his homeroom. When I walked into the classroom, there seemed to be a different tone in the room as compared to the other first grade classroom I had just left (Mrs. H.'s classroom). In contrast to Mrs. K.'s classroom, the desks were neatly organized with four children sitting clustered together in straight

rows, the supplies in the room were neatly arranged, and the room was bright and nicely decorated. There were even curtains on the windows. The children including Tyrone were sitting at their desks completing a coloring assignment. Children were talking quietly to one another as they completed the assignment and this seemed to be acceptable. Tyrone's desk was in the back corner of the room, furthest from Mrs. K.'s desk. When Mrs. K. found out that I was going to observe Tyrone, she was noticeably surprised. She responded, "He is a typical kid and I am not having any problems with him in class."

The children were directed to turn their attention to the Family Farm Activity Book. They were asked to complete a page from the book. As the children completed the task, Mrs. K. walked around the room and answered the students' questions and commented on the work they had completed. Tyrone remained focused on the task and appeared to be one of the first children who completed the assignment. Once the majority of the children completed the assignment, Mrs. K. began to call upon students to share their answers with the class. At one point, Tyrone was called upon and he did not have an answer to the question. This seemed to be ok and Mrs. K. moved onto another student to see if she had an answer. After this particular sheet was reviewed, the children were directed to complete another page. They were encouraged to complete it with the reward of candy that a visitor had just given the class. There was a sense of excitement in the class as the children attempted to complete the assignment. When Tyrone finished the task, he raised his hand to receive his candy. As he walked back to his seat, he encouraged the other students to finish the assignment.

Towards the end of the observation, a few of the children received prompts to change their stop light cards from green to yellow or yellow to red for not following

directions. Mrs. K. used the stop light system as a behavior management tool to address problem behaviors in the classroom. Mrs. K. was the only teacher observed who used a stop light system as a behavior management tool.

On another observation, Tyrone was seen in the morning during a small group reading instruction. Mrs. K. worked in the back of the room with 5-6 students reading a story and helped them pronounce key words from the lesson. The remaining students were in their seats working on a paper related to the story they had been reading.

Tyrone was initially at his desk working on some worksheets when I arrived. He was working at his desk quietly along with two other male students. When he needed assistance, he raised his hand and asked the aide in the classroom for help. When it was time to go to the back of the room, Tyrone was the first one back and he asked another peer to sit by him. He appeared to be focused on the lesson and raised his hand to answer Mrs. K.'s questions. During the lesson, Tyrone as well as the other group members received a wealth of positive attention from Mrs. K. Phrases like "good job" and "I like the way you are sitting and focusing on the story" were stated. Mrs. K. smiled during the lesson at the students, used some humor to joke with the children, and would say "please" and "thank-you" when she made requests of them.

In summary, Tyrone appeared to be thriving in this type of environment both behaviorally and academically. He seemed to have a positive relationship with Mrs. K. and he sought her out as well as the other adults in the classroom for help at appropriate times. Overall, Mrs. K. was highly positive in her interactions with Tyrone as well as the other students in the classroom. Mrs. K. used positive verbal reinforcement and interacted with her students in a kind, respectful manner. Whether Mrs. K.'s classroom

style, Tyrone's cognitive development, or some other reason (or combination or reasons) was responsible for the change, Tyrone seemed to have settled down in first grade and become a focused, cooperative student.

5.6.1.2 Jeremy's Observations

Jeremy is in Mrs. S.'s classroom. Jeremy is a White male who is physically smaller than the rest of his peers. Jeremy has a tendency to talk loudly and it is unclear whether or not he may have a problem with his hearing given the consistency and frequency of how loudly he talks.

During the first observation, Jeremy was in Mrs. K.'s class for reading instruction. He is in the same reading group with Tyrone. At the moment, Jeremy was sitting at a desk by himself attempting to complete a reading worksheet. Jeremy stared at the paper and played with his pencil. There may be some question as to whether or not he was clear on what to do and/or how to complete the assignment. Instead of asking for help, he squirmed in his chair and looked at the paper. He finally raised his hand but the aide walked right by him to assist another student. Jeremy looked at her in apparent disbelief as his eyes followed her across the room. After helping the other student, the aide returned and assisted Jeremy with his paper.

At another observation, Jeremy was seen working at his desk. Similar to before, he was squirming in his chair. He began to dance in his seat and move his shoulders as he completed his assignment. He then added some vocalizations (e.g., lip smacking sounds) to this routine. The rest of the class did not seem to notice Jeremy's activity level as they worked on their assignments quietly. Once most of the students completed their

assignment, Mrs. S. reviewed the answers for the worksheet. She walked around the room and called on multiple students to share their answers with the class. Jeremy would raise his hand on occasion and was called upon once to share his answer with the rest of the class.

In summary, Jeremy seems to blend in with the other students in his homeroom. Despite his high activity level at times, his teacher is accepting of his behavior and does not overly correct him to sit still or stay on task. When asked about Jeremy, Mrs. S. commented that, “He is not a behavioral problem,” and “He is a typical kid.” Jeremy seemed to have positive relationships with his homeroom teacher as well as his reading teacher. Similar to Tyrone, Jeremy was also doing well academically. Overall, Jeremy fits into the Positive Relationship cluster because there is a low degree of student-teacher conflict and he seems to be pretty independent in the classroom. So, compared to other students, his first grade teacher saw him positively and reported a positive student-teacher relationship. In this case, some of the high activity remains, but it is apparently not seen as a problem either by the teacher or by his classroom peers.

5.6.2 Negative cluster

5.6.2.1 Taylor’s Observations

Taylor is in Mrs. H.’s classroom. He is one of 15 students in her classroom. Taylor is a Black male who is average size for his age. He has a bright, engaging smile and is quite charming to talk to. He appears to get along with his peers and was seen multiple times during the observations trying to help his peers with various tasks within the classroom.

However, I was told by Mrs. H. even prior to beginning the observations that Taylor was not doing well in class behaviorally.

During the observations, it was very apparent that Taylor and Mrs. H. did not have a strong relationship. In fact, it was quite the opposite; the relationship could be described as negative and even confrontational at times, as highlighted by the following interaction.

Following lunch one afternoon, the students returned to their homeroom. The students were sitting at their desks finishing up their special art projects for Thanksgiving. Each student had to choose a vest to represent an Indian or a hat to represent a Pilgrim. Mrs. H. has directed each child to finish his/her project quietly. Mrs. H. remained at the desk and helped the students who had selected their hat since each had to be fitted for the child's head. Upon completion of the project, the children along with the other 1st grade classrooms had been invited to attend a dress rehearsal of a play presented by the second grade students.

Prior to working on his vest, Taylor was directed to complete an assignment in his language arts workbook. He did not appear to be interested in completing the assignment and asked me if I was doing homework too since I was writing in a notebook. I said yes, in a way I was also doing homework. He then helped his peer pick up his vest after it dropped to the floor and commented that he did not want to be an Indian or a Pilgrim since he would "look like a dork." After hearing this comment, Mrs. H. stated that she was trying to give Taylor a reason to go to the second grade dress rehearsal; implying that she was looking for positive behavior from Taylor so that he could attend the dress rehearsal. Taylor did not acknowledge Mrs. H.'s comment and called out a peer's name.

Mrs. H. reminded Taylor again about the play in an even louder tone of voice. Taylor continued to fiddle in his workbook. After a few minutes, he commented that he was bored and that he was finished with the workbook. He began to talk to another peer who was also one of the participants in the investigation and who had not been working on any particular task for the entire time period. Taylor then announced to his teacher that he “is bored”. He was told to pull out his library book. Mrs. H. responded to another student and then asked Taylor if he had found something to do. When Taylor responded “yes”, Mrs. H. attempted to reinforce Taylor’s positive behavior by saying “You are making it hard for me to find a reason to keep you back from the play.” A few minutes went by and then the timer went off. This signaled the students to finish what they were doing in the next minute, at which time they needed to clear their desks and get ready for the next activity. During the transition, Taylor touched another student’s vest and Mrs. H. commented to him that, “You can work on a paper with a volunteer or I was going to give you a chance to go to the play but you obviously do not want to go.” Taylor did not respond and he opened his desk. Mrs. H. directed him not to open the desk. Taylor then placed his head down on his desk. He was told to lift his head. Mrs. H.’s tone of voice continued to escalate and she told Taylor that, “You are making it difficult for me to have to say you are going to the play.” Taylor now stated that he did not want to go to the play. Mrs. H. replied “I did not ask you if you wanted to go.” At this point, even I was confused about whether Mrs. H. wanted Taylor to go to the play or wanted him to stay behind due to his behavior (and which was more desirable!).

The timer went off again but there was still some extra time before the students lined up to go to the play. The other students continued to talk to each other despite Mrs.

H.'s repeated prompts to the children to be quiet. Mrs. H. eventually asked everyone, including Taylor, to line up to go to the play. The students lined up and left the classroom.

In summary, Taylor was not given any clear positive feedback regarding his behavior and, overall, his behaviors were not noticeable different from the other students' behaviors. He seemed to be numb to the negative attention he received and his teacher's behavior management strategy (e.g., punishment, threats to lose privileges) lost its effect in helping Taylor stay on task and/or motivating him to display positive behavior. By the end of the observation, it was difficult to say whether or not Taylor recognized how he "pushed" Mrs. H's buttons and whether or not some of his behaviors were done intentionally to aggravate her. Taylor's behaviors could be described as impulsive at times and when this occurred, his behaviors attracted the attention of his teachers and/or the school staff, which led to negative feedback regarding his behavior.

Overall, Mrs. H. appeared exhausted by and highly frustrated with Taylor's behavior and, as a result, the student-teacher relationship consisted of high amounts of conflict and low levels of closeness. She asked this observer several times, "What is wrong with Taylor?" and if "there are any types of medication that he could take to control his behavior?" Mrs. H. seemed hopeless about Taylor's outcome and did not seem to feel supported by the administration of the school in managing Taylor's behavior in the classroom.

It should be noted that all teachers in his now 3 years of schooling have found Taylor to be a serious problem, primarily as a result of his apparent lack of interest and motivation to do schoolwork. This includes his White Kindergarten and 1st grade

teachers, and his current, Black, 2nd grade teacher. The most consistent complaints appear to include the failure to cooperate with both learning activities and with teacher classroom socialization. His current, 2nd grade teacher has requested that Taylor be evaluated for specialized placement for his very low reading and writing level.

5.6.2.2 Marvin's Observations

Marvin is the second participant from Mrs. K.'s classroom. He is also a Black student and is slightly shorter than some of the other boys in his class. When Mrs. K. heard that Marvin was also included in the observations, she definitely agreed that his behavior posed some challenges in her classroom.

When I first observed Marvin, I was accidentally sitting at his desk that was located at the front of the classroom next to the chalkboard. I sat down at the desk thinking that I was out of the way only to find out that I was in Marvin's chair. I moved to a different seat and Marvin was able to return to his desk. He sat in isolation at his desk while the other children were seated behind him working on their assignments collectively. When Mrs. K. began to check one of the assignments with the rest of the class, she was standing up in front of them with her back to Marvin. During this exchange, he missed out on several opportunities to answer Mrs. K.'s questions since her back was to him when he raised his hand.

The children were directed to begin another worksheet and Marvin remained at his desk but he appeared to struggle with the assignment. He did not appear to be on task and squirmed around his seat and sat up on his knees. While the other students hurried to complete their task with the hope of receiving a piece of candy, Marvin appeared

confused about the assignment. But instead of working on it or asking for help, he requested to use the hall pass to go to the bathroom. When he returned from the restroom, he immediately announced that he had completed the assignment when, in fact, he had not. He raised his hand and said he was done. He seemed worried about not receiving a piece of candy. One of the students walked by the stop light poster and called out “Marvin has a green light” meaning that Marvin was having a pretty good day up to that point. Some of the other students as well as Mrs. K. acknowledged this accomplishment. Marvin did not respond to his fellow student’s statements but instead, he still focused on getting a piece of candy. Mrs. K. looked at his packet and told him that all of the pages were not completed and she asked him to finish them. Marvin threw his packet on the ground a few times and said “I am done with this” in a frustrated tone of voice. Another student attempted to assist him at this point.

Mrs. K. was in the back of the classroom helping an adult male who came in to fix the computer. When Mrs. K. turned around, she told Marvin that he could move his desk back to the other desks at the group. The girls at his table groaned and Marvin dragged his desk back to the other desks and slammed it into place with a smile. He began to walk around the room and talked to the children at the other tables. He seemed to remember that he had not received a piece of candy and he went back to his seat and took his assignment to Mrs. K. to be reviewed.

On a second observation, Marvin was seen walking around the room when I entered the classroom. He was prompted to return to his seat and to begin coloring his papers and tracing his letters. He seemed to be pleased with the work he completed and he said to a peer “How do you like it?” Marvin continued to work on his assignment even

when one of his peers attempted to distract him. Marvin called out, “I want to be an Indian,” as he finished coloring his vest. Overall, the noise level seemed to rise and Mrs. K. prompted the students to lower their voices. Marvin began engaging in self-talk and counting with a peer as they put crayons in the box. Some other children were told to change their lights due to their behavior and then Marvin was asked to change his light as well for talking. Up to this point, Marvin had been pretty focused on the task at hand. However, all of that changed when Mrs. K. realized that it was now the end of the day and the students needed to get ready to go home. Marvin’s behavior changed quickly. His overall behavior level increased. He began rushing around the room, slamming books, ran over to get his take home papers, and shoved the papers along with his homework into his desk. He seemed to be engaged in quite a bit of activity but he really was not accomplishing much since he was running around the room in a rush.

In summary, Mrs. K. reported that Marvin had the “most strained relationship” with her. By the month of November, Marvin had already earned five red light cards, which meant that he missed some of the special activities due to his behavior. It was clear that Marvin had been secluded from the rest of the group during the activity in the first observation, which was somewhat odd given that he was supposedly having a good “green light” day. Overall, Mrs. K. saw Marvin’s behavior as a challenge in the classroom as evidenced by the high scores for externalizing and internalizing behaviors as reported by the *TRF*.

6.0 DISCUSSION

The first purpose of this investigation was to examine stability and change in student-teacher relationships across one school grade to the next. A second purpose was to identify student and/or teacher characteristics that correspond with overall student-teacher relationship quality. In particular, analyses were designed to test whether students with high externalizing behavior have the poorest student-teacher relationship as reported by the teacher and whether teachers who have a highly negative climate in their classroom have a poorer relationship quality with their students. Results of the investigation provide a descriptive picture of student-teacher relationships and factors that are or are not associated with them for the 24 students, their teachers, and classroom environments. They are summarized below and discussed in relation to the existing literature on student-teacher relationships. Finally, implications for future research are presented.

6.1 STABILITY OF STUDENT-TEACHER RELATIONSHIPS

It was hypothesized that student-teacher relationship quality would be modestly stable from one school year to the next. The current investigation is drawing from the previous work on *STRS* stability (Howes, Hamilton, & Phillipsen, 1998). In addition, three organizational models regarding relationship stability were previously presented: hierarchical, independent, and integrative. Studies that have found modest student-teacher associations across grades support the integrative model (van IJzendoorn et al., 1992). The *STRS* subscale correlations (conflict = -.02, closeness = -.08, and dependency = -.01)

from Year 1 to Year 2 do not, however, support the first hypothesis. For these students, indices of relationship security with one's teacher in kindergarten or first grade did not provide any knowledge about security in the student-teacher relationship in the next school year. This outcome if valid, supports an independent model for student-teacher relationship quality. However, it is likely a result of the dependency among *STRS* scores, meaning multiple children were rated by the same teacher.

Across time points (twice in Year 1 and once in Year 2), correlations were not found for the sample's *STRS* subscale scores but mean *STRS* differences were observed. Overall, the means of the *STRS* total raw scores and the closeness *STRS* subscale decreased over time whereas the conflict *STRS* subscale increased over the three time points. The Low Closeness/High Conflict Relationship cluster most notably reflected this trend from Spring Year 1 to Spring Year 2. In particular, the students from this cluster had the highest increase in conflict and dependency scores and a moderate decrease in relationship closeness. So, modest patterns pertaining to STR quality for students with low STR closeness/high STR conflict in Spring Year 1 to Spring Year 2 were observed. This could be of concern if the same pattern persists over time for the students identified by their teachers as having relationships low in closeness and high in conflict as found with other investigations for children living in high-poverty, urban environments (Murray & Malmgren, 2005, Barton, Coley, & Wenglinsky, 1998; McLoyd, 1998; & Brooks-Gunn, Duncan, Klebanov & Seland, 1993). These investigations highlight the challenges that potentially interfere with children's adjustment and success in school as well as in other aspects of their lives.

Some stability in student-teacher relationships was also observed for students in the Positive Relationship cluster. The students in this cluster tended to maintain reasonably positive relationships from the first year to the second, as observed during the cluster analysis. An interpretation of this finding suggests that students who are reported by their teachers as having positive student-teacher relationships, display certain characteristics and/or dispositions that tend to be consistently expressed over the first year or two of schooling. Therefore teachers may have closer, warmer relationships with their students who are more pleasurable to work with and may offer more assistance when these students are having trouble with a task. As a result, students are more than likely reinforced by their teachers for their positive, on-task behaviors and this may increase the likelihood that students repeat the behaviors. Although multiple investigations have examined various student behaviors believed to contribute to student-teacher relationships in a positive or negative manner (Kesner, 1999, Howes, 2000), more work is needed in this area to truly understand how positive student-teacher relationships are created and sustained over time.

Stability/instability of student-teacher quality should be a product of multiple factors, including child characteristics, teacher characteristics, their “goodness of fit”, and, from an attachment perspective, the internal working models each party brings to the relationship. As noted earlier in the literature review, at least three organizational models regarding relationship stability have been presented: hierarchical, independent, and integrative (Howes, Hamilton, & Phillipson, 1998). Each model takes a different perspective. Strong associations in relationship quality across teachers would tend to reflect the hierarchical model, which anticipates strong associations in relationship

quality across teachers because positive parent-child relationships would help a child create and/or expect a positive student-teacher relationship. Modest associations across teachers support the integrative model, which holds that each subsequent relationship alters the more or less integrated working model in (perhaps increasingly) modest ways. No association is consistent with the independent model, representing the belief that each functional “type” of relationship (e.g., care-focused, teaching-focused, friendship-focused) has its own version of a working model based on experiences specific to that type of relationship.

The implications from the current investigation tend to fall between the independent and integrative models depending on interpretation of the results. Specifically, one could argue that no associations were found given the lack of *STRS* subscale correlations from Spring Year 1 to Spring Year 2 so this would reflect the idea that each teacher-student relationship is unique and influenced only in minor or subtle ways by any existing working model. The student-teacher relationship then, is based only or primarily on experiences to the current relationship. However, the correlations across grades for cluster *STRS* subscales tend to support the idea that each relationship is modestly associated with previous student-teacher relationships. If, in fact, there is some support for both the independent and integrative models, there are at least two implications. First, student-teacher relationships (especially when rated by the teacher) truly reflect the characteristics of the teacher and the specific “fit” between this particular teacher and student, so one should expect different relationships across teacher (and development). But, at the same time, teachers and students incorporate themes from previous relationship experiences (“Oh, another one of those teacher/students!”) and form

an internal representation of this relationship based on certain themes from previous experiences. Given the patterns of relationship quality for the clusters as well as the absence of rank-order stability in teacher ratings of individual students, it seems that some version of an integrative model is the best fit for the results of this investigation.

Previous studies have found some stability in relationship quality (e.g., .27) (Howes, Hamilton, & Phillipsen, 1998). Although the present investigation did not produce strong evidence to support this view, the investigation does help describe themes and variations in relationship quality for students from a low-income sample. Results from the current investigation, of course, may lack statistical significance due merely to the small sample size in comparison to the other studies that have studied this topic.

In addition, the present sample primarily consisted of students who were in kindergarten in Year 1 and then first grade during the follow-up so the results of the investigation may be confounded by this particular transition period, kindergarten to first grade. In one study of student-teacher relationships from kindergarten to sixth grade, student-teacher relationships became more stable after 1st grade with correlations of .44 or above (Jerome, Hamre, & Pianta, 2007). Results from this study suggest that student-teacher relationships in kindergarten can be qualitatively different from the relationships teachers expect with students beginning in first grade. In kindergarten, teachers' interactions incorporate aspects of care giving as they support children's social, emotional, and academic needs (Baker, 1999; Howes & Hamilton, 1992). However, a child's developmental needs change so decreased amounts of emotional support and adult guidance may be anticipated. One could therefore expect a decrease in the amount of student-teacher closeness in first grade student-teacher relationships as well as an

increased expectation for the students to be more independent in the classroom setting, both of which were supported by trends which were observed in the sample means across time points.

Another possible explanation for the current results may be related to how much time each student spent with his/her homeroom teacher. Beginning in first grade, students started switching teachers for various academic subjects (e.g., reading, math). It is possible that relationship quality in the current investigation was not as stable across grades. First of all, for the obvious reason that students have different teachers from one to the next school year. But a second explanation is that students were not spending as much time with the same teacher in Year 2 who was reporting on the relationship quality. This may also explain why Year 2 reported lower levels of closeness, on average, with their homeroom students. Starting in first grade, then, teachers were presented with the challenge of building relationships with multiple students in and outside of their homerooms.

An alternative explanation for the lack of STR stability can be derived from social learning. As noted in the review of the literature, social learning theory emphasizes the importance of observing and modeling the behaviors, attitudes, and emotional reactions of others (Bandura, 1977). Students are continually observing the behaviors of other students as well as the teachers' responses to these behaviors and this could motivate a child to behave differently across classrooms and over time. As a result, student behaviors in Spring, Year 2 that help and/or hinder student-teacher relationship quality can be different from the previous school year since the student class composition is different. This, coupled with different teacher responses and behavior management

techniques, can explain why student-teacher relationships are not stable from one year to the next.

Young students in this investigation seemed to experience the extremes of student-teacher quality: relationships described by teachers as warm, trusting, and cooperative versus relationships characterized by conflict and negative student-teacher interactions. Pianta (1994) has documented the fact that student-teacher relationships can predict subsequent school adjustment. With this in mind, students from the Low Closeness/High Conflict cluster may be at risk for less than positive outcomes if their student-teacher relationships are representative of their early relationships. On the other hand, positive student-teacher relationships may serve as a protective factor for students who are challenged by high poverty, urban environments (Davis & Dupper, 2004). Thus, the students in the Positive and even the Average Relationship clusters may fare better academically due not only to their own skills and strategies, but also to connections they have made, early on, with a teacher who could be supportive of them. In the next section, student and teacher characteristics that were assessed in this study are considered, as each relates to cluster membership.

6.2 STUDENT BEHAVIORS AND RELATIONSHIP QUALITY

It was hypothesized that students seen as exhibiting externalizing behaviors (e.g., defiance, disobedience, rule breaking, impulsiveness) would have student-teacher relationships characterized by higher amounts of conflict and negativity. This appeared to be true in the present instance. As reported by their teachers, the students with more externalizing behavior had student-teacher relationships that were low in closeness and

high in conflict. Conversely, teachers rated students with low levels of externalizing behavior as having either positive or average student-teacher relationship quality.

These findings, although small in scope, support results from other investigations (Silver et al., 2005). In Silver and colleagues' sample (2005), teachers reported relationships characterized by the most conflict with their male students who exhibited higher levels of externalizing behavior. In the current study, all three students who were reported as having high externalizing behavior and problematic relationships were males. Silver and colleagues measured relationship quality across 4 time points: preschool, kindergarten, first grade, and third grade, and they found that "the interaction between children's externalizing behavior at baseline (preschool) and teacher-child closeness during kindergarten added significantly to the prediction of children's externalizing trajectories" (2005, p.50). The interaction effect reflected the fact that acting-out students with little or no closeness to their teachers in the early grades had notably increased amounts of externalizing behaviors in third grade.

These data from Silver and colleagues (2005) are relevant to the present investigation since they highlight the potential importance of early student-teacher relationships and the role externalizing behaviors seem to play in compromising student-teacher relationship quality. Silver and colleagues (2005) cited other data suggesting that "although behaviors are usually stable once developed, not all children who express early emerging externalizing behavior problems manifest a stable externalizing trajectory" (p.40). This suggests that a student's academic fate is not predetermined by the existence of externalizing behavior problems but that some kind of intervention may be needed to

support both the student as well as the teacher when externalizing behaviors are present so that the student-teacher relationship is not strained.

Students in the Low Closeness/High Conflict cluster may therefore be at particular risk for future problems. However, it is possible that their outcomes can be altered if they are assisted in building more positive relationships with their teachers. Relationship-focused classroom interventions may then function to minimize externalizing behavior problems and support the student as well as the teacher.

6.3 TEACHER CHARACTERISTICS AND RELATIONSHIP QUALITY

It was hypothesized that teacher characteristics covary with teacher report of student-teacher relationship quality. In particular, it was expected that teachers rated higher in negativity and lower in social connections would report poorer quality student-teacher relationships, whereas teachers rated higher in warmth and emotional sensitivity would report more positive student-teacher relationships. Results only partially substantiated this.

Teacher classroom style was rated on the *CLASS* using a subset of its emotional and instructional scales. Of the seven teachers, only two teachers were rated as having positive emotional climates. The remaining five teachers were rated as having classroom environments high in negativity and low in positive climate. However, these individual differences were concealed when *CLASS* averages were computed for teachers of the children in each relationship cluster. In point of fact, each of the three relationship clusters had *CLASS* ratings that were lower than the normative sample for positive climates and higher than the normative sample's negative climate mean (Pianta, 2001).

In general, the majority of classrooms and therefore a relatively high number of teacher interactions could be characterized as negative. Negative interactions contained sarcasm, anger, verbal threats, and a lack of classroom warmth.

Despite the *CLASS* means across clusters, teacher differences emerged related to overall student-teacher relationship quality. To understand how teacher classroom style may correspond with relationship quality, one must first take into account individual teacher means on the *CLASS* profile. For example, compared to the normative mean, one teacher, Mrs. S., was rated high on negative classroom climate and low on positive classroom climate. However, Mrs. S. rated all of her student-teacher relationships as positive. In fact, the relationships were so positive that all six of her students were included in the Positive Relationship cluster. This finding does not support the hypothesis that teachers rated high in negativity report poorer student-teacher relationship quality.

The fact that only Mrs. S.'s students were all in the positive relationship cluster is obviously related to how Mrs. S. reported her relationship quality, but may not be the conclusion that a trained observer would reach. However, most of her students tended to have previous kindergarten relationships that were also positive or at least average in quality. This finding suggests that teachers can have negative student-teacher interactions but still report positive connections with their students. To understand why this occurred, it would be worthwhile to obtain student perceptions regarding the student-teacher relationship. If all six students reported positive student-teacher relationships with Mrs. S., then the instances of negative student-teacher interactions did not harm the relationship quality and/or the students have learned to expect these types of school interactions. On the other hand, if the students report different or mixed opinions, then

the negative student-teacher interactions may have impaired the relationship quality. Since Mrs. S. may or may not have perceived her interactions as negative, it would also be interesting to capture teacher perceptions about their teaching styles (related to the *CLASS* dimensions) for future studies.

Viewing the *CLASS* results from a different teacher, Mrs. H, instead supports the hypothesis regarding teacher negativity and poorer student-teacher quality. Mrs. H. received the lowest mean in the sample for positive classroom climates and the highest mean for negative climate. At the same time, however, she also reported the poorest student-teacher relationship quality for four of the six students who fell into the Low Closeness/High Conflict cluster. This is more consistent with one other research study using both the *STRS* and the *CLASS* (LoCasale-Crouch, et al., 2007). In LoCasale-Crouch et al.'s investigation of a primarily low-income sample (60% below poverty line), teachers rated higher in negativity tended to report poorer student-teacher relationship quality. To the extent that these findings are valid for students from low-income families, it appears that teachers who engage in high levels of control and fewer positive and supportive interactions have increased challenges in developing positive student-teacher relationships.

A direct association between teacher positive classroom style and report of more positive relationship quality was seen with Mrs. K., who was somewhat more flexible and more positive with the students in class and the majority of her observed student-teacher interactions were positive in nature. However, she did report her relationship with one student (Marvin) as higher in conflict and lower in closeness. Based on both the *CLASS* ratings and the qualitative observations, Mrs. K. appeared to be managing Marvin's

behavior effectively. This was not the case for Mrs. H's frustrations with Taylor's and Mike's behavior.

In summary, researchers have reported that early childhood teachers who display certain qualities (e.g., sensitivity) are more likely to have classroom environments and student-teacher relationships that are more positive in nature (Howes & Ritchie, 2002). In the present study, five of the seven teachers were rated as more negative and controlling but only 3 teachers reported more strained student-teacher relationships with students who are seen by their teachers as having behavior problems in the classroom. It is therefore difficult to explain why the other 2 teachers rated as negative and controlling reported only positive and/or average relationships with the students in their classrooms, unless one also takes into account the characteristics and behavior of the children involved. This suggests that teachers who are rated, by observers, as higher in negativity are able to develop and/or report positive student-teacher relationships or such teachers may have been more positive in the first half of the school year when forming relationships, but more negative as the year dragged on. Conversely, teachers rated high in warmth can also report student-teacher relationships characterized by conflict.

6.4 QUALITATIVE DESCRIPTIONS AND RELATIONSHIP QUALITY

Four qualitative observations were completed to add depth and understanding to student-teacher relationship quality in this investigation. Two male students from the Positive Relationship cluster and two male students from the Low Closeness/High Conflict were selected to highlight differences between the two clusters. The four students were of interest since they were all previously rated by observers in their kindergarten classroom

in Year 1 as being highly active. The relationship with each boy was also rated by his Year 1 teacher as higher in conflict during at least one point of measurement. As a result, one could argue that there was an increased risk for student-teacher conflict in the first grade. Yet this was not the case for two of the students, whose teachers appeared more flexible in managing the student's behavior and created classroom environments characterized by the *CLASS* as productive.

In the case of Tyrone and Jeremy, teachers rated their student-teacher relationships as positive. Furthermore, both of their teachers perceived their behavior as typical and, when asked, did not report any concerns about their performance in the classroom. During the observations, Mrs. K.'s and Mrs. S.'s interactions with these two students were positive in nature.

Conversely, Taylor's classroom observation highlighted a negative student-teacher relationship and supported the hypothesis regarding teacher negativity and teacher reports of poorer relationship quality. Unfortunately, students like Taylor and Marvin, may be at increased risk for negative school outcomes without a positive student-teacher relationship. This is especially true for Taylor since he appears to be detached from his teacher(s) and unmotivated to succeed in school. Although most teachers might find Taylor and Marvin difficult, that was not the case for Jeremy and Tyrone who also had previous student-teacher relationships characterized as high in conflict. This suggests the possibility of a different outcome for Taylor and Marvin if they had a different, perhaps more tolerant, teacher in first grade. Therefore, to understand differences in student-teacher relationships, one must look at the "fit" between any one student and teacher.

6.5 ROLE OF OTHER VARIABLES ON STR QUALITY

For the present investigation, variables such as gender, race, and stressful life events did not appear significant for student-teacher relationship quality. In other words, demographic factors such as being male versus female and being Black versus being White did not play a significant role in determining student-teacher relationship quality or which cluster a student was placed. The sample consisted of 14 males/10 females and 13 Black students/11 White students and the cluster memberships were also fairly evenly distributed.

In addition, parents' reports of stressful life events from the previous six months did not seem to determine relationship quality. The results of the *PERI* showed that students with higher stressful life events fell across all three membership clusters. It is possible, however, that some of the parents in this investigation underreported stressful events at home.

6.6 LIMITATIONS

There are several limitations in the design of this study. Although data were collected through a combination of teacher ratings and observations of the classroom, the investigation only reported the teacher's perspective of the student-teacher relationship. The student's point of view regarding the relationship with his/her teacher was not investigated. Given that a relationship involves two individuals, crucial information was not collected regarding the student's perspective and the student's description of his/her teacher relationship may or may not coincide with what the teacher reports.

Incorporating the student's perspective—even at this young age—should be explored for future investigations.

Another limitation involved reliance on teacher ratings of both the relationship and of student behavior problems. Teachers were asked to rate their relationships with their students via the *STRS* and describe a child's behaviors via the *TRF*. Shared source variance should inflate associations across variables. For example, a teacher who recently encountered a negative student-teacher interaction may be more inclined to rate lower relationship quality and also to rate the student as having higher externalizing behaviors. One caveat is that teachers probably have more ego-investment in how they portray their relationships with students than in how they talk about the students themselves, perhaps especially when teachers differ in both social class and race from many of their students. Thus, teachers may want to portray positive student-teacher relationships so their reports inflate the quality of the relationship, but the same teachers are quite willing to describe student behavior as challenging. Overall, various factors have the potential to undermine a teacher's ability to objectively describe the student-teacher relationship, and therefore undermine the validity of the patterns found in the data.

One of the key limitations of the present investigation is the extremely small, and potentially unrepresentative sample. Any interpretation of the findings is limited to the participants of the current investigation. The small sample size also posed a restriction on how the data could be analyzed. To address this concern, it was decided to use a more descriptive approach, including use of cluster analysis to explore the qualitative nature of the student-teacher relationships.

6.7 CONCLUSION

The purpose of the present investigation was to further describe the student-teacher relationship across the transition to early schooling. Overall, student-teacher relationship quality showed some degree of continuity for students in the three relationship clusters, although there was certainly fluctuation at any one point of measurement. Students who were reported as having positive and average relationship quality tended to remain consistent across grades and it seemed that students who were reported by teachers (and, to some extent, by observers) as having notably active, often challenging, and/or externalizing behaviors in the follow-up were rated as having poorer relationship quality. In addition, teachers in this sample of classrooms serving urban, low-income students were generally rated low for positive classroom climates and higher in negativity, although individual differences between teachers were observed.

Understanding student-teacher relationship quality is an important issue since it has been linked to student academic outcomes (Birch & Ladd, 1998). This is especially true for students from urban, low-income neighborhoods where a positive student-teacher relationship can potentially not only help a student stay in school but also do well academically (Davis & Dupper, 2004). The question, of course, is what is the source of the predictive power? Are conflicted student-teacher relationships merely an indicator of troubled student behavior, or does the relationship itself the particular combination of teacher and student characteristics hold unique power in deflecting student trajectories? The evidence gathered in this investigation suggests that both are true. Some students appear to be challenging to most teachers. Other students or other teachers seem able to

overcome problematic behavior and/or relationships to forge a more positive bond with another teacher.

The results of this investigation suggest that 18 out of the 24 students (75%) had average to positive student-teacher relationships as reported by their Year 2 (predominantly first grade) teachers. If this pattern persists, these students should, theoretically, have better chances of succeeding in school. On the other hand, first-grade students with challenging behavior who are already in a negative student-teacher relationship pattern may be at special risk for problems in school.

It seems important to consider possible interventions that help students and their teachers. If disruptive student behaviors stress teachers and tax their resources, it seems critical, at a minimum, to equip teachers, especially those working with urban, low-income student populations with an arsenal of strategies to cope with challenging student behavior. No doubt more effective, if economically unappealing, is to provide teachers in struggling school districts with behavioral support in the classroom (Noam & Hermann, 2002). A model of teacher behavioral consultation (e.g., Pianta, 1999) may represent the most feasible compromise. The goal is to maintain teacher self-efficacy and keep teachers invested in their students' outcomes so that the student-teacher relationship is not undermined.

In conclusion, student-teacher relationships are a complex issue. Further investigations are warranted to explore ways to measure student-teacher relationships from a child's perspective and to explore how the joint contributions and student-teacher interactions play a role in the relationship quality. More importantly, additional resources are needed to support teachers who are working with at-risk students. This implies

additional funding and the development of effective strategies to keep at-risk students in school. However, the goal of “No Child Left Behind” seems to run contrary to this. Improving the nation’s schools by increasing the standards of accountability does not necessarily meet the needs of at-risk students. Instead of focusing on the outcomes of standardized tests, it seems more important for at-risk students to build connections or supportive student-teacher relationships so that they stay in school and reap the rewards of an education. Therefore, more research is needed to understand student-teacher relationships and, more importantly, changes are needed in teacher preparation and classroom interventions are needed to support teachers and at-risk students.

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