PARENT-TEACHER RELATIONSHIPS ACROSS COMMUNITY TYPES

Amanda Witte
University of Nebraska-Lincoln, awitte2@unl.edu

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PARENT-TEACHER RELATIONSHIPS ACROSS COMMUNITY TYPES

by

Amanda L. Witte

A DISSERTATION

Presented to the Faculty of
The Graduate College at the University of Nebraska
In Partial Fulfillment of the Requirements
For the Degree of Doctor of Philosophy

Major: Psychological Studies in Education

Under the Supervision of Professor Susan M. Sheridan

Lincoln, Nebraska

May, 2015
Children with social-behavioral problems are at high risk for developing long-term, pervasive adjustment problems. Home–school relationships may be critical to alleviating the negative effects of behavior problems and to fostering student success. The environment or community in which homes and schools are situated represents an important influence on the home–school relationship. Despite the evidence supporting positive parent–teacher relationships and the association between community context and educational practices and student outcomes, little is known about the relation between community context and parent–teacher relationships. The manner in which cumulative risk factors and child behavior problems influence the link between community type and parent–teacher relationships also remains unknown. The purpose of this study was to examine whether there were differences between parent–teacher relationships across different community types (i.e., rural, town, city) for students who display disruptive behaviors. Furthermore, this study investigated whether differences in the association between parent–teacher relationships and community type were influenced by the presence of cumulative risk factors and severity of child behavior problems. Results indicated there was a significant overall effect of community type on teacher-reported parent–teacher relationships ($p<.0003$). Specifically, teacher-reported parent–teacher relationship scores were significantly higher for city teachers relative to those in towns and rural schools. However, town and rural teacher scores did not significantly differ.
from one another. There was no significant overall effect of community type on parent-reported parent–teacher relationships. The relationship between community type and parent–teacher relationships was not significantly influenced by cumulative risk or behavior severity for this sample. The results of this study advance the parent–teacher partnership research literature by specifically uncovering a significant link between community type and parent–teacher relationships, an area that has not been previously explored. Behavioral interventions that incorporate relevant contextual information may be most effective in addressing student behavioral concerns leading to improved outcomes for students.
This study was supported by federal grants awarded to Dr. Susan Sheridan by the U.S. Department of Education Institute of Education Sciences

(Grant R324A100115 and R305F050284)
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CHAPTER 1: INTRODUCTION

Children with social-behavioral problems are at high risk for developing long-term, pervasive problems. Behavioral skills deficits are associated with negative academic outcomes (Fantuzzo, Sekino, & Cohen, 2004) and psychosocial problems (Buhs, Ladd, & Herald, 2006). If such problems remain unaddressed, children demonstrating negative social behaviors tend to follow a disadvantageous trajectory that may include receiving low achievement scores and academic grades (Bub, McCartney, & Willett, 2007), dropping out of high school (Vitaro, Brendgen, Larose, & Tremblay, 2005), and being suspended from school (Reinke, Herman, Petras, & Ialongo, 2008).

Children’s behavior problems are particularly salient within rural America where, relative to their urban counterparts, children are more likely to have a mental health problem (Leonardson, Ziller, Lambert, Race, & Yousefian, 2010), demonstrate significant behavior difficulties (Barley & Beesley, 2007), and enter school with higher overall adjustment problems (Henderson & Map, 2002). Rural students’ risk for behavior problems is exacerbated by long-standing barriers to services in rural communities, including insufficient mental health infrastructure, cultural differences, and stigma, making access to treatment options challenging in rural settings (Sheridan, Koziol, Clarke, Rispoli, & Coutts, 2014). Although rural communities may offer adaptive features such as safety and proximity to extended family (Vogt, Burkhart-Kriesel, Cantrell, & Lubben, 2014), some rural children experience behavior problems (Sheridan, et al., 2014) that may be perpetuated by limited resources and intervention supports.

Similarly, students living in disadvantaged environments (regardless of geographic setting) are more likely to have social-behavioral problems and are at risk for
negative academic outcomes. Students living in poverty have demonstrated fewer adaptive skills, more disruptive behaviors, and lower academic competency than their non-disadvantaged counterparts (e.g., Magnuson, Meyers, Ruhm, & Waldfogel, 2004; Wu, Hou, & Schimmele, 2008). Beyond poverty, early exposure to social-demographic risk factors such as low maternal education and language differences between home and school predicts children’s behavior problems (Appleyard, Egeland, van Dulmen, & Sroufe, 2005). The aggregation of risk factors seems to exert a particularly powerful influence on academic and social outcomes as exposure to multiple risk factors impacts children more than the experience of any one individual risk factor (Evans, Li, & Sepanski Whipple, 2013). The more risk factors children experience, the more likely they are to experience poor outcomes (Sameroff, 2000). The likelihood of experiencing these risk factors may vary by community, as does the influence of these factors on outcomes.

Home–school relationships may be critical to alleviating the negative effects of behavior problems and cumulative risk and to fostering student success. When families and schools work together, students benefit emotionally, academically, and behaviorally. Students whose families engage with schools enjoy school more than students whose parents are disconnected from school (Adamski, Fraser, & Peiro, 2013). Parent–teacher relationship quality has been positively correlated with student social competence, adaptive behaviors, and teacher–child relationships. When parents have high-quality relationships with teachers, they are more likely to participate in their children’s schooling (e.g., Kohl, Lengua, McMahon, & Conduct Problems Prevention Research Group, 2000; Waanders, Mendez, & Downer, 2007) which results in positive academic outcomes for their children (e.g. Christenson & Reschly, 2009).
Negative home–school relationships have the opposite effect. Poor parent–teacher relationships exert a strong negative influence on teachers’ ratings of student behaviors; poor parent–teacher relationships may even supersede students’ behavioral history (Serpell & Mashburn, 2011). Specifically, when teachers believe their own education-related values conflict with those of the students’ parents, teachers tend to rate students lower on academic competency and have lower expectations for students’ academic success (Hauser-Cram, Sirin, & Stipek, 2003). Unfortunately, families of students with social-behavioral problems tend toward disengagement from, or limited connection with, schools (Dishion & Stormshak, 2006) and have poorer quality parent–teacher relationships (Rimm-Kaufman, Voorhees, Snell, & La Paro, 2003). Without meaningful partnerships with schools, these families have constrained abilities to access support for their children’s social-behavioral problems. These findings suggest positive parent–teacher relationships have significant weight, and understanding the factors that influence parent–teacher relationships is important.

The environment or community in which homes and schools are situated represents an important influence on the home–school relationship. The bulk of family–school partnership research has focused primarily on student and family factors rather than community factors; however, several rural education researchers have investigated the benefits of family–school partnerships specifically for rural schools and students. In a study of high-performing, high-needs rural schools, supportive relationships with families and communities were among the most important factors associated with school success (Barley & Beesley, 2007). In fact, strong parent involvement was identified as one of the six key components that influence rural school success (Bauch, 2001). In a study of rural
African American youth, maternal involvement in children’s education was linked directly to academic competence and mediated the relationship between low education and SES and students’ self-regulation and academic skills (Brody, Stoneman, & Flor, 1995). Similarly, a longitudinal investigation of rural migrant families revealed that a school–community partnership intervention for English language learning (ELL) students and parents resulted in higher language scores for children whose families received the family involvement training relative to students in the control group (St. Clair, Jackson, & Zweiback, 2012). Moreover, a study of students in rural Appalachia found that successful school efforts to involve parents were linked to a higher rate of student college enrollment (King, 2012).

Family–school relationship studies conducted in urban and suburban communities have shown a pattern of results similar to studies conducted in rural communities. For example, two recent studies conducted in different large metropolitan communities investigated family–school partnership interventions for students with attention deficit/hyperactivity disorder (ADHD). Pfiffner, Villodas, Kaiser, Rooney, andMcBurnett (2013) found that, after receiving a family–school partnership intervention, fifth-grade students demonstrated improvements in teacher- and parent-rated ADHD symptoms, organizational skills, and homework completion. Power et al. (2012) found that, relative to students who received a parent support and education intervention, students who received a family–school partnership intervention demonstrated greater gains in homework performance. Furthermore, the families who participated in the family–school partnership intervention experienced improved family–school relationships and parenting behavior relative to parents in the control group. Similarly, a
randomized trial conducted in an urban community tested the efficacy of a family–school partnership intervention for promoting behavioral competence and decreasing problem behaviors of students with behavioral concerns. Students who received the intervention demonstrated greater increases in adaptive skills and reduction in externalizing problems over the 8-week intervention period relative to the control group (Sheridan et al., 2012).

There has been substantial family–school relationship research within specific types of communities (e.g., rural, urban) but there remains a dearth of work investigating the family–school relationship across or between community types. To date, the majority of the empirical work investigating family–school partnerships, including family involvement, has been conducted without consideration of the community type within which the sample resided. Several parent involvement studies included samples from both urban and rural communities (e.g., Conduct Problems Prevention Research Group, 2007; Xu, 2004); however, these studies did not directly focus on a comparison of the urban and rural samples.

Although cross-community studies of family–school relationships have not been conducted, several studies comparing student academic outcomes across the urban–rural continuum are available. Some researchers have suggested that community type—urban, suburban, or rural—influences important educational practices and student outcomes. For example, rural teachers were less likely to refer students for special education evaluation for inattentive or off-task behavior than their inner-city and suburban counterparts (Dunn, Cole, & Estrada, 2009). Rural students have been shown to enter kindergarten with fewer math (Lee & Burkham, 2002) and literacy skills (Grace et al., 2006) than non-rural students. Rural families’ limited access to libraries and home computers was documented
to mediate the relationship between community type and rural children’s diminished reading scores in kindergarten (Clarke, Koziol, & Sheridan, in submission).

Furthermore, differences along the urban–rural continuum have been found in the link between family income and student early achievement with increases in family income favoring students in large urban areas more than students in rural areas (Miller, Votruba-Drzal, & Setodji, 2013). Miller and Votruba-Drzal (2013) found that students in rural and large urban communities came to kindergarten less academically prepared than their small urban and suburban counterparts.

These studies suggest rural, suburban, and urban communities differ both in accessibility and impact of resources; economic characteristics; and collective human, social, and cultural capital which may impact children’s development (Evans, 2006). Just as factors such as student behavior problems have been shown to influence family–school relationships, it can be hypothesized that community type may also exert influence on parent–teacher relationships.

Despite the evidence supporting positive parent–teacher relationships and the association between community context and educational practices and student outcomes, little is known about the relation between community context and parent–teacher relationships. The manner in which cumulative risk factors and child behavior problems influence the link between community type and parent–teacher relationships also remains unknown.

**Study Purpose**

The purpose of this study was to examine whether there were differences between parent–teacher relationships across different community types (i.e., rural, town, city) for
students with disruptive behaviors. Furthermore, this study investigated whether differences in the association between parent–teacher relationships and community type were influenced by cumulative risk and severity of child behavior problems. This study addressed three primary questions: (1) Does community type (i.e., rural, town, city) predict quality of parent–teacher relationships? (2) Does cumulative risk influence the relationship between community type and parent-teacher relationships quality? and (3) Does severity of child behavior problems influence the relationship between community type and parent–teacher relationship quality? This author hypothesized that parent–teacher relationships in rural communities would be of lower quality than parent–teacher relationships in towns or cities. Furthermore this author expected that cumulative risk and child behavior severity would exacerbate parent–teacher relationship problems for all the participants, but the effect would be most pronounced for those in rural communities.
CHAPTER 2: LITERATURE REVIEW

Theoretical Basis for Investigating Parent–Teacher Relationships Across Community Types

The primary theory guiding family–school partnership research has been Bronfenbrenner’s (1986) well-defined ecological-systems theory in which the individual child influences and is influenced by four nested, interdependent systems of human ecology: microsystem, mesosystem, exosystem, and macrosystem. The microsystem refers to the child’s immediate environments (e.g., home and school) and the mesosystem is composed of the relationships among the microsystem environments (e.g., parent–teacher relationships). As such, children’s social and behavioral competencies are a function of not only immediate sources and settings within which they reside, but also of the relationships between those systems. Broader community and cultural variables (exosystems) impinge on the child indirectly through their effect on micro- and mesosystems via the provision of opportunities to support children’s behavioral and social-emotional development (e.g., the affluence of the community, availability of high-quality child care, and parents’ workplace support of school involvement). Finally, the macrosystem affects both the proximal learning environments (the microsystems of home, preschool) and interactions and relationships among them (the mesosystem). Political and ideological patterns and underpinnings (macrosystems) such as local or federal policy regarding family–school partnership (e.g., No Child Left Behind, Individuals with Disabilities Education Act) subsume all other systems and subsystems and indirectly affect the child and practices within his or her environments (e.g., home–school practices; Bronfenbrenner, 1977).
Each of Bronfenbrenner’s interconnected systems influences the individual child in a unique way. For example, rural culture (exosystem) may perpetuate stigma associated with social-behavioral problems (Girio-Herrera, Owens, & Langberg, 2013), which might affect a child’s access to behavioral services. Rural school boards (exosystem) are increasingly choosing to consolidate schools across multiple rural communities into one school district (Phillips, Harper, & Gamble, 2007) which might mean an individual child must travel long distances to reach school, potentially reducing school attendance and contributing to academic difficulties. Parent involvement at school may also be reduced due to the travel time required to reach the school building. Rural community members typically have multiple relationships (mesosystem) with each other (e.g., serve together on committees, attend the same church) which could influence parent-teacher relationships and ultimately a child. Guided by ecological theory, the current study considers an individual child’s world from different levels and closely examines the processes at work in the mesosystem (parent–teacher relationships) across different community types (rural, town, city).

**Overview of Parent-Teacher Relationship Research**

Parents’ involvement in their children’s learning is clearly related to positive academic and behavioral outcomes (for a review see Fan & Chen, 2001). Building on this strong foundation, researchers have subsequently investigated fine-grained questions such as why, for whom, and under what conditions parent involvement is most effective (Pomerantz, Moorman, & Litwack, 2007). One outgrowth of this expanded line of research is parent–teacher relationship investigations. To clarify the difference between parent–teacher relationship and parent involvement, several researchers have made
distinctions between parent behaviors and activities and parent emotions and attitudes (Kohl et al., 2000; Rimm-Kaufman, La Paro, Downer, & Pianta, 2005; Vickers & Minke, 1995). Parent involvement behaviors include volunteering at school, attending school functions, and assisting with homework. Parent–teacher relationship quality refers to the affective quality of the home–school connection, characterized by trust, mutuality, affiliation, support, shared values, and shared expectations and beliefs about each other and the child (Vickers & Minke, 1995). From an ecological perspective, parent–teacher relationships represent a direct measure of key aspects of the home-school mesosystem (Thijs & Eilbracht, 2012). The following paragraphs describe investigations into how this understanding of parent–teacher relationships relates to teacher and student outcomes.

High-quality parent–teacher relationships tend to lead to more positive outcomes for teachers. Many educators have recognized the importance of high-quality home–school connections and frequently taken steps to foster strong relationships with the parents of their students (Warren & Quintanar, 2005). Teachers have called for increased attention to parent–teacher relationship practices in teacher preparation programs (Warren, Noftle, Ganley, & Quintanar, 2011). Relationship building with parents has been identified by teachers as a key benefit of teacher home visits for early elementary children (Meyer & Mann, 2006). Teachers have typically reported higher rates of satisfaction with behavioral interventions when the method of intervention promotes parent–teacher partnership compared to interventions that omit parent–teacher relationship components (Garbacz et al., 2008).

The benefits of quality parent–teacher relationships for children’s developmental outcomes have been well established (for a review, see Clarke, Sheridan, & Woods,
parent–teacher relationship quality is closely associated with child behavioral, social-emotional, and academic outcomes. Beyond uncovering links between parent–teacher relationships and student outcomes, researchers have delved into nuanced investigations of conditions that influence parent–teacher relationships. Several factors—behavior problems, economic disadvantage, linguistic minority status, single parent household, and low maternal education—have been shown to influence parent–teacher relationships and are described in the following sections.

**Behavior Problems and Parent–Teacher Relationships**

Parent–teacher relationships influence and are influenced by student behavior problems. Student behavior problems tend to lead to negative interactions and strained relationships between teachers and parents (Sheridan & Kratochwill, 2008). Recurring negative interactions often result in parental avoidance of the school and parent–teacher relationships characterized by conflict (Hornby & Lafaele, 2011). For example, a Dutch study (Thijs & Eilbracht, 2012) found a significant positive correlation between student disruptive behaviors and parent–teacher relationship conflict. Parent–teacher relationship quality correlated with teacher–student relationship quality, with positive parent–teacher relationships predicting positive teacher–student relationships. Student behavior problems were found to moderate that relationship, with negative parent–teacher relationships more closely linked to negative teacher–student relationships when the students demonstrated high rates of problem behaviors.

Fortunately, high-quality parent–teacher relationships appear to exert a positive influence on student and parent behavior. When parents and teachers both perceive their relationship to be positive, teachers tend to rate students higher in social skills and lower
in behavior problems compared to teachers with incongruent or non-positive congruent parent–teacher relationships (Minke, Sheridan, Kim, Ryoo, & Koziol, 2014). A study of students with behavior problems found a significant negative correlation between parent–teacher relationship quality and student externalizing problems, and a significant positive association between parent–teacher relationship quality and student adaptive skills (Kim, Sheridan, Kwon, & Koziol, 2013). Parent–teacher relationships also mediated the connection between parents’ motivation and competence for helping their child succeed in school and students’ behaviors. Furthermore, parent–teacher relationship quality has been shown to mediate the effect of a behavioral intervention (i.e., Conjoint Behavioral Consultation; CBC) on child behavioral outcomes. In other words, high-quality relationships between teachers and parents provide a likely causal explanation for the positive effects of behavioral interventions (Sheridan et al., 2012). Thus parent–teacher relationships may be one mechanism through which parents’ desires to support their children is transmitted to children (Kim et al., 2013).

Cumulative Risk and Parent–Teacher Relationships

Risk factors are individual or environmental characteristics that place a child at risk for negative developmental, social-emotional, behavioral, or academic outcomes. Because children often experience many interconnected risks, a single risk factor does not reflect the reality of most children’s lives (Gutman, Sameroff, & Eccles, 2002). Therefore, cumulative risk (i.e., related risks that increase in effect with each added risk) is a better predictor of child outcomes than any one factor (Evans et al., 2013). Cumulative risk has been linked to such child outcomes as IQ (Sameroff, Seifer, Barocas, Zax, & Greenspan, 1986), psychiatric disorders (Rutter, 1979), and academic
achievement (Gutman et al., 2002). Pertinent to the present study, the cumulative risk literature has consistently indicated that as the number of risk factors increases, so too do child behavior problems (e.g., Ackerman, Izard, Schoff, Youngstrom, & Kogos, 1999; Jones, Forehand, Brody, & Armistad, 2002).

Although a multitude of different risk factors have been linked to children’s behavior, the present study focuses on factors that have been linked to negative behavioral outcomes and are hypothesized to be most salient for parent–teacher relationships because they may reflect differences in attitudes about education or may inhibit effective home–school communication. Specifically, risk factors will include (1) coming from an economically disadvantaged family, (2) having a family who speaks a primary language other than English (i.e., the predominant language of the school), (3) living in a single-parent household, and (4) having a mother with low educational attainment.

**Economic disadvantage.** High-quality parent–teacher relationships appear to be less common for low-income students than for higher-income students, and family financial strain has been shown to hinder positive parent–teacher relationships (Kohl et al., 2000). In a study of kindergarten students, Iruka, Winn, Kingsley, and Orthodoxou (2011) found teachers were more likely to report stronger relationships with higher-income parents. Specifically, teachers were likely to report stronger agreement, clarity of communication, and trust with higher-income parents than lower-income parents. Horvat, Weininger, and Lareau (2003) found that families with limited cultural capital (i.e., resources that families are able to access through their social ties such as informal parent networks), typically low-income and ethnic minority families, were less likely to readily
comply with the expectations of schools or communicate with schools and teachers. Furthermore, there is often mutual mistrust between low-income families and schools. Many factors ranging from parents’ previous experiences with schools, lack of knowledge about school practices and expectations, as well as schools’ lack of comprehensive and clear communication contribute to mistrust (Hoover-Dempsey & Sandler, 1997).

In a study of Head Start students, Waanders et al. (2007) found parents reporting higher levels of economic stress and disorder in their neighborhoods tended to report lower teacher-rated parent–teacher relationships. The stress of poverty and living in a community with greater social disorder may exacerbate parents’ psychological distress, likely leaving them with less energy for activities like developing relationships with their children’s teachers. Additionally, the time burden faced by low-income families trying to make ends meet and the greater inflexibility of many low-wage jobs likely interfere with opportunity for, and quality of, parent–teacher interactions.

**Linguistic minority status.** Cultural and language differences often impact parent–teacher relationships for ethnic and linguistic minority families. Minority families are less likely than their Caucasian counterparts to have strong home–school partnerships (Valdés, 1996). For example, although Hispanic parents generally care about their children’s education and want to be involved, they often feel alienated by their children’s schools because of their inability to speak English and the school’s lack of communication channels in a language other than English (Smith, Stern, & Shatrova, 2008). Limited communication contributes to disconnected relationships between linguistic minority families and schools. Communication is especially difficult when
families and educators do not share a common language (López, 2001). Both parents and teachers have reported that language barriers limit their ability to partner with one another (Ruiz-de-Velasco, Fix, & Clewell, 2000). Parents reported feeling excluded, intimidated, and demeaned by their children’s teachers (Shim, 2013), and teachers reported feeling frustrated by lack of support and training for how best to teach ethnic minority students and partner with their parents (Good, Masewicz, & Vogel, 2010).

Limited communication may also give rise to a lack of mutual understanding which, in turn, may lead to conflict and disconnect between parents and teachers (Epstein, 1995). Minority families report being hesitant to partner with Caucasian professionals (Murry, Heflinger, Suiter, & Brody, 2011) or to share personal family information with educators that may result in their children being negatively labeled (Mukolo & Heflinger, 2011). Teachers report feeling under-educated in multiculturalism, which impacts their ability to effectively partner with ethnic minority parents (Good et al., 2010). Even after accounting for income, non-English–speaking families are less likely than their English–speaking counterparts to engage with their children’s school (Cheadle, Amato, & King, 2010). Barriers pertaining to school staffs’ lack of familiarity with culturally and linguistically diverse families, as well as parents’ lack of familiarity with U.S. schools can all impede effective parent–teacher partnerships (Waterman & Harry, 2008).

**Single-parent household.** Although it is difficult to disentangle the influence of poverty from other family characteristics, researchers have demonstrated that children raised in single-parent families tended to fare worse in academic achievement, conduct, psychological adjustment, and social behavior than children of consistently married
parents (Amato, 2001; McLanahan & Sandefur, 1994). Evidence linking number of adults in the home with parent–teacher relationships is lacking; however, single parenthood is associated with less parental involvement in school-related activities (Cheadle, Amato, & King, 2010; Grotnick, Benjet, Kurowski, & Apostoleris, 1997; Kohl et al., 2000; McLanahan & Sandefur, 1994). A study of preschoolers found single parents were rated by teachers as less involved in their child’s education than married parents (Arnold, Zeljo, Doctoroff, & Ortiz, 2008). This study only reported teacher perceptions, and it may be that single parents were supporting their children’s learning in ways not visible to teachers. Arnold et al. (2008) hypothesized that it is more difficult for single parents to find time to participate in education-related activities and forge close relationships with teachers because they are overwhelmed by completing their parenting tasks alone. However, much like other parents, single parents who are involved in their children’s education contribute to positive outcomes for their children (National Center for Education Statistics, 2007).

**Low maternal education.** Low maternal education also has been identified repeatedly as a risk factor in children's development (Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002) and is regarded as a possible barrier to high-quality parent–teacher relationships (Hornby & Lafaele, 2011). Mothers' education level has been significantly correlated with parental efficacy for helping their children learn (Hoover-Dempsey & Sandler, 1997), and encouragement and support of their children’s learning (Hornby & Lafaele, 2011). When parents had confidence in their ability to help their children (self-efficacy), they were more likely to be involved in their children's education (e.g., Pelletier & Brent, 2002; Shumow & Lomax, 2002). Parents who performed poorly in school or did
not achieve high levels of education may feel ill-equipped to collaborate with their children’s teachers reducing the quality of the parent–teacher relationship.

**Community Type and Parent–Teacher Relationships**

Community characteristics that affect child educational outcomes and family–school partnerships differ across community types (rural, town, city). Emerging evidence suggests that rural students are more likely to experience behavioral and academic problems than urban students. Rural students, on average, have demonstrated significant behavior difficulties (Barley & Beesley, 2007), entered school with higher overall adjustment problems (Henderson & Map, 2002) and less advanced academic skills (Miller & Votruba-Drzal, 2013) relative to non-rural students. Isolation and limited access to schools and support services is common in rural communities and technology designed to overcome isolation (e.g., broadband) is less available in rural communities than cities (Beede & Neville, 2013). Recent rural school consolidations have increased the distance from homes to schools for many rural families (Phillips et al., 2007) potentially decreasing communication between parents and teachers. Long distances between home and school and lack of transportation inhibit parents’ involvement in school activities (Weiss & Correa, 1996). Rural schools often face challenges related to the availability of highly qualified or specialized staff with expertise in parent engagement (Hammer, Hughes, McClure, Reeves, & Salgado, 2005). The “brain-drain” in rural communities (i.e., a phenomenon wherein highly educated adults move to urbanized areas) means that a disproportionate number of parents remaining in rural areas are poorly educated and are more likely to have dropped out of high school than urban parents (O’Hare & Johnson, 2004). O’Hare and Johnson (2004) reported 32 percent of
25-to-44-year-olds in urban areas have at least a college degree, compared to only 18 percent of those living in non-urban communities. Parents with limited education or who had negative experiences in school are less likely to engage in positive communication with schools (Hoover-Dempsey & Sandler, 1997). Therefore the combination of elevated risk for behavior problems, lack of behavioral health resources, and limited home-school communication make parent-teacher relationships particularly challenging in rural communities.

Rural communities have closely connected professional and social networks, which enable personal information to spread quickly among community members. Parents may be reluctant to partner with teachers for fear that family members, friends, and colleagues will learn about their family business (Larson & Corrigan, 2010). The cultural emphasis on self-reliance in rural communities can also discourage individuals from seeking help for parenting or behavioral difficulties (Osborn, 2012). Stigma, defined as a perceived flaw resulting from a personal characteristic viewed as socially unacceptable (Blaine, 2000), is often associated with the identification of and treatment for behavioral health needs. Rural communities are particularly susceptible to the negative impact of stigma (Beloin & Peterson, 2000; Owens, Richerson, Murphy, Jageleweski, & Rossi, 2007). For parents of children with behavioral concerns, stigma may influence whether or not parents decide to partner with teachers to address concerns if doing so might result in feelings of shame about themselves (e.g., being judged as a bad parent) or shame for their children (Dempster, Wildman, & Keating, 2012). Families without generational ties to the rural community may experience social exclusion and be less likely than other families to access the limited resources that are available (Elder &
Although these community differences have been noted, their impact on parent–teacher relationships have not been directly studied.

The Current Study

Parent–teacher relationship research is well grounded in ecological-systems theory (Bronfenbrenner, 1986), but deeper insight in the links between community type (i.e., macrosystem) and parent-teacher relationships (i.e., mesosystem) would strengthen theoretical underpinnings in the literature. The benefits of high quality parent–teacher relationships in all community types have been documented, but differences in parent–teacher relationships across community types have not been investigated. Uncovering the varying influences on parent–teacher relationships will help inform home–school partnership interventions.

The purpose of this study was to examine whether there were differences between parent–teacher relationships across different community types (i.e., rural, town, city) for students with disruptive behaviors. Furthermore, this study investigated whether differences in the association between parent–teacher relationships and community type were influenced by cumulative risk and severity of child behavior problems. This study addressed three primary questions: (1) Does community type (i.e., rural, town, city) predict quality of parent–teacher relationships? (2) Does cumulative risk influence the relationship between community type and parent-teacher relationships quality? and (3) Does severity of child behavior problems influence the relationship between community type and parent–teacher relationship quality? This author hypothesized that parent–teacher relationships in rural communities would be of lower quality than parent–teacher relationships in towns or cities. Furthermore, this author expected that cumulative risk
and child behavior severity would negatively influence parent–teacher relationships for all the participants, but the effect would be most pronounced for those in rural communities.
CHAPTER 3: METHODS

Participants

The sample for this investigation was drawn from an existing database and includes 414 5- to 9-year-old, kindergarten through third-grade students, their parents, and their teachers. Of this sample 108 students and 59 teachers were from a rural setting, 133 students and 78 teachers were from towns, and 193 students and 83 teachers were from a city. Demographic information for the rural, town, and city participants is provided in Table 1. Consistent with prior research on children with behavior problems (e.g., Kim et al., 2013) the students in this study were mostly male (75%). Parents identified their children’s ethnicity, with 81% identified as Caucasian, 5% as Hispanic, 5% as African American, and 9% as other. More than half (53%) the students were eligible for free or reduced lunch. Parents were mostly female (92%) and most participating parents completed high school or equivalent, but only 37% obtained a college degree. Teachers predominantly self-identified as Caucasian non-Hispanic (99%) and female (96%). Only one parent per child completed questionnaires and only one child per family was invited to participate.

Setting

Participants were recruited from three community types: rural, town, and city. Community type was defined using the National Center for Education Statistics urban-centric locale designation system whereby schools fall into a locale category based on community population size and proximity to a densely settled urbanized area. This system classifies territory into four major types: city, suburb, town, and rural.
Table 3.1
Demographic Characteristics of Rural, Town, and City Samples

<table>
<thead>
<tr>
<th>Student and Family Characteristics</th>
<th>Rural</th>
<th>Town</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (SD) Behavior Problem Severity&lt;sup&gt;a,d&lt;/sup&gt;</td>
<td>66.21 (12.12)</td>
<td>67.08 (9.78)</td>
<td>67.42 (11.07)</td>
</tr>
<tr>
<td>Mean (SD) Number of Risks</td>
<td>1.24 (.93)</td>
<td>1.64 (.98)</td>
<td>1.34 (1.04)</td>
</tr>
<tr>
<td>Risk Factors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Eligible for Free or Reduced Meals&lt;sup&gt;b&lt;/sup&gt;</td>
<td>49%</td>
<td>62%</td>
<td>49%</td>
</tr>
<tr>
<td>Non-English Language Spoken at Home&lt;sup&gt;c&lt;/sup&gt;</td>
<td>1%</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Maternal Education &lt; College Degree&lt;sup&gt;c&lt;/sup&gt;</td>
<td>63%</td>
<td>70%</td>
<td>57%</td>
</tr>
<tr>
<td>Fewer Than Two Adults in Home&lt;sup&gt;c&lt;/sup&gt;</td>
<td>14%</td>
<td>30%</td>
<td>26%</td>
</tr>
<tr>
<td>Mean (SD) Student Age&lt;sup&gt;a&lt;/sup&gt;</td>
<td>7.02 (1.25)</td>
<td>6.88 (1.18)</td>
<td>7.00 (1.09)</td>
</tr>
<tr>
<td>Mean (SD) Student Grade&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.57 (1.15)</td>
<td>1.45 (1.09)</td>
<td>1.31 (1.07)</td>
</tr>
<tr>
<td>Student Gender (Male[Female])&lt;sup&gt;b&lt;/sup&gt;</td>
<td>76% [24%]</td>
<td>75% [25%]</td>
<td>73% [28%]</td>
</tr>
<tr>
<td>Student Ethnicity&lt;sup&gt;c&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White/non-Hispanic</td>
<td>92%</td>
<td>77%</td>
<td>73%</td>
</tr>
<tr>
<td>Black/African-American</td>
<td>0%</td>
<td>6%</td>
<td>9%</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>5%</td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
<td>8%</td>
<td>14%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teacher/Classroom Characteristics</th>
<th>N = 59</th>
<th>N = 78</th>
<th>N = 83</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (SD) Teacher Years of Experience</td>
<td>14.54 (11.39)</td>
<td>15.33 (11.24)</td>
<td>9.64 (9.88)</td>
</tr>
<tr>
<td>Mean (SD) Number of Students in Classroom</td>
<td>15.59 (3.62)</td>
<td>20.49 (3.62)</td>
<td>19.66 (4.73)</td>
</tr>
<tr>
<td>Teacher Highest Degree&lt;sup&gt;b&lt;/sup&gt;</td>
<td>College Degree</td>
<td>22%</td>
<td>27%</td>
</tr>
<tr>
<td></td>
<td>Additional Formal Schooling</td>
<td>78%</td>
<td>73%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parent Characteristics</th>
<th>N = 105</th>
<th>N = 113</th>
<th>N = 193</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (SD) Parent Age&lt;sup&gt;a&lt;/sup&gt;</td>
<td>34.75 (7.18)</td>
<td>34.51 (7.53)</td>
<td>34.46 (7.75)</td>
</tr>
<tr>
<td>Paternal Education &lt; College Degree&lt;sup&gt;c&lt;/sup&gt;</td>
<td>82%</td>
<td>78%</td>
<td>66%</td>
</tr>
<tr>
<td>Annual Household Income&lt;sup&gt;c&lt;/sup&gt;</td>
<td>$8,001-$20,000</td>
<td>14%</td>
<td>27%</td>
</tr>
<tr>
<td></td>
<td>$20,001-$35,000</td>
<td>23%</td>
<td>21%</td>
</tr>
<tr>
<td></td>
<td>$35,001-$50,000</td>
<td>22%</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>over $50,000</td>
<td>42%</td>
<td>27%</td>
</tr>
</tbody>
</table>

Note. <sup>a</sup> One-way between subjects ANOVA yielded no significant difference (p > .05) between rural, town, and city samples. <sup>b</sup> Chi-square test of independence yielded no significant difference (p > .05) between rural, town, and city samples. <sup>c</sup> Between group comparison could not be conducted, expected cell count was less than five. <sup>d</sup> Rating of severity by teachers on the BASC-2 Externalizing Problems Composite Score.
Cities and suburbs have three subcategories based on population size: large, midsize, and small. Towns and rural areas are further distinguished by their distance from an urbanized area. They can be characterized as fringe, distant, or remote (Schneider, 2006). Communities in three mid-western states were included.

**Recruitment**

A rolling enrollment procedure was used. Participants enrolled in the study at different times over nine academic years from 2005 to 2014. Participants were recruited from 220 classrooms across 106 different schools. Upon approval from school administrators, all kindergarten through third-grade general classroom teachers were invited to participate. Every teacher who consented to participate then nominated up to five students from his or her classroom and completed a brief screener for each nominated student. Students became eligible for participation if teachers rated them as “moderately” to “greatly” in need of additional behavioral services, and their externalizing behaviors were “moderately” to “extremely” severe and “moderately” to “extremely” frequent. Students with a diagnosis of autism spectrum disorder or intellectual disability were excluded from the study. Once students were deemed eligible for the study their parents were invited to participate. As many as three students per classroom participated. If teachers nominated more than three students, the three most in need of additional services were prioritized and the parents of these three students were invited to participate. If any of those parents declined to participate, the fourth student’s parents were invited; if they declined, the fifth student’s parents were invited.
Study Variables and Measures

The predictor variable in this study was community type (i.e., city, town, rural). The outcome variable was parent–teacher relationships. Means and standard deviations for the parent–teacher relationship measure are reported in Table 4.4. Moderating variables were cumulative risk and child behavior problem severity. Means and standard deviations for the moderating variables are reported in Table 3.1. See Figure 3.1 for graphical representation of the model being tested in this study.

![Diagram](image)

Figure 3.1. Moderation model being tested.

Screening Measure

All students were selected for participation in the study based on teacher-reported concerns regarding the presence of disruptive behaviors. Teachers are asked to rate up to five students in their classrooms who displayed externalizing behaviors on a brief screening measure (Glover, Sheridan, Garbacz, & Witte, 2005). Teachers rated each student’s behavior based on severity and frequency, as well as the teachers’ perception of how much the student needed behavioral intervention. Teachers rated children’s externalizing behaviors on a 9-point Likert-type scale in regard to their severity and frequency. The severity item was rated with 1 indicating very mild, 3 somewhat mild, 5 moderate, 7 somewhat severe, and 9 very severe. Ratings of 2, 4, 6, and 8 were used for responses that fall between the other anchors for severity of externalizing behaviors. The frequency item was rated with 1 indicating very infrequent, 3 somewhat infrequent, 5
moderate, 7 somewhat frequent, and 9 very frequent. Ratings of 2, 4, 6, and 8 were used for responses that fall between the other anchors for frequency of externalizing behaviors. Teachers rated the need for additional intervention on a 5-point Likert-type scale, with 1 indicating no need, 3 moderate need, and 5 significant need. Ratings of 2 and 4 were used for responses that fall between the other anchors. Students were eligible for inclusion in the study if they scored a 5 or higher for both severity and frequency of problem behavior, and if they scored a 3 or higher on the perceived need for additional intervention item.

Parent–Teacher Relationship

Parent and teacher perception of the quality of their relationship with each other was assessed using the Parent–Teacher Relationship Scale (PTRS; Vickers & Minke, 1995). The PTRS consists of 24 items rated on a Likert-type scale with 1 indicating almost never, 2 once in a while, 3 sometimes, 4 frequently, and 5 almost always. Higher scores indicate a more positive perception of the relationship. The PTRS measures two specific family systems constructs: cohesion (emotional bonding) and adaptability (ability to change when needed), to the parent–teacher subsystem (Vickers & Minke, 1995). The scale assesses the overall quality of the parent–teacher relationship across two factors: Joining and Communication-to-other. The 19-item Joining subscale includes items to measure feelings of partnership between parents and teachers (e.g., We are sensitive to each other's feelings; We cooperate with each other). The 5-item Communication-to-other subscale is designed to measure parents and teachers communication of information and feelings (e.g., I tell this teacher/parent when I am
pleased). Both parents and teachers completed this scale. Internal consistency for the current sample was found to be high (α = .94 for teachers and .93 for parents).

**Cumulative Risk**

Demographic family, child, and school information was collected to quantify family risk factors including: (1) economic disadvantage (i.e., qualify for free or reduced lunch), (2) having a family whose primary language is other than English (i.e., the predominant language of the school), (3) fewer than two adults in the home, and (4) low maternal educational attainment (i.e., less than college degree). The variable of interest for the current study is cumulative risk, defined as total number of family risk factors reported for the child (ranging from 0 to 4).

**Behavior Problem Severity**

Child behavior problem severity was determined using teacher report on the Behavior Assessment System for Children – Second Edition Externalizing Problems Composite Score (BASC-2; Reynolds & Kamphaus, 2004). The Externalizing Problems Composite examines the areas of hyperactivity and aggression for all students, and also includes conduct problems for students 6 and older. The hyperactivity scale measures the tendency to be overly active or act without thinking, the aggression scale measures the tendency to act in a hostile manner that may appear threatening to others, and the conduct problems scale measures the tendency to engage in anti-social rule-breaking behavior. Each BASC-2 item consists of a statement pertaining to a child’s behavior. Teachers are asked to indicate the frequency with which the student exhibits a behavior using a 4-point Likert-type scale (N=Never, S=Seldom, O=Often, or A=Almost Always). The BASC-2
authors (Reynolds & Kamphaus, 2004) reported relatively high internal consistency for the externalizing problems composite with a coefficient alpha of .90.

**Covariates**

Teachers’ years of experience and class size served as covariates. Teachers’ years of experience, measured by their report of the number of years they have been teaching, is significant because teachers with more experience may have an easier time developing relationships with parents. Class size, measured by teacher report of the number of students in their class, is included as a covariate because higher parent involvement rates have been reported in schools with larger classes and larger student-teacher ratios (Griffith, 1998). Because data were collected from participants over nine academic years, participation year was included as a covariate to account for any variance due to events that occurred in a particular academic year.

**Procedure**

The present study is part of a larger randomized controlled trial with random assignment to either a treatment or control group occurring at the classroom level. Parents and teachers of students in classrooms assigned to the treatment group experienced Conjoint Behavioral Consultation (CBC; Sheridan & Kratochwill, 2008), a family–school partnership intervention involving teachers working with parents and a consultant to design and implement behavioral interventions collaboratively. Students assigned to classrooms in the control condition experienced “business as usual.” The current study employs data collected after randomization but prior to intervention delivery.
Data Collection

The PTRS, demographic questionnaire, and BASC-2 were collected via written questionnaires which included other assessments that are not pertinent to the present study. The questionnaires were either hand delivered, mailed, or presented as an on-line questionnaire emailed to parents and teachers. Parents and teachers completing paper questionnaires were provided with a postage-paid envelope by the study staff. Upon completion and submission of each questionnaire parents and teachers received $50 remuneration.

Data Entry

The PTRS, demographic information, and BASC-2 data from on-line and paper surveys were entered into a password-protected study database. Code numbers were used to identify the data and no names were used in the database.

Data Analysis

The hypothesized associations between community type, cumulative risk, behavior problem severity, and parent–teacher relationship was assessed using multilevel modeling. Nested data frequently occur in educational research wherein data are organized at student, classroom, and school levels. In particular, data nested within a group tend to be more alike than data from individuals selected at random and not nested within a group. Multilevel modeling accounts for the shared variance in hierarchically structured data (e.g., students who share a teacher could have data that are more similar to each other than to other participants in the sample) (Pedhazur, 1997). Therefore, a multilevel modeling approach was appropriate for the nesting of data in this study that included students nested within classrooms and classrooms nested within schools.
The direct effect of community type on parent–teacher relationship (as measured by parent and teacher reports on the PTRS; **Research Question 1**) as well as the moderating effect of cumulative risk (**Research Question 2**) and behavior problem severity (**Research Question 3**) was assessed using a three-level multilevel model. The multilevel model was implemented using SAS PROC MIXED (Singer, 1998) with parents’ ratings of students (Level 1) nested within teachers (Level 2) nested within schools (Level 3).

Moderation was statistically tested using interaction terms of cumulative risk by community type, and behavior severity by community type, to determine whether the effect of cumulative risk and behavior severity on parent–teacher relationship depended on community type. Although this approach to testing moderation does not exactly reflect research questions 2 and 3, it is in keeping with typical statistical tests of continuous by categorical interactions and is statistically symmetrical in that both perspectives are tested with the same analysis. Teachers’ years of experience, class size, and participation year were entered as covariates. Community type served as the predictor variable, parent–teacher relationship served as the outcome variable, and cumulative risk and behavior problem severity served as moderator variables. The predictor variable was dummy coded using rural as the reference. Rural was chosen as the reference because it is hypothesized that parent–teacher relationships in rural communities will be of lower quality than parent–teacher relationships in towns or cities for this sample. Therefore, the comparisons of interest are with rural communities and other types of communities (i.e., town and city). The moderator variables as well as covariates were grand mean centered.
The direct effect of community type on parent–teacher relationship quality was tested using the regression coefficient for community type. Subsequently, moderation was statistically tested using the interaction term of community type by cumulative risk (Level 1) and community type by behavior severity (Level 1) to determine whether shared interaction qualities moderated the association between community type and parent- and teacher-reports of the parent–teacher relationship.

A description of the three level multilevel statistical model follows (a . in the subscript indicates the mean).

The Level 1 equation is:

\[ TPTRS_{ijk} = \Pi_{0jk} + \Pi_{1jk} (BEH_{ijk} - BEH_{jk}) + \Pi_{2jk} (CRISK_{ijk} - CRISK_{jk}) + r_{ijk} \]

The Level 2 equation is:

\[ \Pi_{0jk} = \beta_{00k} + (BEH_{jk} - BEH…) \beta_{01k} + (CRISK_{jk} - CRISK…) \beta_{02k} + (\beta_{03k}) (cov1) + (\beta_{04k}) (cov2) + r_{0jk} \]

\[ \Pi_{1jk} = \beta_{10k} \]

\[ \Pi_{2jk} = \beta_{20k} \]

The Level 3 equation is:

\[ \beta_{00k} = \gamma_{000} + \gamma_{001}(DTOWN) + \gamma_{002}(DCITY) \]

\[ + \gamma_{003}(BEH_{k} - BEH…) + \gamma_{004}(CRISK_{k} - CRISK…) \]

\[ + \gamma_{005}(BEH_{k} - BEH…) (DTOWN) + \gamma_{006}(BEH_{k} - BEH…) (DCITY) \]

\[ + \gamma_{007}(CRISK_{k} - CRISK…) (DTOWN) + \gamma_{008}(CRISK_{k} - CRISK…) (DCITY) \]

\[ + \sum_{j=0}^{17} \gamma_{00j} \text{cov}_j + r_{00k} \]

\[ \beta_{01k} = \beta_{010} \]
\[ \beta_{02k} = \beta_{020} \]
\[ \beta_{03k} = \beta_{030} \]
\[ \beta_{04k} = \beta_{040} \]
\[ \beta_{10k} = \gamma_{100} + \gamma_{101} (\text{DTOWN}) + \gamma_{102} (\text{DCITY}) \]
\[ \beta_{20k} = \gamma_{200} + \gamma_{201} (\text{DTOWN}) + \gamma_{202} (\text{DCITY}) \]

The parents \(i\) (Level 1), teachers/classrooms \(j\) (Level 2), and school \(k\) (Level 3), model components are combined into a mixed model. In this model, \(\text{TPTRS}_{ijk}\) is the teacher report of the parent–teacher relationship for parent \(i\) within teacher \(j\) within school \(k\), \(\gamma_{001} (\text{DTOWN}) + \gamma_{002} (\text{DCITY})\) represents the main effect of community type, \(\gamma_{003} (\text{BEH}_{ijk} – \text{BEH}…)\) represents the level three direct effect of behavior severity and \(\gamma_{004} (\text{CRISK}_{ijk} – \text{CRISK}…)\) represents the level three direct effect of cumulative risk, \(\gamma_{005} (\text{BEH}_{..k} – \text{BEH}…) (\text{DTOWN}) + \gamma_{006} (\text{BEH}_{..k} – \text{BEH}…) (\text{DCITY})\) represents the interaction effect between community type and behavior severity, \(\gamma_{007} (\text{CRISK}_{..k} – \text{CRISK}…) (\text{DTOWN}) + \gamma_{008} (\text{CRISK}_{..k} – \text{CRISK}…) (\text{DCITY})\) represents the interaction effect between community type and cumulative risk. The level three residual term is represented by \(r_{00k}\). For this study, the direct effects of interest are the magnitude and significance of \(\gamma_{001} (\text{DTOWN}) + \gamma_{002} (\text{DCITY}) + \gamma_{003} (\text{BEH}_{..k} – \text{BEH}…) + \gamma_{004} (\text{CRISK}_{..k} – \text{CRISK}…)\) the regression coefficient and cross-product interaction term that capture the difference in teacher reports of the parent-teacher relationship due to community type, and \(\gamma_{100} + \gamma_{101} (\text{DTOWN}) + \gamma_{102} (\text{DCITY})\) and \(\gamma_{200} + \gamma_{201} (\text{DTOWN}) + \gamma_{202} (\text{DCITY})\) which capture the moderating effect of behavior severity and cumulative risk, controlling for the covariates of interest. This same model was repeated for parent report of the parent–teacher relationship (\(\text{PPTRS}_{ijk}\)). Figure 3.2 contains a visual depiction of the relationships.
tested in the multilevel model. Although the analyses for this study were not conducted using structural equation modeling, Figure 3.2 provides a conceptual illustration of the current study.

Figure 3.2. Conceptual three level path diagram.
CHAPTER 4: RESULTS

Hierarchical linear modeling (HLM) was used to statistically analyze a data structure where students (level-1) were nested within teachers (level-2) who were nested within schools (level-3). For both parent-reported and teacher-reported outcomes, model building started with an empty model (no predictors) to determine the unconditional variance structure. The teacher-reported outcome model variance components shown in Table 4.1 suggested schools did not differ significantly in parent–teacher relationship scores. However, there was significant variation among teachers within schools. Although school-level random intercept was not significant, it was retained to account for any between school differences. Next, the full proposed model with covariates was estimated. For teacher-reported outcomes the model was re-estimated removing two covariates, class size and cohort, that had very little effect. Finally, the intercepts model and slopes-as-outcomes model were simultaneously tested with all predictor variables in the model to determine the presence of any interactions between predictor variables. As shown in Table 4.2, there was an overall community-type simple effect on parent–teacher relationship quality. Table 4.3 provides all fixed effects including interaction effects.

Table 4.1
Covariance Parameter Estimates

<table>
<thead>
<tr>
<th>Cov Parm</th>
<th>Subject</th>
<th>Estimate</th>
<th>Standard Error</th>
<th>Z Value</th>
<th>Pr Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN(1,1)</td>
<td>School</td>
<td>0.01226</td>
<td>0.01652</td>
<td>0.74</td>
<td>0.4582</td>
</tr>
<tr>
<td>UN(1,1)</td>
<td>Teacher*school</td>
<td>0.1290</td>
<td>0.03511</td>
<td>3.68</td>
<td>0.0002</td>
</tr>
<tr>
<td>Residual</td>
<td></td>
<td>0.2936</td>
<td>0.02949</td>
<td>9.96</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>
Table 4.2  
*Type 3 Tests of Fixed Effects*

<table>
<thead>
<tr>
<th>Effect</th>
<th>Num DF</th>
<th>Den DF</th>
<th>F Value</th>
<th>Pr &gt; F</th>
</tr>
</thead>
<tbody>
<tr>
<td>L3_Pred_risk</td>
<td>1</td>
<td>81.5</td>
<td>0.38</td>
<td>0.5405</td>
</tr>
<tr>
<td>Community Type</td>
<td>2</td>
<td>68.9</td>
<td>9.01</td>
<td>0.0003</td>
</tr>
<tr>
<td>L3_Pred_Beh Sev_Community</td>
<td>2</td>
<td>81.2</td>
<td>1.72</td>
<td>0.1851</td>
</tr>
<tr>
<td>L3_Pred_Risk_Community</td>
<td>2</td>
<td>61.5</td>
<td>1.30</td>
<td>0.2812</td>
</tr>
<tr>
<td>Teacher Experience</td>
<td>1</td>
<td>133</td>
<td>4.39</td>
<td>0.0381</td>
</tr>
</tbody>
</table>

Table 4.3  
*Solution for Fixed Effects*

<table>
<thead>
<tr>
<th>Effect</th>
<th>Location</th>
<th>Estimate</th>
<th>Standard Error</th>
<th>DF</th>
<th>T Value</th>
<th>Pr&gt;[t]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>3.8175</td>
<td>0.09617</td>
<td>124</td>
<td>39.69</td>
<td>&lt;.0001</td>
<td></td>
</tr>
<tr>
<td>L1 Beh Sev</td>
<td>-0.00611</td>
<td>0.005437</td>
<td>135</td>
<td>-1.12</td>
<td>0.2634</td>
<td></td>
</tr>
<tr>
<td>L1 Risk</td>
<td>-0.04105</td>
<td>0.05403</td>
<td>143</td>
<td>-0.76</td>
<td>0.4486</td>
<td></td>
</tr>
<tr>
<td>L2 Beh Sev</td>
<td>-0.01504</td>
<td>0.005379</td>
<td>132</td>
<td>-2.80</td>
<td>0.0059</td>
<td></td>
</tr>
<tr>
<td>L2 Risk</td>
<td>-0.1090</td>
<td>0.06272</td>
<td>167</td>
<td>-1.74</td>
<td>0.0841</td>
<td></td>
</tr>
<tr>
<td>L3_Pred_Beh Sev</td>
<td>-0.01585</td>
<td>0.01217</td>
<td>160</td>
<td>-1.30</td>
<td>0.1948</td>
<td></td>
</tr>
<tr>
<td>L3_Pred_Risk</td>
<td>-0.2118</td>
<td>0.1770</td>
<td>136</td>
<td>-1.20</td>
<td>0.2336</td>
<td></td>
</tr>
<tr>
<td>Town</td>
<td>2</td>
<td>-0.1502</td>
<td>0.1399</td>
<td>110</td>
<td>-1.07</td>
<td>0.2854</td>
</tr>
<tr>
<td>City</td>
<td>3</td>
<td>0.3106</td>
<td>0.09921</td>
<td>60</td>
<td>3.13</td>
<td>0.0027</td>
</tr>
<tr>
<td>Rural</td>
<td>4</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L3_Pred_Beh Sev*Town</td>
<td>2</td>
<td>-0.02956</td>
<td>0.01921</td>
<td>120</td>
<td>-1.54</td>
<td>0.1264</td>
</tr>
<tr>
<td>L3_Pred_Beh Sev*City</td>
<td>3</td>
<td>0.002760</td>
<td>0.01624</td>
<td>82.2</td>
<td>0.17</td>
<td>0.8655</td>
</tr>
<tr>
<td>L3_Pred_Beh Sev*Rural</td>
<td>4</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L3_Pred_Risk*Town</td>
<td>2</td>
<td>0.3386</td>
<td>0.2208</td>
<td>97.4</td>
<td>1.53</td>
<td>0.1283</td>
</tr>
<tr>
<td>L3_Pred_Risk*City</td>
<td>3</td>
<td>0.1472</td>
<td>0.1976</td>
<td>99.4</td>
<td>0.74</td>
<td>0.4580</td>
</tr>
<tr>
<td>L3_Pred_Risk*Rural</td>
<td>4</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher Experience</td>
<td>0.008006</td>
<td>0.003822</td>
<td>133</td>
<td>2.09</td>
<td>0.0381</td>
<td></td>
</tr>
</tbody>
</table>

The primary purpose of the present study was to investigate whether there were differences in parent–teacher relationship quality across different community types (i.e., rural, town, city) for students with disruptive behaviors. Descriptive statistics for PTRS scores for each community type are displayed in Table 4.4. There was a significant overall effect of community type on teacher-reported parent–teacher relationships ($p<.0003$). Planned comparisons revealed that the difference between the city and rural settings and the difference between city and town settings on parent–teacher relationship
was significant. Specifically, teacher-reported parent–teacher relationship scores were significantly higher for city teachers relative to those in towns and rural schools. However, town and rural teacher scores did not significantly differ from one another. There was no significant overall effect of community type on parent-reported parent–teacher relationships.

Table 4.4
PTRS Scores

<table>
<thead>
<tr>
<th></th>
<th>Rural</th>
<th>Town</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teacher Report-PTRS</strong></td>
<td>N = 111</td>
<td>N = 122</td>
<td>N = 183</td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>3.94 (.64)</td>
<td>3.90 (.64)</td>
<td>4.21 (.64)</td>
</tr>
<tr>
<td><strong>Parent Report-PTRS</strong></td>
<td>N = 103</td>
<td>N = 112</td>
<td>N = 171</td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>4.36 (.66)</td>
<td>4.28 (.59)</td>
<td>4.42 (.55)</td>
</tr>
</tbody>
</table>

This study also investigated a possible moderation effect of cumulative risk and behavior severity. No significant interaction effect was found for cumulative risk and community type on teacher-reported or parent-reported parent–teacher relationships. Furthermore, no significant interaction effect was found for behavior severity and community type for teacher-reported or parent-reported parent–teacher relationships. In other words, the relationship between community type and parent–teacher relationships was not influenced by cumulative risk or behavior severity for this sample.
CHAPTER 5: DISCUSSION

In accordance with Bronfenbrenner’s (1986) ecological theory, high-quality parent–teacher relationships are linked to positive outcomes for students and may be particularly beneficial for students with behavior problems. Despite strong evidence affirming the link between parent–teacher relationships (mesosystem) on micro-level student outcomes, community-level influences on parent–teacher relationships have not been investigated. The current study aimed to begin to uncover links between community type and parent–teacher relationships, and whether characteristics of the student or his/her behavior influenced these linkages. Understanding community-level differences in parent–teacher relationships is critical for intervention development.

This study examined parent–teacher relationships across different community types (i.e., rural, town, city) for students with disruptive behaviors. Furthermore, this study investigated whether differences in the association between parent–teacher relationships and community type are influenced by child cumulative risk and severity of child behavior problems. Clarification of the specific factors influencing the gap between the desire for home–school connections and the actual practice of family–school partnership is considered a necessary precursor to the further development of home–school partnership and parent involvement in education (Hornby & Lafaele, 2011). The results of this study provide evidence that community type predicts parent–teacher relationship quality.

Main Findings

Results of this study provide evidence that community type predicts parent–teacher relationship quality for students with behavior problems. Considered within the
ecological-systems framework (Bronfenbrenner, 1986), these findings emphasize the importance of exosystemic influences on the mesosystem (parent–teacher relationship). The current study was the first to empirically investigate relationship differences across community types.

**Main Effect**

Significant main effects indicated that parent–teacher relationship quality, as rated by teachers, differed across community type with teachers in cities reporting more positive parent–teacher relationships relative to teachers in towns and rural communities. In other words, teachers in city schools experienced higher quality parent–teacher relationships for students with behavior problems than teachers of similar students in smaller, less densely populated communities. This finding provides evidence to support the hypothesis that the structural characteristics of the community influence parent–teacher relationships. Just as community type has been shown to influence student academic achievement (Miller et al., 2013), and social-behavioral skills (Sheridan et al., 2014), community type appears to impact quality of the parent–teacher relationship as well.

Perhaps the difference in parent–teacher relationship quality between urban and non-urban communities is due to limited access to partnership-building opportunities and support. For example, in some non-urban communities, the geographical distance between school buildings and families’ homes limits parent and teacher time for collaborative, relationship-building meetings (Kushman & Barnhardt, 2001). If parents and teachers face long commutes to and from the school, time for face-to-face meetings is reduced and communication may be limited to brief notes or phone calls home.
These brief exchanges reduce communication to reporting and informing on the child’s negative behavior rather than collaborating or cooperative problem-solving. In the case of children with behavior problems, if communication is limited to only unpleasant interactions it could be difficult to develop positive relationships.

Histories of negative interactions between parents and their children’s teachers may also hinder families’ desires to partner with school personnel. Due to the small size of rural communities and multiple relationships among their residents, there may be challenges associated with lack of privacy and fear of judgment from community members (Beloin & Peterson, 2000; Owens et al., 2007). In small communities not only does everyone know everyone, they also know each other’s extended families and may have formed opinions dating back generations (Humble, Lewis, Scott, & Herzog, 2013). Thus, parents and teachers in rural communities may have long-standing relationships and histories of previous interactions (some predating current school situations) that influence their initial abilities to work together as partners.

Rural teachers have limited access to family–school partnership interventions, and have fewer opportunities for communication and collaboration with parents (McBride et al., 2002). Rural parents of students with behavior problems may be hesitant to accept offers for collaboration due to lack of privacy and potential for stigma (Owens et al., 2007). Non-urban specialized service providers (e.g., school psychologists) who might support parent–teacher partnerships and help repair relationships characterized by long-standing conflict frequently work across multiple school districts and travel extensively for their jobs (McLeskey, Huebner, & Cummings, 1984). The need to serve multiple
schools across large geographical areas limits service providers’ availability to provide support or mediation (McLeskey et al., 1984). Non-urban school personnel (e.g., teachers and administrators) who are more likely than specialists to be available to support parent–teacher partnerships often lack training in how to effectively engage families as a partner in students’ education, including effective communication strategies and cultural sensitivity (Agbo, 2007; Dornbusch & Glasgow, 1996).

Although there was a significant main effect, no difference in parent–teacher relationship ratings was found between teachers in rural communities and teachers in towns. These results are somewhat surprising because it was anticipated, but not verified, that teachers of students with behavior concerns in rural communities would have lower parent–teacher relationship quality relative to teachers in towns and cities. Other researchers found that suburban schools resembled rural schools much more than urban schools in parent involvement levels (Ma, Shen, & Krenn, 2014). It may also be that in the current sample rural communities and towns shared similar cultural characteristics (e.g., attitudes about education and help-seeking) and access to resources. Similar cultural characteristics might explain the finding that, although rural and town parent–teacher relationship ratings differed from city ratings, they did not differ from each other. It is possible that rural communities and towns are similar in terms of available resources or cultural attitudes and practices that resulted in similar parent-teacher relationship quality. Perhaps there is a population size cut-point at which a community is large enough to support increased educational resources or adequate privacy and subsequent high-quality parent–teacher relationships.
Significant main effects were found for teacher reports of parent–teacher relationship quality. However, no significant differences were found for parent-reported parent–teacher relationship quality. This finding is consistent with previous research reporting that teacher ratings of parent–teacher relationships were significantly improved by a collaborative intervention but parent ratings of parent–teacher relationships did not show a significant change (Sheridan et al., 2012). Perhaps because teachers communicate and form relationships with many parents as part of their role, they draw on previous experiences with multiple relationships with parents when rating scales. On the other hand, parents of children in early elementary school completing scales do not have extensive experience with teachers (Sheridan et al., 2012). Also, it is possible that teachers often have clear expectations for parental involvement whereas parents, especially those living in poverty or with low educational attainment, have broad or unspecified expectations for teacher practices. In this study, parent ratings of parent–teacher relationships were higher than the teacher ratings on average and had slightly less average variability than teacher ratings. Perhaps these average differences in relationship ratings made it more difficult to detect significant differences between parent-reported parent–teacher relationship scores.

**Moderation Results**

The non-significant interaction between risk and community type indicated that the link between parent–teacher relationship quality and community type was not moderated by the presence of risk. This result is somewhat contrary to previous research focused on parenting. Specifically, previous risk studies have indicated higher levels of risk predicted lower quality parenting in rural communities (Burchinal, Vernon-Feagans,
& Cox, 2008). Some studies indicated that risk is related to harsh, less responsive, parenting (Conger et al., 1992). It is possible that the relationship between risk and parenting hold regardless of community types. It could also be the case that risk does not influence other aspects of parenting such as parental engagement with teachers. Because risk has been linked to parent insularity, particularly in rural communities (Kitchen, Williams, & Chowhan, 2012), this author hypothesized that risk may diminish the ability of cumulative risk parents’ ability to form high-quality relationships with teachers. However this hypothesized relationship was not born out in the current study. Perhaps a measure of insularity (rather than risk) and community type would have produced different results.

The relationship between community type and parent–teacher relationships was also not influenced by behavior severity for this sample. This author hypothesized that child behavior severity would negatively influence parent–teacher relationships for all the participants, but the effect would be most pronounced for those in rural communities. One reason this hypotheses was presented was due to the limited resources for addressing behavioral problems in many rural communities. However, this hypothesis was not confirmed. This study did not directly measure school resources for students with behavior problems. It could be that, in the current sample, behavioral intervention supports and resource availability did not vary by community type.

**Implications for Practice**

This study points to the importance of educators and psychologists to be aware of the role community type (rural, town, city) has on how teachers experience their relationships with parents of students with behavior concerns. Given the importance
placed on home–school partnerships and parent involvement for students with behavior problems, it is important that education professionals are aware of unique challenges in building home–school partnerships in non-urban communities. Although evidence points to the significant benefits of home–school partnership programs to reduce students’ disruptive behaviors (Sheridan et al., 2012) and enhance educational outcomes (Jeynes, 2007), it may be difficult to implement effective home–school partnership interventions in the midst of poor parent–teacher relationships.

Sheridan and Kratochwill (2008) suggest schools adopt a framework that reflects a partnership oriented approach, attitude, and atmosphere. They argue relational prerequisites (i.e., meaningful approach, constructive attitudes, and positive atmosphere) lay the ground work for successful parent–teacher relationships and behavioral interventions (Sheridan & Kratochwill, 2008). Although a strong partnership framework may be beneficial for all schools it may be especially important for non-urban schools where isolation and limited resources create unique partnership challenges (Barley & Beesley, 2007).

Non-urban communities may consider investing in general practices to improve parent–teacher relationships independent of any specific behavioral interventions. For example, schools may provide access to tools and training to augment the skills and competencies of rural and small town teachers in parent–teacher partnerships. Initial partnership promoting practices could aim to ensure positive attitudes among community members’ about family–school partnerships. Teachers may benefit from guided reflection on their attitudes and beliefs about parent involvement. Rural school districts could partner with local colleges and universities to increase parent–teacher relationship
training for pre-service teachers planning to work in rural schools. Professional development workshops on home–school partnerships could be offered to in-service teachers in rural schools. On-going coaching could be provided as necessary to bolster teachers’ partnership skills. In order to create a welcoming atmosphere, non-urban schools could create a home–school liaison position or develop a family center in the school staffed by parent volunteers.

Early collaboration is preferable to waiting until there is a problem when parent–teacher conflict is more likely (Rhode, Jenson, & Reavis, 2010). Thus, schools might consider investing in programs to establish positive relationships with parents early when children are young. When positive parent–teacher relationships exist in the absence of behavior problems it is easier for parents and teachers to find common ground if behavior problems do arise. Forming partnerships early may be particularly challenging in rural communities where center-based care is unavailable (Gordon & Chase-Lansdale, 2001). Perhaps rural schools could sponsor events for pre-school aged children and their parents or simply invite pre-school families to school events. Opportunities for home–school interactions may pave the road to positive relationships even before children enter kindergarten. Two-way communication systems, starting in kindergarten, between school staff and parents could be used for relaying positive information. Such a system may normalize home–school communication thereby providing an avenue for parents and teachers to work together at the first sign of trouble.

To be maximally effective, parent–teacher relationship training and interventions need to be context-sensitive. Training should emphasize the unique challenges of partnering with families and with parents of children with behavior problems in all
communities. Special efforts to address isolation might include educational practices such as home visits or virtual face-to-face meetings via distance technology (e.g., Skype).

A collaborative approach wherein parents are treated as equal partners and work together with the teacher to identify behavior concerns and contributing factors may be beneficial for all schools. Especially for young children, parents should be instrumental in developing a specific plan to address the student’s negative behavior and in evaluating the success of the plan. Methods for two-way positive communication between home and school should be established. This study’s finding that non-urban teachers tended to report lower parent–teacher relationship scores than urban teachers suggests the need for teacher training and support in non-urban schools. To alleviate problems associated with overlapping relationships and historical conflict, teachers and school administrators could be trained in structured problem-solving processes focused on the student’s specific needs. Clearly defined meeting objectives and goals as well as mutually agreed-upon roles and responsibilities can help facilitate productive parent–teacher interactions.

Limitations

This study’s results are important for understanding the connections between community type and parent–teacher relationships. However, this study has several limitations that may influence the interpretation of the results and inform future research directions. First, all data are based on informant reports. This study’s outcomes are based on teachers’ and parents’ reports of their relationship. No direct measure of their relationship was conducted. Similarly, child behavior problem severity was rated by teachers and no parent report of behavior severity or direct observation of student behavior was collected. Direct behavioral observations may offer more precise
information (Nock & Kurtz, 2005) but were not available for this study. Cumulative risk factors were reported by parents and no independent verification of presence or absence of risk was made. Although self-report demographic surveys are subject to erroneous reporting (Podsakoff & Organ, 1986) independent verification was beyond the scope of this study. Furthermore, this study used qualification for free or reduced lunch as a risk indicator rather than an alternative indicator such as income ratio relative to the federal poverty line (O’Hare & Johnson, 2004). The items used to collect information on income and need were changed in the larger study from which the current study’s data were drawn, midway through the study. Therefore, eligibility for free and reduced lunch was used in the current study because it was assessed in a consistent manner across all years of the larger study. Many of the parents in this sample also experienced fluctuations in their income and responding to a single dichotomous item (i.e., Does your child qualify for free or reduced lunch?) may be more easily answered.

Second, this study was confined to a single geographic region (i.e., one state and communities along its border). Significant variations in rural contexts exist (e.g., agricultural rural communities vs. manufacturing rural communities) and it is likely that parent–teacher relationships and interactions between behavior severity, cumulative risk and community type also vary regionally. Therefore, this study’s results cannot be generalized to other regions.

Third, interaction effects can be difficult to detect with relatively small samples. Therefore, the current study may have been underpowered to detect moderation effects. A larger sample size may be necessary to determine if the link between community type and parent–teacher relationships is influenced by cumulative risk or behavior severity.
Future Directions

This current study is derived from secondary data from a study that was not
designed to test the link between community type and parent–teacher relationship nor the
moderating influence of risk or behavior severity. Therefore, although the results of this
study are promising, future investigation is needed to explain how and why community
type relates to parent–teacher relationships. Specifically a larger sample is needed to
explore potential moderation effects. A larger sample may help clarify the differences in
how behavior severity and risk operate across community type. Further exploration
between cumulative risk, community type, and social isolation is needed to better
understand the influence of cumulative risk on parent–teacher relationships. Also, the
link between cumulative risk and parenting practices was not explored in this study.
Future investigations exploring community type differences in parenting practices,
especially regarding parent education involvement and under conditions of high risk,
would lend important insight into this line of research. For example, future research
might test a mediation model exploring the role of parenting practices potentially linking
community type and parent–teacher relationships as well as student outcomes.

The constructs under investigation should be further defined. Specifically, risk
and behavior severity could be more precisely measured and a direct measure of parent–
teacher relationships could be collected in future studies. Furthermore, the current study
used only population density and community size to define community type. Previous
research has taken place largely in urban areas and, although some family involvement
research has focused on rural communities, distinctions between rural communities and
small towns have not been common. Few studies have compared education-related
outcomes across community types and clear definitions of community type are often lacking. A deeper understanding of the ecological, social, economic, demographic, or other variables in these contexts, which might explain relationship differences, should be investigated in the future. For example, what influence does the community’s primary income source (e.g., agriculture, manufacturing, mining) have on home–school partnerships? How might the demographic make-up of the community influence parent involvement? How does a community’s overall economic health impact parent–teacher relationships?

Finally this study focused on students with behavior problems. Although this population is of great interest to educators, future studies exploring the community type and parent–teacher relationships with general student populations or students with academic concerns would provide valuable comparison information.

Conclusion

In conclusion, results from this study provide evidence that community type predicts parent–teacher relationship quality for students with behavior problems. Specifically, teachers in towns and rural communities reported poorer parent–teacher relationship quality than teachers in cities. The results of this study advance the parent–teacher partnership research literature by specifically uncovering a significant link between community type and parent–teacher relationships, an area that has not been previously explored. Behavioral interventions that incorporate relevant contextual information may be most effective in addressing student behavioral concerns leading to improved outcomes for students.
References


Waterman, R., & Harry, B. (2008). *Building collaboration between schools and parents of English language learners: Transcending barriers, creating opportunities*

