

PEER AND SCHOOL EXTERNALIZING BEHAVIORS
AMONG EARLY ADOLESCENTS: AN ECOLOGICAL SYSTEMS ANALYSIS

BY

JUN SUNG HONG

DISSERTATION

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Doctoral Committee:

Associate Professor Mary Keegan Eamon, Chair
Professor Dorothy L. Espelage
Professor Wynne Sandra Korr
Associate Professor Joseph P. Ryan

ABSTRACT

The purpose of this study was to examine ecological level correlates of peer and school externalizing behaviors among early adolescents (ages 12-14). The current research addressed the following hypotheses for the direct effects: learning problems, poverty, and peer and school externalizing behaviors at Time 1 (socio-demographics); negative peer influence (microsystem); living in a central city, compared with other urban and rural residence (exosystem); and lack of school rules (macrosystem) will be associated with an increase in peer and school externalizing behaviors at Time 2. Cognitive stimulation and emotional support, teacher involvement, and ease of making friends (microsystem), neighborhood safety (exosystem), and religious involvement (macrosystem) will be associated with a later decrease in peer and school externalizing behaviors. This study also tested several moderators. Positive teacher-student relationships will be associated with a decrease in peer and school externalizing behaviors more for Black and Hispanic youth than for white youth. Additionally, positive parenting (cognitive stimulation and emotional support) will be associated with a decrease in peer and school externalizing behaviors more for Black and Hispanic youth than for white youth. Moreover teacher involvement and ease of making friends will buffer the effects of having learning problems on exhibiting peer and school externalizing behaviors. Finally, I hypothesized that negative peer influence and neighborhood safety will mediate the effects of poverty status on peer and school externalizing behaviors.

To address these hypotheses, secondary data analysis was conducted, using the National Longitudinal Survey of Youth. The sample was drawn from the mother-child dataset, which included youth who in the first of two years, 2002 or 2004 (Time 1), were living with their mothers, enrolled in regular school, responded to at least one of the 13 items from the self-

administered survey, and the mothers responded to at least one of the four items measuring peer and school externalizing behaviors in Time 1 and Time 2 (in 2004 for those entering the sample in 2002; in 2006 for those entering the sample for 2004). Multivariate hierarchical logistic regression model were estimated to address the hypotheses.

Findings from the study indicate that youth's learning problems and peer externalizing behavior at Time 1 were significantly associated with peer externalizing behavior at Time 2. When the microsystem variables were included in Model 2, ease of making friends was statistically significant. When the exosystem variables were added in Model 3, the neighborhood environment variables were all statistically significant, but none of the macrosystem variables were significant when added to Model 4. Concerning school externalizing behavior at Time 2, male gender and school externalizing behavior at Time 1 were statistically significant, and two microsystem variables--cognitive stimulation and negative peer influence--were significantly associated with school externalizing behavior at Time 2. None of the exosystem and macrosystem variables were associated with school externalizing behavior at Time 2. With regards to the moderators, I found that for Hispanics, higher levels of cognitive stimulation was associated with an increased risk of exhibiting school externalizing behavior, although the odds ratio indicated little practical significance. I also found that ease of making friends also moderated the effects of learning problems on school externalizing behavior at Time 2. With regards to the mediators, since no direct relationship between poverty and peer and school externalizing behaviors at Time 2 was found, no further tests for mediation were conducted.

Findings from this study have implications for research, practice, and policy. Based on the findings, suggestions are made to assess and target the ecological systems levels, which can improve early adolescents' peer and externalizing behaviors.

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The best teacher is not the one who knows most but the one who is most capable of reducing knowledge to that simple compound of the obvious and wonderful.

- H. L. Mencken

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CHAPTER 1

INTRODUCTION

Students exhibiting externalizing behavior in classrooms and in schoolyards, which ranges from non-compliance to bullying, has become a serious concern for students, parents, teachers, school administrators, and school social workers. In the aftermath of several well-publicized shooting cases in schools across the nation, school externalizing behavior, particularly bullying, has received considerable research attention (Garbarino, 2004; Phillips, 2007; Smokowski & Kopasz, 2005). Even prior to recent school shooting events such as the one at Columbine High School, externalizing behaviors, such as bullying, disobedience, teacher-student conflict, and antisocial behavior has been examined by a number of researchers (e.g., Gregory & Weinstein, 2008; Juvonen, Graham, & Schuster, 2003; Kalb & Loerber, 2003; Murray & Murray, 2004; Nansel et al., 2001; Pellegrini, 2002; Stephenson, Linfoot, & Martin, 2000). The majority of the research on behavior problems in the school setting has identified bullying and violence as the most serious concerns and has focused primarily on elementary school age children (Little, 2005), given that problem behavior of older students is likely to stem from earlier behavioral problems (Stephenson et al., 2000). Little (2005) argued that although bullying and aggression may be the most serious behavior, the most frequent behaviors are less severe (e.g., disobedience), which are major concerns for teachers and school administrators. However, Algozzine et al. (2008) report that some of the most frequent disciplinary referrals in schools are for more serious externalizing behaviors, such as disruption, disrespect, and aggression within the classroom and in the schoolyard.

A well-known distinction that is made in the field of developmental psychology and psychiatry is between “externalizing” and “internalizing” disorders (Achenbach, 1978; as cited

by Liu, 2004). The concept of externalizing behavior consists of a group of outward behavior problems (e.g., aggressive, impulsive, coercive, non-compliant behaviors), which reflect the child negatively acting on the external environment, such as in the school (Eisenberg et al., 2001). In contrast, internalizing behavior, such as anxiety and depression, affects the child's internal psychology (Liu, 2004). Externalizing behavior in school has been a major challenge among clinical child psychologists. Arnold (1997) argued that externalizing behavior is prevalent, consistent, resistant to treatment, and can cause problems for the victims and society. Earlier studies also found that although tremendous amount of resources have been expended to treat and prevent externalizing behavior, the long-term effects have been discouraging (Taylor, 1989).

Good reasons exist for the research attention given to externalizing behavior among children and adolescents in school. Such behavior can physically and emotionally harm individual students to whom it is directed, and can create a chaotic class and school environment that poses a major impediment to learning for all students (Dinkes, Kemp, Baum, & Snyder, 2009). Researchers also have consistently reported an association between exhibiting externalizing behaviors and negative outcomes, such as low school achievement (Baker, Clark, Crowl, & Carlson, 2009; Baker, Grant, & Morlock, 2008; McEvoy & Welker, 2000). Low school achievement in turn appears to have immediate and long-term negative outcomes, such as engaging in delinquent and criminal activities and living in poverty (Farrington, 2005; Fraser, 1997; Jozefowicz-Simbeni & Allen-Meares, 2002; Katsiyannis, Ryan, Zhang, & Spann, 2008). For these reasons, examining the factors associated with students' exhibiting externalizing behavior is critical. Understanding these factors can provide practical guidance for teachers, school administrators, school counselors, school social workers, and other professionals working

with students by suggesting methods to assist them in dealing effectively with behavior that fails to meet classroom expectations (Eamon & Altshuler, 2004).

Research has made advances in understanding the factors that place students at risk of exhibiting externalizing behavior (e.g., Deater-Deckard, Dodge, Bates, Pettitt, 1998; Dekovic, 1999; Olson, Bates, Sandy, & Lanthier, 2000), which affects students and the school environment in virtually all parts of the world. Despite the research advances in understanding the factors that predict externalizing behavior, which is a prerequisite to creating safe school environments that are conducive to students' learning, empirical studies are limited in scope. Although bullying within the school has been studied extensively by a number of researchers (see Espelage & Swearer, 2003 for a review), little is known about the factors that increase the probability of bullying within certain relevant socio-demographic characteristics (e.g., learning disability, academic achievement, poverty status) and broader contexts, such as neighborhood environments and cultural influences (e.g., religious affiliation). Even less is known about the broader level, ecological factors that contribute to other types of adolescent externalizing behavior displayed in school, such as disobedience and student-teacher conflict. Identifying the ecological factors that are associated with externalizing behavior specifically in the school setting can contribute to implementing effective prevention and intervention strategies. Using Bronfenbrenner's (1977) ecological systems theory as a framework, the current study examines the socio-demographic characteristics and ecological influences that are associated with both peer and school externalizing behaviors.

The following section provides definitions and conceptualization and the prevalence of two types of externalizing behaviors--those exhibited with peers and those exhibited specifically

within the school, which were the focus of this research. This section is followed by a brief summary of the current research and the content in the subsequent chapters.

Definition and Conceptualization

This section defines and conceptualizes peer (i.e., bullying and peer conflict) and school (i.e., disobedience in school and student-teacher conflict) externalizing behaviors, both of which frequently occur in the classroom and in the schoolyard.

Peer Externalizing Behavior

Bullying. Although variously defined, the majority of researchers who have examined children's bullying behavior have focused on the school setting because bullying occurs most commonly among classmates in school (Salmivalli et al., 1996). Defining bullying has been a major challenge for researchers (Arora, 1996), and bullying has been operationalized and conceptualized in many ways (Espelage & Swearer, 2003). For example, the World Health Organization (2002) recognizes bullying behavior as the intentional use of physical and psychological force or power, threatened or actual, against oneself, another person, or against a group or community that either results in or has a high likelihood of resulting in injury, death, psychological harm, mal-development, or deprivation.

Among researchers, the term "bullying" was originally coined by Dan Olweus (1991), a Norwegian researcher on bullying, who identifies a bully as someone who "chronically harasses someone else either physically or psychologically..." and "[a] student is being bullied or victimized when he or she is exposed, repeatedly and over time, to *negative actions* on the part of one or more other students" (p. 413). Olweus' definition of bullying among school children has been borrowed by many researchers in the United States (e.g., Atlas & Pepler, 2001; Ballard, Argus, & Remley, Jr., 1999; Juvonen, Graham, & Schuster, 2003; Nansel et al., 2001; Pellegrini,

2002; Twemlow, Sacco, & Williams, 1996). Other attempts to define bullying have been made by researchers in the United States. For example, Smith, Schneider, Smith, and Ananiadou (2004) define bullying as “a particularly vicious kind of aggressive behavior distinguished by repeated acts against weaker victims who cannot easily defend themselves” (p. 547).

Researchers have also identified major characteristics of bullying, which encompass several different subcategories. Olweus’ earlier studies categorized bullying mainly into two types: indirect or “verbal” bullying (i.e., teasing, taunting, threatening, calling names, or spreading a rumor) and direct or “physical” bullying (i.e., pushing, shoving, hitting, kicking, or restraining another). Researchers have also employed types, such as “overt” and “covert” bullying and aggression (e.g., Crick, Casas, & Ku, 1999; Espelage & Swearer, 2003). Relational (indirect or covert) aggression is a type of behavior that does not involve direct confrontation between the perpetrator and victim. This type of bullying involves excluding someone from a social group, spreading rumors, keeping secrets, or humiliating someone in a social setting (Griffin & Gross, 2004).

Peer conflict. Peer relationships during early adolescence represent an important part of children’s social and emotional development, and adolescents learn essential social and communication skills from their peers as they transition into late adolescence and early adulthood (Sidorowicz & Hair, 2009). Considering that children and adolescents spend a great deal of time with their peers and inevitably provoke one another (Murphy, 2002), peer conflict is considered to be a part of children and adolescents’ social and personal development (Laursen, 1993). Researchers have defined peer conflict as a relationship where two people with incompatible goals may use a variety of prosocial and antisocial strategies to influence one another (Hay, 1984; Malloy & McMurray, 1996; Schantz, 1987). Noakes and Rinaldi (2006)

define peer conflict as mutual disagreement or hostility between peers or peer groups, which is often unplanned and does not involve violence, although it can escalate into violence (Sidorowicz & Hair, 2009). Murphy (2002) also argues that peer conflict represents a complex interaction involving a provoking event, initial opposition from one youth, further opposition from the other youth, and an eventual ending of mutual opposition. A seminal review of adolescent peer conflict conducted by Laursen and Collins (1994) also maintains that interpersonal conflict during adolescence is characterized as a state of incompatible behaviors, disagreement, and opposition.

Peer conflict strategies may include physical and verbal tactics, which can be characterized as aggressive or non-aggressive (Wheeler, 1994). Researchers also argue that children's conflicts include physical and non-physical tactics (e.g., Killen & Turiel, 1991). Physical tactics might include fighting, whereas verbal tactics range from opposition to reasoning and negotiation (Wheeler, 1994). Additionally, children might use teasing, as well as their size, age, physical ability, or knowledge to establish control in peer conflict situations (Killen & Turiel, 1991).

School Externalizing Behavior

School disobedience. According to the National Center for Education Statistics (n.d.), disobedience, or insubordination in school is defined as “unwillingness to submit to authority, refusal to respond to a reasonable request, or other situations in which a student is disobedient.” Researchers (e.g., Kalb & Loerber, 2003) have conceptualized disobedience, or non-compliance, as instances when a child purposefully does not perform a behavior that has been requested by an adult authority figure. Studies on childhood psychopathology have frequently conceptualized disobedience or defiance as a consistent characteristic of the child (e.g., Gregory & Weinstein,

2008). Children who exhibit such defiant behaviors at home are likely to display these behaviors in school (e.g., Reid, 1993). A number of studies have examined a serious form of disobedience referred to as Oppositional and Defiant Disorder (ODD) across multiple settings, such as home and school (see Burke, Loeber, & Birmaher, 2004, for a review of this literature). Several symptoms that indicate the diagnosis of ODD include refusing to comply with adult requests and rules, arguing with adults, frequently exhibiting anger, and questioning rules (American Academy of Child & Adolescent Psychiatry, 2009). However, research that focuses on less serious forms of disobedience or defiant behavior in the school setting among adolescents has been limited (Gregory & Weinstein, 2008).

Student-teacher conflict. Student-teacher relationships and conflicts have been conceptualized and measured using various instruments by several researchers who asked teachers or students to assess the quality of student-teacher relations and student-teacher conflicts (Hughes, Cavell, & Wilson, 2001; Meehan, Hughes, & Cavell, 2003; Murray & Murray, 2004; Yoon, 2002). Hughes et al.'s (2001) study utilized the Teacher Support questionnaire and the Teacher Conflict questionnaire. The Teacher Support questionnaire includes items, such as "These children get along well with their teacher" and "[T]hey like to talk to their teachers." The Teacher Conflict questionnaire includes items, such as "These children don't get along with their teachers"; "[T]hey often argue with their teachers." Meehan et al. (2003) assessed student-teacher relationships using the Network of Relationships Inventory (NRI), which asked the students to rate persons in their social network (e.g., teacher) with respect to eleven types of social support or conflict, which contains items, such as "How much do you tell this person everything?" The student-teacher relationship scale (STRS) is another type of instrument that assesses students' relationships and conflicts with teachers. Used by Murray and Murray (2004),

STRS consists of 28 items designed to assess teachers' perceptions of student-teacher relationships. The first section, Conflict, contains 12 items related to student-teacher conflicts, such as "This child and I are always struggling with each other." The second section, Closeness, includes 11 items related to warmth, communication, and involvement in student-teacher relations (e.g., "It's easy to know what this child is feeling."). Finally, a study by Yoon (2002) measured student-teacher relationships by asking teachers to report the percentages of their students who fell into various relationship categories, which ranged from "a very good relationship" to "a very negative relationship."

Prevalence Rates and Frequencies

The following section reviews the prevalence rates and frequencies of peer and school externalizing behaviors.

Peer Externalizing Behavior

Bullying. Although the prevalence of bullying in U.S. schools is difficult to ascertain and measures vary significantly (Espelage & Swearer, 2003), findings from national surveys suggest that bullying is common. The National Institute of Child Health and Development (2001) of the National Institute of Health estimated in 2001 that approximately 5.7 million American children in grades six to ten have experienced or witnessed bullying in their schools. They also found that one in five children admits to have bullied a classmate; and 29% of the student population has been identified as a bullying victim, a perpetrator, or both. According to a national survey of students in grades six to ten by the National Youth Violence Prevention Resource Center (n.d.), 13% reported bullying students, and 6% said that they were both victims and perpetrators of bullying. A national survey conducted jointly by the U.S. Department of Education and the U.S. Department of Justice found that in 2005-2006, 24% of public schools reported that bullying was

a daily or weekly problem (Indicators of School Crime and Safety, 2007). A more recent survey conducted by the National Center for Education Statistics (Robers, Zhang, & Truman, 2011) also reported that in 2009 the percentage of middle schools reporting bullying was higher than that of elementary schools and high schools. Almost 40% of middle school students, compared to 19.6% of elementary school and 19.8% of high school students reported experiencing school bullying.

Other researchers have examined the prevalence of bullying in particular schools or school districts. For example, Bosworth, Espelage, and Simon (1999) examined bullying behavior among 558 sixth- to eighth-grade students at a middle school located in a major Midwestern metropolis. They found that 81% of the students reported experiencing at least one type of bullying during this period, and 7.7% reported bullying their peers at school frequently. In a study of middle school students (N = 4,263) in one Maryland school district, Haynie et al. (2001) found that 24.1% of students reported bullying their peers in school at least once during the past year, with 16.7% bullying one or two times and 7.4% bullying three or more times. Seals and Young's (2003) study involving 7th and 8th grade students (N = 1,126) in a northern delta region found that 24% of the students reported being involved in bullying in school as a perpetrator or victim. The prevalence of bullying among high school students, however, appeared to be low, compared to that of middle school students.

Peer conflict. Peer conflict is common during childhood and adolescence, as reported by a limited number of studies (e.g., Latipun, Nasir, Zainah, & Khairudin, 2012). Peer conflicts among children and adolescents occur most frequently in the school, and conflicts are predominantly with close friends, classmates, or schoolmates (Opotow, 1991). A study by Adams and Laursen (2004), which examined adolescents' conflict with their parents and peers, also found that peer conflicts primarily involved relationships (48.0%), followed by autonomy

(32.4%) and daily hassles (19.6%). These findings suggest that peer conflict is a serious concern; yet, there appears to be a dearth of studies that have investigated its prevalence and frequency, particularly among early adolescents.

School Externalizing Behavior

School disobedience. According to the School Survey on Crime and Safety of the National Center for Educational Statistics (n.d.), disobedience or insubordination is one of the leading offenses in schools, which accounts for 21% of the total offenses. Of 17,800 school districts nationwide, 327,100 actions were taken for school rule infractions (National Center for Educational Statistics, n.d.). Consistent with these national findings, studies also report that defiance in school comprises one of the largest offense categories for disciplinary actions (e.g., suspension) in middle and high schools (Costenbader & Markson, 1998). Studies (Mendez & Knoff, 2003; Skiba, Peterson, & Williams, 1997) reveal that “disobedience,” “disrespect,” and “school rule breaking” are the most common school offenses. A study by Mendez and Knoff (2003), which investigated out-of-school suspensions by race, gender, school level, and infraction type for 137,563 students in school districts located in Florida, reveals that for all races and gender, the most common infraction resulting in suspension was for disobedience/insubordination in school.

Student-teacher conflict. Only one study could be located that reported on the occurrence of student-teacher conflict in schools. Based on a national survey of students, teachers, and school administrators, the *Indicators of School Crime and Safety 2009* of the Bureau of Justice Statistics (2009) reported that student-teacher conflict is also a major concern in school districts. The report indicates that this conflict is a serious problem that is frequently expressed by teachers. During the 2007-2008 school years, 11% of public schools nationwide

reported that students acted disrespectfully toward their teachers on a daily or weekly basis, and 6% reported students verbally assaulting their teachers, which interfered with teaching in the classroom.

Current Study

The purpose of this study is to investigate socio-demographic characteristics and ecological factors occurring in the microsystem, exosystem, and macrosystem levels that are associated with peer and school externalizing behaviors of early adolescents. This dissertation is divided into four additional chapters. Chapter 2 discusses the theoretical framework, Bronfenbrenner's ecological systems theory, which guides the research. This discussion is followed by a review of studies on the socio-demographic and the ecological factors associated with peer and school externalizing behaviors of children and adolescents. Chapter 3 describes the significance of the study, hypotheses that were tested, the data source and the sample, measures used for the variables, and statistical procedure used for data analysis. Chapter 4 presents the results of the analyses, which includes both descriptive and multivariate regression results. The final Chapter 5 includes a discussion of the findings, limitations of the study, and implications for practice, social policy, and future research.

CHAPTER 2

LITERATURE REVIEW

This chapter discusses factors that are associated with peer and school externalizing behaviors within socio-demographic and ecological contexts, which include micro-, meso-, exo-, macro-, and chronosystems. I provide a background of Bronfenbrenner's ecological systems theory, which is followed by a review of research findings on the socio-demographics and the ecological factors associated with peer and school externalizing behaviors among children and adolescents.

Theoretical Framework

If research is going to contribute to understanding the factors associated with peer and school externalizing behaviors, it must take into account multiple environmental influences. However, relatively few studies have evaluated these multiple level factors that contribute to these problems, which can be investigated within the context of ecological systems theory. The ecological systems theory encompasses an evolving body of theory and research that are relevant to the processes and conditions that govern the life course of human development in the environments in which the individual is embedded (Bronfenbrenner, 1994). This framework will be discussed in this section as well as more specific theories that attempt to explain externalizing behaviors within the various ecological systems.

The ecological paradigm was first developed in the 1970s by Urie Bronfenbrenner (Bronfenbrenner, 1974, 1977, 1979). Bronfenbrenner defined his ecological paradigm as “the scientific study of the progressive mutual accommodation, throughout the life span, between a growing human organism and the changing immediate environments in which it lives, as this process is affected by relations obtaining within and between these immediate settings, as well as

the larger social contexts, both formal and informal in which the settings are embedded” (Bronfenbrenner, 1977, p. 514). Bronfenbrenner (1979) argues that an understanding of human development requires more than direct observation of behavior on the part of one or two persons situated in the same place. The ecological environment is envisioned as a set of nested structures, in which each structure is inside the next. For example, home and school settings are nested within a neighborhood.

Two propositions specify the defining properties of the ecological systems theory (Bronfenbrenner, 1994). The first proposition asserts that in the early phases and throughout the life course, human development occurs through processes of complex, reciprocal interactions between an active, evolving biopsychological human organism and the individuals, objects, and symbols in his or her immediate environment. These forms of interaction in the immediate environment are referred to as proximal processes, which occur, for example, in parent-child, teacher-child, or child-child activities. The second proposition argues that the form, power, content, and direction of the proximal processes affecting human development vary systematically as a joint function of the characteristics of the person and of the environment. Both propositions are theoretically interdependent and subject to empirical tests. As Bronfenbrenner’s (1977) theory suggests, youth and family characteristics can influence interactions in immediate settings such as the home and school, which affect the quality of more distant environments such as the neighborhood. These interactions, in turn, can exacerbate or inhibit peer and school externalizing behaviors.

Microsystem. The most direct influences on peer and school externalizing behaviors among youth are within microsystems, which are composed of individuals and groups of individuals within immediate settings with whom the youth have interactions. The critical term at

the microsystem level is *experienced*, which is used to indicate that the scientifically relevant features of any environment include objective properties as well as the way in which these properties are perceived by the individual situated in that environment (Bronfenbrenner, 1979). At the inner-most level is the immediate setting, which contains the individual or a group of individuals, such as the home or the classroom. Bronfenbrenner (1986) also argued that although family and peers provide the principal contexts where human development occurs, they are but two of several settings where developmental processes can and do occur.

Mesosystem. The next system is the mesosystem level, which requires examining the inter-relations among two or more microsystems (e.g., home, school, and peer groups), each containing the developing individual (Bronfenbrenner, 1979, 1986). For example, observing violence within the home might carry over into the school setting in the form of peer and school externalizing behaviors. On the other hand, parents' involvement in the youth's school might mitigate such behaviors, as studies have consistently found that parental involvement in school is related to fewer behavioral problems and higher academic achievement and aspirations (Englund, Luckner, Whaley, & Egeland, 2004; Hill et al., 2004).

Exosystem. Bronfenbrenner (1979) argues that understanding human development requires an examination of multi-person systems of interaction beyond a single setting. At the exosystem level, the third level of the ecological systems theory, Bronfenbrenner (1994) hypothesizes that an individual's development is affected by interactions between two or more settings, but the individual is embedded in only one. For example, if a parent is employed in a highly stressful job, this stress can be carried into the home setting and negatively influence parent-child interactions. On the other hand, if the parent receives social support from others outside of the home, this support can mitigate the negative effects of the stress within the home.

Macrosystem. The macrosystem has been referred to as a cultural “blueprint” that may determine the social structures and activities that occur in the immediate systems level (Bronfenbrenner, 1994). The macrosystem refers to factors such as cultural beliefs, opportunity structures, and hazards, which ultimately affect particular conditions and processes that occur within microsystems (Bronfenbrenner, 1994). For example, schools with clear rules and enforcement of those rules would likely decrease students’ opportunities to engage in peer and school externalizing behaviors. On the other hand, students involved in cultures that condone and even support such behaviors, are likely to exhibit more peer and school externalizing behaviors. As evidenced by a limited number of study findings, youth’s culturally prescribed attitudes and beliefs that are supportive of violence can contribute to bullying behavior (Bosworth, Espelage, & Simon, 1999; McConville & Cornell, 2003).

Chronosystem. The final level of Bronfenbrenner’s (1994) ecological framework, the chronosystem, includes consistency or change (e.g., historical or life events, and changes in family structure or place of residence) that affects the developing individual over the life course. Elements within this system can be external, such as disruptive effects of parents’ divorce or a parent’s death, or internal, such as the physiological changes that occur with the child. These historical events and life changes also can affect a youth’s behavior within the school. For example, a residential location which results in the youth attending a safer school might decrease externalizing behaviors. On the other hand, disruptive family events, such as a parent’s divorce if not handled appropriately, can contribute to peer and school externalizing behaviors.

Research reviewed in the next section includes empirical findings in the United States as well as in other countries, although the issue of cultural validity of international findings has

been a major concern for American researchers (Espelage & Swearer, 2003). Understanding factors associated with peer and school externalizing behaviors of early adolescents necessitates a close examination of the complex inter-relationships between the individual and the environment. As the previous discussion indicates, the ecological systems theory contends that youth exhibiting peer and school externalizing behaviors are part of complex, interrelated systems levels that place youth at the center and move out from the center to the various systems that shape them; that is, *micro-*, *meso-*, *exo-*, *macro-*, and *chronosystem* levels (Bronfenbrenner, 1994; Swearer & Espelage, 2004). Because individuals are affected by these systems, assessment and interventions for peer and school externalizing behaviors need to target these systems. This assertion is related to studies that suggest that youth with peer and school externalizing behaviors experience problems in multiple settings and systems levels, such as family, peer groups, school, and neighborhood (Swearer & Espelage, 2004).

Studies Supporting the Ecology of Peer and School Externalizing Behaviors

Although past research demonstrates that factors associated with peer and school externalizing behaviors must be understood in multiple contexts, there appears to be a dearth of research that has investigated the multiple level factors associated with adolescent peer conflicts. Thus, the bulk of the studies on peer externalizing behavior reviewed next involve factors related to bullying behaviors. More specifically, the following sections review empirical studies on the factors that decrease and increase the risk of exhibiting peer and school externalizing behaviors within the context of socio-demographic characteristics and *micro-*, *meso-*, *exo-*, *macro-*, and *chronosystems*. This is followed by a review of research on moderators and mediators of the effects of these factors on youth peer and school externalizing behaviors.

Socio-Demographic Characteristics

As previously discussed, assessing youth and family characteristics is important in understanding peer and school externalizing behaviors. Socio-demographic characteristics, such as youth's age, gender, and race/ethnicity are frequently examined predictors of peer and school externalizing behaviors. Less frequently examined are the associations between youth characteristics, such as having a learning disability and academic achievement, and maternal and family characteristics such as mothers' education and marital and poverty status, and peer and school externalizing behaviors.

Age. Studies have found that bullying behaviors and peer conflicts differ by age. To illustrate, earlier studies report that elementary school-age children are embedded in social environments where circumstances such as possession and use of objects, limited resources (e.g., toys), negative peer interactions, and violations of rules exist, which can exacerbate peer conflicts (Alexander & McConnell, 1993; Fabes & Eisenberg, 1992). In contrast, when young adolescents enter middle school, they are exposed to additional social conditions that lead to bullying and peer conflicts, such as jealousy of or exclusion from social groups, intrusive behavior (e.g., intimidation), formation of cliques, jealousy of others' possessions, and claims about opinions and beliefs (Ray & Cohen, 2000; Sims, Hutchins, & Taylor, 1997). Thus, it is no surprise that researchers have found that bullying increases during middle school years, particularly when children transition from elementary school to middle school (Espelage & Swearer, 2003; Nansel et al., 2001; Pellegrini & Bartini, 2001; Smith, Madsen, & Moody, 1999). O'Connell, Pepler, and Craig's (1999) study, which examined bullying episodes on the school playground, found that older boys (grades 4-6) were more likely to participate in bullying behavior than were younger boys (grades 1-3) and older girls. Findings from these and

other studies suggest that middle school students are more likely than elementary school students to bully their peers (Astor, Meyer, & Pitner, 2001; Dinkes, Kemp, Baum, & Snyder, 2009; Kasen, Berenson, Cohen, & Johnson, 2004). Pellegrini (2002), for example, suggests that youth's exploration of new social roles and their pursuit of status among peers can motivate aggressive behavior in school, particularly for students making the transition from elementary to middle school.

In contrast, few studies have examined the factors that might be responsible for the correlation between age and school externalizing behaviors, such as teacher-student conflicts. Extant research on school externalizing behavior has focused on elementary school-age children (e.g., Ackerman, Brown, & Izard, 2003; Plybon & Kliever, 2001; Stormont, 2002) or high school-age youth (e.g., Kupersmidt & Coie, 1990) rather than on early (11 through 13 years) adolescence. A longitudinal study by Maggs, Almeida, and Galambos (1995) found that school disobedience, school misconduct, substance use, and peer risk-taking behaviors increases with age. This is not surprising, given that school disobedience and conflicts with adults (e.g., teachers) emerge most frequently during high school years because high school students often feel a sense of independence and are less dependent on adult figures than middle school students (American Academy of Child & Adolescent Psychiatry, 2011).

Race/ethnicity. A limited number of recent studies also shed light on the association between race/ethnicity and bullying behavior (Qin, Way, & Rana, 2008; Hanish & Guerra, 2000; Mouttapa et al., 2004; Seals & Young, 2003). Children of various racial and ethnic backgrounds are increasingly exposed to bullying (Hanish & Guerra, 2000). Considering the accumulation of risk factors that Black youth encounter as well as teachers' and youth's perceptions of Blacks as aggressive (Graham & Juvonen, 2002), it is not surprising that studies (Koo, Peguero, &

Shekarkhar, 2012; Nansel et al., 2001; Wang, Ianotti, & Nansel, 2009) report a higher likelihood of involvement in bullying among Black youth than among youth of other races/ethnicities. Prevalence of bullying by race/ethnicity, however, has been inconsistent. A U.S. nationally representative study by Nansel et al. (2001), which included 6th- to 10th-grade youth, found that Hispanic students were more likely to report bullying others compared with Black students (Nansel et al., 2001). The relationship between race/ethnicity and bullying in school is complex (Espelage & Swearer, 2003) and appears to be influenced by the racial/ethnic composition of the classroom, school, and community (Juvonen, Nishina, & Graham, 2001). For example, one study conducted in the Netherlands found that racial/ethnic minority status was not associated with bullying in schools; however, bullying was reported to be more prevalent in ethnically heterogeneous classrooms (Vervoort, Scholte, & Oberbeek, 2008).

There appear to be relatively few studies on the relations between race/ethnicity and school externalizing behavior (Gordon, Della Piana & Keleher, 2000). Some studies (e.g., Gregory & Weinstein, 2008) suggest that there is an overrepresentation of Black students being rated by teachers as disobedient in the classroom, which escalates into conflict between teachers and students. Resistance theory can provide an explanation. This theory purports that adolescents do not share similar beliefs about teacher authority with teachers, particularly among youth who perceive their teachers as uncaring or as having low expectations. These youth might be uncooperative and exhibit defiance as a result, which can result in teacher-student conflict (Gregory & Weinstein, 2008). Gregory and Weinstein (2008) reviewed a school's annual discipline data on the 442 students referred for defiance. They found that Blacks were over-represented in referrals for defiance and most students received referrals from teachers, suggesting that defiance occurs primarily in classroom situations. Scholars have theorized that

the overrepresentation of Black students with regards to teacher-student conflicts can be attributed to the fact that Black youth frequently employ “right to respect” coping strategies or exude a tough façade in response to inherent racism in school (Ferguson, 2000; Spencer, Noll, Stolfus, & Harpalani, 2001). Moreover, although Sheets (1996) found that youth in general felt that school rules were unjust, racial/ethnic minority youth felt that teachers engaged in disrespectful and racist behavior toward them.

Gender. Studies that examined the relationship between gender and bullying found that boys in general are more likely to engage in bullying than girls (Espelage, Bosworth, & Simon, 2000; Nansel et al., 2001; Ross, 1996; cited in Gropper & Froschl, 2000; Seals & Young, 2003; Varjas, Henrich, & Meyers, 2009). Researchers have also found that boys are more likely to engage in physical aggression than girls (Espelage, Bosworth, & Simon, 2000; Hyde, 1986; McDermott, 1996), as boys tend to hold more positive views of aggression than girls, particularly as they enter adolescence (Crick & Werner, 1998). Gender role socialization theory can provide an explanation for the higher likelihood of males to engage in aggressive behavior. According to this theory, through the process of socialization boys and girls are encouraged to adopt and develop particular characteristics or personality traits that are typically “masculine” and “feminine” (Dietz, 1998). For instance, boys are socialized into developing autonomy rather than nurturing relationships. Not dependent on the relationships that are a prominent part of girls’ identity, boys are encouraged to use aggressive tactics, particularly when confronted with problems (Perry, Perry, & Weiss, 1989).

Other studies also suggest that boys are more commonly victims and perpetrators of physical aggression and other direct forms of bullying, while girls perpetuate social rejection, exclusion, and relational aggression (e.g., Olweus, 1993; Varjas, Henrich, & Meyers). Because

girls engage in relational aggression more than physical aggression, they are often better at hiding aggressive behaviors from adults (Pepler & Craig, 1995). Recently, however, researchers have questioned whether males are in fact more aggressive than females. A recent study on bullying indicates that although females are less likely to be involved in bullying, the gender difference was only marginally significant (Barboza et al., 2009).

Past studies also suggest that internalizing behavior (e.g., depression, anxiety) is more prevalent among adolescent girls, while adolescent boys are more vulnerable to developing externalizing behavior (Scaramella, Conger, & Simons, 1999) and to exhibiting such behavior in school (Bradshaw, Schaeffer, Petras, & Ialongo, 2010). Interestingly, feminist perspective of aggression (in which the definition included non-physical, covert, and social components) challenges the common notion that males are indeed the more aggressive gender. Feminist theorists argue that while boys may exhibit more physical aggression, there are other forms of aggressions that are more frequently displayed by girls (Espelage, Mebane, & Swearer, 2004). However, a more recent study by Bradshaw et al. (2010), which examined the association between aggressive-disruptive behavior in school (i.e., breaks rule, harms others, breaks things, takes others' property, fights, lies, teases classmates), reported no significant gender differences in externalizing behavior.

Learning problems. A few studies have found an association between children and adolescents having a learning problem and bullying and peer conflict. Kaukiainen et al.'s (2002) study explored the associations between learning skills, social intelligence, and self-concept and bullying among fifth-grade children. Their findings were consistent with the notion that bullying was prevalent among children with a learning disability, which is attributed to the fact that these children experience interpersonal problems with peers in school. The researchers also

theorized that children with a learning disability have difficulty in interpreting verbal and nonverbal communication, and have poor social skills, which hamper their efforts to attain their purpose. These children also have impulsive behavioral tendencies (Whitney, Smith, & Thompson, 1994), which may predispose them to bullying behavior in school (Kaukiainen et al., 2002).

Children with a learning problem are likely to display externalizing behavior in school, such as hyperactivity, attention problems (e.g., Feagans, Merriwether, & Haldane, 1991), aggression, and ODD (e.g., Cornwall & Bawden, 1992). Studies (e.g., Arnold, 1997; Nelson, Benner, Lane, & Smith, 2004; Richards, Symons, Greene, & Szuszkiewicz, 1995) report a strong correlation between academic difficulties and school externalizing behavior, which increases with age. Academic difficulties and school externalizing behavior have been the two biggest challenges in the fields of clinical child and school psychology considering that both are resistant to treatment (Arnold, 1997).

Mothers' marital status and educational level. Relatively few studies have investigated relationships between maternal characteristics, such as marital status and educational attainment, and children's peer and school externalizing behaviors. An earlier study by Harnish, Dodge, and Valente (1995) found that socioeconomic status, which was measured by mothers' marital status and educational level, was a significant risk factor of children exhibiting school externalizing behavior. That is, having a single mother with low educational attainment was related to this type of behavior. A more recent study also reported that children with less educated mothers were more likely to display externalizing behavior in school, and Hill et al.'s (2004) longitudinal study also found that highly educated parents had children who exhibited fewer school behavior problems. Perhaps these relations can be explained by parents with lower

educational attainment, compared to parents with higher educational attainment, being more likely to live in poverty, less likely to be involved in their children's academic lives (Griffith, 1998), and less able to send their children to higher quality schools (Phillips & Chin, 2004) where their academic and behavioral needs in school can be met.

Poverty status. Longitudinal studies (e.g., Duncan & Brooks-Gunn, 1997) suggest that socio-demographic factors, such as persistent poverty, can lead to negative child developmental outcomes. For example, positive behavior development also appears to be compromised for children whose parents are economically disadvantaged (Eamon, 2000; Eamon, 2001a; Eamon, 2001b; Eamon & Zuehl, 2001), and poverty is considered to be a contributing factor to peer and school externalizing behaviors (Civita, Pagani, Vitaro, & Tremblay, 2007).

Until recently, however, relatively few studies in the United States have examined poverty as a risk factor for peer and school externalizing behaviors (Carlson, 2006; Curtner-Smith et al., 2006; Gupta, Nwosa, Nadel, & Inamdar, 2001; Unnever & Cornell, 2003). Gupta et al.'s (2001) study reports that parents' unemployment, a measure of economic well-being was associated with children's aggression and externalizing behavior in school (Gupta et al., 2001). Other studies found that impoverished youth were more likely to identify with a culture of bullying (Unnever & Cornell, 2003), and to hold positive attitudes toward peer aggression in school (Carlson, 2006; Curtner-Smith et al., 2006; Gupta et al., 2001). One explanation of why poverty relates to aggression is that income inequality associated with poverty has a corrosive effect on social relationships and the availability of social resources in the community, such as supportive family relationships, prosocial peer networks, and positive school environments. Thus, poverty creates social disorganization and reduces social controls over misbehaviors and violent acts (e.g., lack of effective sanctions or approval of the behavior) (Kawachi & Kennedy, 2002).

Thus, it is not surprising that impoverished youth are also less likely to receive empathy and nurturance from their mothers, which has been found to reduce the likelihood of aggression (Curtner-Smith et al., 2006).

Microsystem

The microsystem level analysis suggests that assessment of risk factors for peer and school externalizing behaviors among youth must consider parenting practices within the home, relations with peers, and the school environment.

Parenting practices. Previous researchers have long argued that parenting practices within the home and the nature of mother-child interactive patterns are associated with children's behavioral development. Parental practices at home characterized as negative significantly predict behavior problems outside of the home (Moss et al., 1998). Researchers on bullying have also consistently found parent-level factors, such as negative adult influences (e.g., parents who are supportive of violence) (Espelage, Bosworth, & Simon, 2001) and lack of parental support (Holt & Espelage, 2007) as influencing bullying. Studies have also found an association between negative family interactions (Duncan, 2004; Spriggs, Iannotti, Nansel, & Haynie, 2007) and bullying.

Parenting practices that are characterized as having a high level of parental involvement can affect youth behavior and achievement (Paulson, 1994). For instance, parental involvement in youth's access to media at home (e.g., television, internet, video games) is also an important consideration given that youth have many opportunities for exposure to media violence, which can influence externalizing and violent behaviors in school. Media, however, appears to have positive as well as negative effects on children and adolescents, which depend on the program content and the time spent viewing the media (Gupta, Nwosa, Nadel, & Inamdar, 2001). School

externalizing behavior, such as disobedience at school, conflict with teachers (Christakis & Zimmerman, 2007), and aggression have been reported to be the most detrimental consequence of excessive viewing of violence on television. Recent events in the United States (e.g., school shootings) have brought much research attention to the relationship between media violence and aggressive behavior among adolescents in school (Anderson & Bushman, 2001; David-Ferdon & Hertz, 2007; Huesmann, Moise-Titus, Podolski, & Eron, 2003; Williams & Guerra, 2007; Zimmerman, Glew, Christakis, & Katon, 2005). Researchers consistently have found that youth's exposure to violence on media at home such as television (Huesmann et al., 2003), video games (Anderson & Bushman, 2001), and the internet (Williams & Guerra, 2007) increases the likelihood of aggression-related thoughts and behaviors. Social learning theory provides explanations for these findings. That is, youth who observe models acting violently in the media can learn aggressive interactions. Huesmann et al. (2003), who investigated relations between exposure to television violence at ages six to ten and later aggressive behavior, found that exposure to television violence predicted aggressive behavior for both males and females. They also found that identification with aggressive characters on television and perceived realism of television violence are significant risk factors for aggressive peer interactions.

Peer relations. Because adolescence is a period where friendships and peer support are crucial, negative peer relationships and lack of peer support can be significant risk factors for bullying. Researchers have asserted that bullying is a group process (Salmivalli, 2009), and a number of researchers (Barboza et al., 2009; Espelage, Bosworth, & Simon, 2001; Haynie et al., 2001; Holt & Espelage, 2007; Mouttapa et al., 2004; O'Connell, Pepler, & Craig, 1999; Pellegrini & Long, 2002; Rodkin & Hodges, 2003; Schmidt & Bagwell, 2007) have found a

significant association between the quality of peer relationships (e.g., such as those characterized as hostile) and the likelihood of engaging in bullying.

Youth seeking autonomy from their caregivers turn to their friends and peers for social support; thus, it becomes increasingly important to gain acceptance and popularity (Espelage, 2002). Interestingly, Reitz, Dekovic, Meijer, and Engels (2006) also theorized that friends tend to have similar attributes, which can be explained by a *reciprocal influence process* (where individuals attempt to change one another to create a more satisfying friendship) and *selection process* (individuals select one another on the basis of common attributes). Because peer group membership is important during adolescence, peer groups frequently form based on similarities in sex, race, and behavior (called homophily hypothesis), and peer influences play a major role in bullying in school (Espelage, Bosworth, & Simon, 2000; Espelage & Swearer, 2003). Espelage and Swearer (2003) argue that youth who associate with others who bully report an increase in bullying over the school years. Consistent with the homophily hypothesis, a number of researchers in the United States (Erath, Pettit, Dodge, & Bates, 2009; Pellegrini, Bartini, & Brooks, 1999) and abroad (Wong, 2004) found peer influence to be a risk factor in bullying.

School environment. Considering how the school environment influences youth's behavior, it becomes evident that schools can either foster or inhibit the development of externalizing behavior in school (Reinke & Herman, 2002). School environment or school climate is a broad concept that includes factors such as communication patterns, school norms, role relationships and perceptions, patterns of influence, and rewards and punishments (McEvoy & Welker, 2000; Tobin & Sprague, 2000; Welsh, Stokes, & Greene, 2000). The relationship between school environment and behavior problems (Bowen & Bowen, 1999; Laukkanen et al., 2002; Resnick et al., 1997), bullying in particular (Glew et al., 2005; You et al., 2008), have been

examined by a number of researchers. These studies report that school environment that is characterized as safe and nurturing reduce the risk of negative developmental outcomes, such as behavior problems in school. On the contrary, school climates that are characterized as high-risk, such as students carrying a lethal weapon have been linked to externalizing behavior, such as bullying in school (Brockenbrough, Cornell, & Loper, 2002).

Students' relationships with teachers, another aspect of the school environment, also play an important role in influencing classroom and school behavior (Silver, Measelle, Armstrong, & Essex, 2005). Due to frequent interactions between students and teachers in school, teachers' attitudes and involvement are important to understanding externalizing behavior in school. Teachers and school officials can impact students' relationships with their peers and their perceptions of the school environment (Lee, 2009; Olweus, 1992). A study by Frey, Ruchkin, Martin, and Schwab-Stone (2009) found from a sample of 652 predominantly minority inner-city students that students who perceived their teachers as supportive and involved were less likely to engage in behavior problems in school.

Findings from studies (e.g., Baker, Grant, & Morlock, 2008; Gregory & Ripski, 2008; Pianta, Steinberg, & Rollins, 1995) indicate that the quality of teacher-student relationships is associated with children's school adjustment. Teacher-student relationships that are characterized as negative are strongly associated with externalizing behavior in school (Murray & Murray, 2004), such as disruption, defiance (Gregory & Ripski; Lapointe, 2003), and aggression (Lewis, Romi, Qui, & Katz, 2005). Earlier studies have suggested that teacher-youth relationships provide a context in which children learn adaptive or maladaptive interpersonal relations (e.g., Shore, Gunter, & Jack, 1993). Researchers (Hamre & Pianta, 2001; Ladd & Burgess, 2001) have also longitudinally examined the relations between the quality of the kindergarten teacher-child

relationship and classroom behavior. Findings from the study suggest that a negative relationship between a teacher and child in kindergarten is predictive of classroom behavior problems in later school years.

And finally, school environments where youth feel that it is easy to make friends can also reduce the likelihood of behavioral problems. According to Hartup (1992), close friendships are emotional resources which may lead to better adjustment and development, reducing the likelihood of behavioral problems in school. Studies have also documented that youth with no friends reported greater behavioral problems and distress than youth with friends (Wentzel, Barry McNamara, & Caldwell, 2004). Lack of emotional and social support from friendships may indicate difficulties in school adjustment (Juvonen, 2007).

A study by Kuperminc, Leadbeater, Emmons, and Blatt (1997) examined the association between school climate and behavioral problems and emotional distress in a sample of middle school students. Using demographic and psychosocial risk variables (i.e., self-worth, academic self-concept, academic performance, and exposure to stressful events), the researchers found that middle school boys with positive perceptions of their school environment were less likely to display externalizing behavior. Findings suggest that investigating relations between various aspects of the school environment and students' externalizing behavior in school is an important consideration in prevention and intervention efforts.

Mesosystem

According to the ecological framework, a mesosystem consists of experiences in one microsystem, such as the home environment, which may influence activities and interactions in another, such as the school. Considering the connection between home and school, parenting practices within the microsystem of the home, such as harsh disciplinary practices, can affect

youth's relationships with their peers and their behavior in the school environment (e.g., Eamon & Altshuler, 2004). Home and schools represent the primary systems in children's lives, and homes and schools are their primary learning contexts (Sheridan, Warnes, & Dowd, 2004). Healthy development is likely to occur when there are congruent and consistent messages conveyed across contexts, and healthy and constructive relationships among them (Sheridan et al., 2004). A productive, constructive partnership between parents and teachers are necessary for maximizing a student's potential and for developing social competence (Sheridan et al., 2004). Thus, it is not surprising that parental involvement in youth's school was found to be a significant factor in the overall well-being of children (Flaspohler et al., 2009). Studies consistently have found that youth are less likely to exhibit externalizing behaviors in school (Hill et al., 2004), such as aggression (Barboza et al., 2009; Flouri & Buchanan, 2003; Georgiou, 2009; Somerville, 2010), when parents are involved in their school lives.

Exosystem

Neighborhood environment is an exosystem level factor that might place youth at risk of exhibiting externalizing behavior in the school. For example, occurrences in a neighborhood environment (e.g., lack of resources, adult criminal activity), which may or may not directly contain the youth, can negatively influence how youth behave in school and how they interact with their classmates and peers. Because schools are embedded within neighborhoods, influences in the neighborhood caused by factors such as lack of resources and crime, can influence youth behavior problems in school. Additionally, social disorganization theory might explicate the influence of neighborhood environment on youth's externalizing behavior. Youth from low-income neighborhoods are exposed to delinquency and criminal activities occurring in the neighborhood. These youth are also likely to be embedded in a neighborhood subculture in

which delinquency is an approved behavior and that criminality is acquired through a process of interactions in the neighborhood (Shaw & McKay, 1942; Sampson, 2012).

A substantial body of studies have demonstrated that exposure to violence in the neighborhood is related to emotional and behavior outcomes in children and adolescents (e.g., Plybon & Kliewer, 2001). Several studies (Espelage, Bosworth, & Simon, 2000; Khoury-Kassabri, Benbenishty, Astor, & Zeira, 2004; Nansel et al., 2003; Swearer & Doll, 2001; Wienke Totura et al., 2008) have consistently found a strong relationship between neighborhood violence and bullying among youth. These studies suggest that youth residing in unsafe neighborhoods are prone to bullying (Khoury-Kassabri et al., 2004), and these neighborhoods may reflect a larger social environment where bullying and violence occur (Espelage et al., 2000).

Researchers have also investigated the effects of neighborhood environment on other types of behaviors in the school setting (Bowen & Bowen, 1999; Bowen, Bowen, & Ware, 2002; Nash, 2002; Pettit, Bates, Dodge, & Meece, 1999). These studies report that neighborhood environment increases the incidence of school misbehavior. A study by Bowen and Bowen (1999), for example, reports from a national probability sample of middle and high school students that youth's exposure to neighborhood and school dangers can impact youth's externalizing behavior in school, particularly for Black males. Another study, however (Eamon & Altschuler, 2004), indicates contradictory findings. Although peer associations and residence in a metropolitan area were associated with disruptive school behavior, youth's perception of the safety of their neighborhood environment was not statistically significantly associated with this behavior. On the other hand, inner-city youth are more likely than suburban youth to experience lack of resources and stressors. Lack of resources and stressors in the area of residence can

undermine parenting practices and increase the likelihood of youth behavioral problems (Gorman-Smith & Tolan, 1998).

Macrosystem

School behaviors are embedded within culture (Monks et al., 2009) and can be influenced by opportunity structures. Within the context of peer and school externalizing behaviors, two broad types of macrosystem level factors include religion and school rule enforcement.

Religion. Religion can be considered a cultural factor, and its role has been investigated extensively in several aspects of adolescent mental health (Dew et al., 2008). Studies have found an inverse relationship between religion/spirituality and substance use, delinquency, depression, and suicidality (see Dew et al., 2008, for a review). A number of studies have also reported that youth who are involved in religion are more likely to receive social support, have relationships with positive role models, acquire school and work related skills, have decreased stress levels, and experience positive interpersonal relations, all of which can mitigate behavioral problems (Damon, 2000; Grant et al., 2000).

A limited number of studies have also examined the relationship between religion (e.g., religious beliefs, church attendance) and peer externalizing behavior (primarily bullying) among youth (Abbotts, Williams, Sweeting, & West, 2004; Ellison, Bartkowski, & Segal, 1996; Petts, 2009). The results from these studies produced mixed findings. Ellison et al. (1996) found, for example, that parents with conservative religious beliefs use corporal punishment more frequently than those with less religious affiliations, which was significantly related to children's exhibiting bullying behavior. Abbotts et al. (2004) reported a consistent result; that is, youth who frequently attended church bullied others more often. A more recent study by Petts (2009), however, found that parents' religiosity was a protective factor. That is, children of mothers with

higher levels of religious participation were less likely to display externalizing behavior. The findings from these studies demonstrate that religion can either increase or decrease externalizing behavior. Dew et al. (2008) also argued that researchers must not only consider protective relationships, but also potential harmful effects when examining the association between religion and youth externalizing behaviors.

School rule enforcement. School rules are intended to regulate or prevent student conduct that might disrupt activities, cause harm, or damage school property (Doyle, 1990). School rules function to regulate and control the students' school behavior in order to maintain an environment conducive to learning (McGinnis et al., 1995). However, studies suggest that relations between school rules and their enforcement and student behavior are complex. For example, a limited number of previous studies have found that when school rules are enforced with students who have a history of externalizing behavior, the frequency and intensity of these behaviors are likely to increase (Mayer, 1995). Behavioral problems in school arise when school rules are perceived by youth as being unfair (e.g., Gottfredson, Gottfredson & Hybl, 1993). Overreliance on punitive methods, lack of clarity of school rules and policies as well as a weak or inconsistent enforcement by school administrators also appear to increase youth's behavioral problems in school (Mayer, Nafpaktitis, Butterworth, & Hollingsworth, 1987; Mayer, 1995, 2001). Creating a heavily scrutinized environment may also foster violence and behavioral problems, as students may resent punitive school environments and react against them (Mayer, 2002). Likewise, inconsistency in school rule application is a major source of students' dissatisfaction, which breeds a sense of grievance and precipitates behavioral problems and confrontations (Tattum, 1982).

Chronosystem

Chronosystems include the time dimensions of the ecological model, which includes consistency or change over the life course. Studies have documented that changes in family structure, such as divorce, can result in negative youth outcomes, such as adjustment problems, less parental supervision, and peer aggression (Breivik & Olweus, 2006; Lamden, King, & Goldman, 2002). According to Hetherington and Elmore (2003), pre-adolescent children in divorced or remarried families exhibited an increased level of aggression, non-compliance, disobedience, inappropriate classroom conduct, and decreased level of self-regulation. These findings are not surprising considering that children in divorced or remarried families have a difficult time adjusting to the family structural changes, which may manifest into aggressive and hostile behaviors (see Spigelman, Spigelman, & Englesson, 1991). Also as argued by Wallerstein and Kelly (1980), children of divorce are prone to intense anger, which can lead to aggressive behavior.

Race/Ethnicity, Parenting Practice, and Externalizing Behaviors

Culturally and socially defined role expectations, which influence parenting practices and involvement and relations with teachers, may be relative to particular racial and ethnic groups. Research has shown that racial and ethnic minority youth living in negative family environments are more likely to exhibit externalizing and internalizing behaviors than whites (Gavazzi et al., 2008). Other researchers also found significant racial/ethnic differences in the associations between particular parenting practices and behaviors (Deater-Deckard, Dodge, Bates, & Pettit, 1996; Stormshak et al., 2000). For instance, Deater-Deckard et al. (1996) found that authoritative and physically punitive parenting practices were associated with behavioral problems for white youth, and not for Black youth. Theoretically, parenting practices might influence racial and

ethnic minority youth differently, because racial/ethnic minority youth experience more risk factors than whites (Rowe, Vazsonyi, & Flannery, 1994).

Other researchers have questioned racial/ethnic differences in authoritative parenting and youth behavioral outcomes, as findings from other studies that examined racial and ethnic variations in the association between parenting practices and youth behavioral problem have been inconsistent (Gershoff, 2002). For example, Straus, Sugarman, and Giles-Sims (1997) found that physically punitive parenting practices increase the likelihood of antisocial behavior regardless of race and ethnicity. Nevertheless, the interaction between race/ethnicity and parenting practices on youth externalizing behavior warrants further empirical attention, as does the intermediary role that parenting practices may play in the development of externalizing behavior.

Race/Ethnicity, Teacher Involvement, and Externalizing Behaviors

Teacher-student rapport may affect students' behavioral adjustment differently depending on the students' race/ethnicity. Racial/ethnic minority youth frequently report feeling more disconnected from school, teachers, and peers than white youth (Romo & Falbo, 1996; Steinberg, Brown, & Dornbusch, 1996). Interestingly, Kesner (2000) reported that teachers were more likely to rate Black and other racial/ethnic minority students as higher in dependency in teacher-student relationships than white students. Because racial/ethnic minorities are more likely to attend low-income schools, positive relations with teachers appear to be less frequent for racial/ethnic minority youth than for white youth (Hamre & Pianta, 2001; Hill et al., 2004). Racial/ethnic minorities in low-income schools are deprived of important resources, such as support from teachers, which are necessary for academic and social development. Thus, it is not surprising that teacher-youth relationships that are characterized as supportive can result in better

developmental outcomes for racial/ethnic minority youth more so than for white youth. Likewise, negative teacher–student relationships appears to be more strongly associated with misbehavior and school adjustment problems among Black and Hispanic students than for white students (Murray, Waas, & Murray, 2008). Furthermore, Meehan et al. (2003) found that positive teacher–child relationships were more strongly associated with declines in aggression among Black and Hispanic children than among white children (Meehan et al., 2003).

Ease of Making Friends, Learning Problems, and Externalizing Behaviors

Children with learning problems and developmental disabilities are at a heightened risk of engaging in bullying and peer conflicts (see Rose, Monda-Amaya, & Espelage, 2011, for a review). Youth with learning problems have more difficulty in making friends and are more likely to be rejected by their peers in school compared to youth without learning problems, which can result in bullying (Stone & LaGreca, 1990; Wiener & Schneider, 2002) and other externalizing behaviors in school (Cornwall & Bawden, 1992; Feagans, Merriwether, & Haldane, 1991). However, an emotionally and physically comfortable school environment can mitigate school problems for students with learning problems. For instance, Savage (2005) reports that school environments where youth with learning problems can be accepted by their peers and can establish friendships decrease bullying involvement among these youth. Youth with disabilities, including learning problems, typically have fewer friendships than youth without disabilities, as these youth have more difficulties in social interactions (Greenham, 1999; Morrison & Cosden, 1997). However, friendship is a protective factor, as research finds that youth with learning problems who have close friends are likely to have better psychological adjustment (e.g., Bagwell, Newcomb, & Bukowski, 1998), which reduces their likelihood of engaging in

misbehaviors (e.g., bullying). Thus, understanding whether friendship can buffer the effects of learning problems on peer and school externalizing behaviors is imperative.

Poverty, Negative Peer Influence, and Externalizing Behaviors

As previously discussed, studies have established associations between living in poverty and negative youth outcomes, such as peer aggression (Carlson, 2006; Chaux, Molano, & Podlesky, 2009; Curtner-Smith et al., 2006) and school behavior problems (Civita, Pagani, Vitaro, & Tremblay, 2007). Youth living in poverty are more likely to identify with a culture of violence and hold positive attitudes toward aggressive behaviors than non-poor youth (Unnever & Cornell, 2003). Not surprisingly, economically disadvantaged youth are more likely to attend lower-quality schools located in high-crime neighborhoods (Lahey, Waldman, & McBurnett, 1999) where they are susceptible to deviant and delinquent peer association (Eamon, 2001b; O’Keefe & Sela-Amit, 1997). These youth are also more likely to be rejected by conventional peers (Patterson, Vaden, & Kupersmidt, 1991; Windle, 2000) and turn to deviant peers as a result, which exposes them to negative peer influences, such as substance use and delinquent activities (Fergusson, Swain-Campbell, & Horwood, 2002). Negative peer influences in turn increase the likelihood of engaging in bullying and misbehavior in school. Because early adolescents increasingly turn to their friends and peer groups, it is not surprising that “deviancy and antisocial training” within adolescent peer groups significantly predict bullying behavior (Haynie et al., 2001; Poulin, Dishion, & Burraston, 2001; Weiss et al., 2005). Further, youth with similar levels of deviant and aggressive behaviors are likely to associate with one another (Espelage, Holt, & Henkel, 2003; McPherson, Smith-Lovin, & Cook, 2001). These youth model their behaviors after those of their deviant peers and find that their behavior is rewarded by social acceptance into their peer group (Akers, 1998). As a result, negative peer influences might

explain why being poor is related to youth externalizing behaviors. In summary, low-income youth appear to have an increased risk of affiliating with deviant and delinquent youth, which increases their risk of exhibiting externalizing behavior.

Poverty, Neighborhood Safety, and Externalizing Behaviors

Researchers also assert that low-income youth are more likely to reside in lower-quality, high-crime neighborhoods, which can undermine their sense of neighborhood safety (National Research Council, 1993; Schubiner et al., 1993). Not surprisingly, neighborhoods with crime, violence, illegal activities, and lack of caring about what happens in the neighborhoods are characteristics of neighborhoods with high rates of delinquency and youth behavioral problems (Farrington & West, 1993; Garbarino, DuBrow, Kostelny, & Pardo, 1992), such as misbehavior in school (Bowen, Bowen, & Ware, 2002; Nash, 2002). One study, which was conducted in a city-wide, low-income neighborhood, found that exposure to neighborhood violence mediated the relation between poverty and youth aggressive behavior (Guerra et al., 1995). These findings are in line with the social disorganization framework, which theorizes that youth from low-resourced neighborhoods have fewer resources to exert control over crime and delinquency. As a result, these youth are more frequently exposed to crime and violence, which can increase the risk that youth will support misbehaviors (Sampson, Raudenbush, & Earls, 1997; Sampson 2012). This literature suggests that another reason why poor youth are at higher risk of exhibiting peer and school externalizing behaviors is because they are more likely than non-poor youth to live in unsafe neighborhoods, which expose them to violence, thus increasing their risk of displaying externalizing behavior.

Summary of the Previous Studies and Research Gaps

The previously reviewed studies have significantly contributed to enhancing our understanding of the correlates of two types of externalizing behaviors—those that occur in the school and those that occur within peer relationships. Both types of youth externalizing behavior can create a chaotic school environment, which is problematic not only for the student exhibiting the problem, but also for others. As demonstrated by the aforementioned literature review, much of the research on externalizing behavior in school has been conducted on elementary school-age children or late adolescents (i.e., high school students). Relatively few studies have examined the factors that predict peer and school externalizing behaviors specifically among early adolescents. The studies that have been conducted on early adolescents primarily have examined a limited number of socio-demographic variables (e.g., parental education) while overlooking important family (e.g., poverty status) and youth characteristics (e.g., learning problems). Although a limited number of studies have found that certain ecological factors (e.g., parenting practices, teacher-student relations, and neighborhood environment) predict children and adolescent externalizing behavior, no study has simultaneously examined the range of factors within each of the systems levels as did the current study.

CHAPTER 3

METHODS

This chapter presents a brief overview of the current study, followed by the hypotheses that were tested, the data and sample, measures of the variables, and the data analysis.

The Current Study

This study examined various socio-demographic characteristics, parenting practices, negative peer influences, school and neighborhood environments, lack of school rules, and one cultural factor (i.e., religious involvement) that predict two types of externalizing behaviors, including those that occur with peers and within the school. Using longitudinal data, this study also controlled for a previous measure of peer and school externalizing behaviors, which adjusts for selection bias to a greater degree than most previous studies. This method should result in less biased findings. All of these contributions should assist in developing more effective intervention strategies for peer and school externalizing behaviors among early adolescents.

Hypotheses

As described in this section, this study addressed a number of hypotheses related to direct effects, moderators, and mediators.

Direct Effects

Direct effects of the socio-demographic characteristics (age, race, gender, learning problems, mothers' marital status and educational level, and poverty status), and *microsystem* (cognitive stimulation, emotional support, negative peer influence, teacher involvement, and ease of making friends), *exosystem* (neighborhood safety and area of residence), and *macrosystem* (religious involvement and lack of school rules) levels on peer and school externalizing behaviors were tested. With the exception of poverty and learning problems, for which specific

hypotheses were made, the socio-demographic variables were placed in the models primarily as control variables, as past research has established relationships between these variables and externalizing behaviors.

- Certain socio-demographic characteristics (i.e., learning problems and poverty) and peer and school externalizing behaviors at Time 1 will increase the risk of peer and school externalizing behaviors at Time 2.
- Microsystem level factors, including positive parenting (providing higher levels of cognitive stimulation and emotional support), teacher involvement, and ease of making friends will decrease the risk of peer and school externalizing behaviors, while negative peer influence will increase the risk of peer and school externalizing behaviors.
- Exosystem level factors, including neighborhood safety will decrease the risk of peer and school externalizing behaviors, while living in a central city, compared with other urban and rural residence will increase the risk of peer and school externalizing behaviors.
- At the macrosystem level, religious involvement will decrease the risk of peer and school externalizing behaviors, while lack of school rules will increase the risk of peer and school externalizing behaviors.

Moderators

- Positive teacher-student relationships will reduce peer and school externalizing behaviors more for Black and Hispanic youth than for white youth.
- Positive parenting will reduce peer and school externalizing behaviors more for Black and Hispanic youth than for white youth.
- Teacher involvement will buffer the effects of having learning problems on exhibiting peer and school externalizing behaviors.

- Ease of making friends will buffer the effects of having learning problems on exhibiting peer and school externalizing behaviors.

Mediators

- Negative peer influence will mediate the effects of poverty on peer and school externalizing behaviors.
- Neighborhood safety will mediate the effects of poverty on peer and school externalizing behaviors.

Data and Sample

Data were extracted from the National Longitudinal Survey of Youth (NLSY) and the NLSY mother-child datasets. The NLSY is a multipurpose, ongoing survey, which began collecting information on life events from a nationally representative sample of 12,686 individuals between the ages of 14 and 22 when they were first interviewed in 1979. Sponsored by the Department of Labor, the NLSY79 contains information about education, training, employment, and family experiences of the respondents (Center for Human Resource Research, 2004). The original NLSY oversampled Blacks, Hispanics, and economically disadvantaged white youth. From 1979 through 1994, respondents were interviewed annually and interviewed biennially thereafter. In 1986 and every two years subsequently, assessments of the NLSY female respondents and their children were conducted. The assessments measure the children's cognitive ability, temperament, motor and social development, behaviors, competence, and home environment (Center for Human Resource Research, 2004). Since 1986, youth between the ages of 10 and 15 were interviewed using a self-administered survey, which collected information on factors related to parenting, school, peers, and neighborhoods.

For this study, the sample was drawn from the mother-child dataset, which included youth who in the first of two years (2002 or 2004), referred to as Time 1, met the following criteria: the youth were between the ages of 10 through 12, were living with their mothers, were enrolled in regular school, responded to at least one of the 13 items from the self-administered survey that were related to this study, and mothers responded to at least one of the four items that measured peer and school externalizing behaviors in both Time 1 and Time 2 (in 2004 for those entering the sample in 2002; in 2006 for those in 2004). Mothers' socio-demographic information was collected only on the biological mother and her household; thus, youth living with other caregivers were eliminated from the sample. The sample contained siblings who shared some particular characteristics, such as the same mother, school, or neighborhood, which could lead to biased estimates if techniques are not used to handle such clustered data. Although the NLSY data allow for identifying siblings in the same family, it is not possible to identify whether the youth are attending the same school. Thus, to deal with the clustering problem, one youth from each family with multiple youth who met the selection criteria was randomly selected. The sample selection criteria resulted in a sample of 733 youth who were 10, 11, or 12 years old when they entered the sample in either 2002 or 2004.

Measures

Dependent Variables

The main outcome of interest for this study is peer and school externalizing behaviors, which were measured at Time 2 using four items from the Behavior Problem Index (BPI).¹ The BPI is a 28-item scale which is designed to examine typical childhood behaviors, rather than unusual behaviors that may indicate serious pathology (Christie-Mizell, 2003). Mothers rate as

¹ Initially, I used three items (“child bullies or is cruel/mean to others, child is disobedient at school,” and “child has trouble getting along with teachers”) to measure school externalizing behavior. Due to the low alpha, the dependent variable was redefined as two dependent variables: peer and school externalizing behaviors.

“often true,” “sometimes true,” or “not true” the occurrence in the previous three months of 28 common child behaviors. I selected four BPI items that based on past studies represent externalizing behavior commonly occurring in the classroom and on the schoolyard. These items also are among those that measure the Antisocial Behavior Subscale of the BPI (Center for Human Resource Research, 2004). The items for peer externalizing behavior are “child bullies or is cruel/mean to others” and “child has trouble getting along with other children.” Items measuring school externalizing behavior include “child is disobedient at school,” and “child has trouble getting along with teachers.” The terms “externalizing behavior” and “antisocial” are often used interchangeably, although there are some distinctions, according to Shaw and Winslow (1997). That is, the term externalizing behavior is commonly used to discuss the “less severe disruptive and destructive behaviors of children” (pp. 148-149), while antisocial behaviors are more severe.

The two BPI variables that measured each dependent variable were recoded so that higher numbers reflect the youth’s exhibiting a greater degree of behavior problems. To determine whether the two variables measured the same underlying constructs and had adequate factor loadings, a principal components analysis (PCA) using the PRINQUAL and PRINCOMP procedures (available in SAS 9.1) was conducted. The PRINQUAL and PRINCOMP procedures are appropriate for non-continuous variables, which are assumed by a PCA. These procedures determined that the two variables for each of the externalizing behaviors measure one factor or component. The factor loading for each indicator of peer externalizing behavior is .86. For school externalizing behavior, the factor loading for each indicator is .87. Cronbach’s alpha for peer externalizing behavior is .70, and Cronbach’s alpha for school externalizing behavior is .77.

The two variables for each dependent variable were then summed and collapsed into three categories. However, the proportional odds assumption was not met for many of the models when ordinal regression models were estimated. Therefore, the two dependent variables were dichotomized (0 = mothers' responded "not true" to the two questions measuring each type of externalizing behavior; 1 = mothers' responded "somewhat true" or "often true" to at least one of the two questions measuring each type of externalizing behavior), and multivariate logistic regression models were estimated.

Independent Variables

Using an ecological model as a framework for this study, youth and mothers' characteristics and three groups of variables representing three of the ecological systems were entered into the models, which include microsystems (parenting, peer, and school), an exosystem (neighborhood), and macrosystems (religion and school rules). Because race/ethnicity might be considered as a cultural influence, the interactions between race/ethnicity and teacher involvement, cognitive stimulation, and emotional support were entered into the final models.² These variables were all measured at Time 1.

As Bronfenbrenner's (1977) ecological systems model suggests, socio-demographic characteristics of the youth and family can affect interactions in immediate settings such as the home and school, and influence the quality of more distant environments such as the neighborhood. These interactions and environments, in turn, can affect youth's externalizing behavior in their school environments.

² GIFTED (based on a question that asks the mother whether the child was in a program for gifted children during the past year), TV/VIDEOGAMES ("How often do parents limit the amount of time watching TV/video games"), WEAPONS ("have you ever seen a student carry a weapon such as a gun or knife on school property"), and SAFESCHOOL ("I don't feel safe at this school") variables were initially considered. Because none of these variables were associated with either outcome, and there were large number of other independent variables placed into the models that had more research support for their inclusion, I decided to eliminate them from final estimated models.

Supported by a limited number of previous studies reviewed in Chapter 2, a variety of socio-demographic variables were examined in this study. Youth's socio-demographic characteristics included age in months (120 through 144); race/ethnicity, based on the mothers' racial/ethnic identifier (Black; Hispanic; non-Hispanic, white was the reference variable); gender (female was the reference variable); and having learning problems. This latter variable was based on a question that asks the mother whether the child has a learning problem/disability, dyslexia, reading, or speech problem, and was coded as 1 = "yes" and 0 = "no."

Socio-demographic characteristics of the mother and household included the mothers' marital status (never married; other; married, spouse present was the reference variable) and educational level (high school; more than high school; less than high school was the reference variable), and poverty status (year before the interview). Poverty status as defined by a NLSY constructed variable based on the Federal poverty definition was used (1 = "in poverty"; 0 = "not in poverty").

The final socio-demographic variables were Time 1 measures of peer and school externalizing behaviors, which were measured identically to the Time 2 dependent variables, but measured two years before.

The microsystems level refers to immediate environments, such as the home and school, where youth interact with family, peers, and teachers. As discussed in the literature review, parenting practices, negative peer influence, and school environments can influence youth to exhibit externalizing behavior.

Parenting practices were measured using items from the Home Observation for Measurement of the Environment-Short Form (HOME-SF) Inventory, which was developed by Caldwell and Bradley (1984). The HOME Inventory, which is based on maternal report and

interviewer observations, was designed to measure the nature and quality of children's home environment from birth to adolescence. The HOME-SF Inventory includes age appropriate cognitive and emotional subscales for children from ages 0 to 15. Items included in the cognitive stimulation scale are related to outings, reading, playing, and other parent-youth interactions. The emotional support subscale includes items related to family relationships and disciplining (e.g., spanking, grounding, taking away TV or other privileges). The raw scores for both scales were normalized so that a one-unit change in the variable represents a one standard deviation change in the outcome variables (Zimmerman, Glew, Christakis, & Katon, 2009).

Negative peer influence was measured by five items, which asked the youth whether they felt pressured from friends to engage in five different behaviors: "try cigarettes," "try alcohol," "try marijuana/other drugs," "skip school," and "commit crime/violence" (1 = yes, 0 = no). These items were added, and because of the low frequency of "yes" responses for some of the items, I collapsed them into three categories: 0, 1-2, and 3-5. The school environment was measured by two items--teacher involvement ("most of the teachers are willing to help with personal problems") and ease of making friends ("it's easy to make friends at this school"). Teacher involvement and ease of making friends were measured on a 4-point Likert scale (1 = "not at all true"; 4 = "very true"). However, two of the categories (i.e., "not at all true," "not too true") were collapsed due to low frequencies. A PCA using PRINQUAL and PRINCOMP procedures was conducted on these two items, which indicated that they were measuring the same concept. Cronbach's alpha for the school environment variable was .51. Due to the low alpha level, the variables were entered separately into the statistical models.

Two *exosystem* variables were included in the analysis. These are youth's responses to "how safe do you feel walking and playing in your neighborhood" (1 = not at all safe; 4 = very

safe) and youth's area of residence. Two of the categories ("not at all safe," "somewhat safe") were collapsed due to low frequencies. Youth's area of residence was measured as follows: "not in a standard metropolitan statistical area (SMSA)"; "in a SMSA, not in a central city"; and "in a SMSA, in a central city" was the reference variable. These variables were defined by NLSY as they are applied to the Census Bureau data. Although the measure is complex, SMSA includes a core urbanized area of at least 50,000 residents and includes adjacent communities that have a high degree of economic and social integration with that core area (National Longitudinal Survey of Youth Codebook Supplement, n.d.).

The *macrosystem* level included the cultural influence of religion and opportunity structures for engaging in externalizing behavior in the school. Religious involvement was measured by the question asking mothers, "[h]ow important is religion to child" (1 = not important at all; 4 = very important). Lack of school rules was measured by the item asking youth whether "[y]ou can get away with almost anything at school." The variable was measured on a 4-point Likert scale (1 = not at all true, 4 = very true).

To determine whether three factors in the microsystems level affect the peer and school externalizing behaviors differently as a result of culture related to race/ethnicity, interaction terms were created between Black and Hispanic and teacher involvement, cognitive stimulation, and emotional support. Interaction terms between learning problems and teacher involvement and ease of making friends were also created. The interaction terms were entered separately into the regression models.

Missing Data

Slightly more than one half of the respondents (51.84%) had no missing data on any of the variables. However, 196 cases (26.74%) had data missing on at least one variable, and one

case (0.14%) had data missing on eight variables. With regard to specific variables, negative peer influence had the highest number of cases missing ($n = 117$, 15.96%), while learning problems and mothers' educational status both had the lowest number of cases missing ($n = 1$, 0.14%). Because missing data or non-response can produce a threat to the validity of inference (Shadish, Cook, & Campbell, 2002), missing data were addressed using the imputation methods available in SAS 9.1. The SAS PROC MI and PROC MIANALYZE procedures were used, while incorporating procedures suggested by other researchers for imputing data for categorical variables (Miller & Chen, 2006; Rose & Fraser, 2008). The MI procedure replaces missing values with values repeatedly drawn from conditional probability distributions by using the Markov Chain Monte Carlo simulation method. The five imputates that were created using the PROC MI procedure were combined using the MIANALYZE procedure to generate valid statistical inferences (Rose & Fraser, 2008).

Data Analysis

SAS 9.1 also was used to conduct the data analyses. Weighted descriptive statistics (means and standard deviations or percentages) for all of the variables were calculated. Because the dependent variables--peer and school externalizing behaviors--are dichotomous, multivariate logistic regression models were estimated. For a multivariate logistic model, each odds ratio can be interpreted as the effect of each variable on the odds of exhibiting peer and school externalizing behaviors, adjusted for the effects of the other independent variables (Allison, 2001). As recommended by the Center for Human Resource Research (2004), multivariate models were not weighted. The poverty and race/ethnicity variables controlled for the oversampling of participants with these characteristics.

In the proposed study, there is a possibility that any relationships found between the independent variables and Time 2 peer and school externalizing behaviors is the result of selection bias. That is, the relationships are caused by some unmeasured characteristics that are not controlled in the analysis and can result in biased estimates. To adjust for this possible selection bias, in addition to placing into the models a variety of socio-demographic variables that might be related both to the systems level factors and to the externalizing behaviors, residualized change models (also referred to as a lagged dependent variable or regressor variable methods) were estimated (Berger et al., 2009). In the residualized change model, the Time 1 measure of peer and school externalizing behaviors was entered into the multivariate logistic regression models. This method adjusted for persistent youth characteristics (e.g., genetic factors) that are assumed to have consistent effects on peer and school externalizing behaviors at both Time 1 and Time 2. The estimates should then be less subject to bias than those estimated with traditional multivariate logistic models.

Consistent with the ecological model, the effects of four groups of variables on peer and school externalizing behaviors were investigated by estimating four hierarchical logistic models. The first model included variables measuring the socio-demographic characteristics, which was followed by adding the variables measuring the microsystem, exosystem, and macrosystem. To determine whether certain effects varied by race/ethnicity, the interactions between Hispanic and Black and teacher involvement, cognitive stimulation, and emotional support were entered into subsequent models. In addition, to determine whether teacher involvement and ease of making friends buffer the effects of having learning problems, interactions between the former variables and a learning problems were entered into subsequent models. All of the models contained the socio-demographic variables and the Time 1 measure of peer and school externalizing behaviors.

To establish mediation, certain criteria must hold, as suggested by Baron and Kenny (1986). First, the independent variable (poverty) must be related to the dependent variable (peer and school externalizing behaviors). Second, the independent variable must be related to the mediating variable (negative peer influence and neighborhood safety). Third, the mediator must be related to the dependent variable. Finally, when the mediator is placed into the model, the relationship between the independent variable and the dependent variable must be non-significant or be substantially reduced. Diagnostic statistics that were conducted before estimating the hierarchical logistic regression models reported no problems with outliers or multicollinearity.

To test whether adding each group of variables representing the different ecological systems levels and each group of interaction terms into the model improves the model fit, I subtracted the -2 x log likelihood (-2 LL) value for the model including the additional ecological systems variables or interaction terms from the -2 LL value for the previous model. Whether there is a significant difference in the -2 LL between the two models was determined with the differences in the degrees of freedom between the two models utilizing a chi-square table. A significant decrease in -2 LL indicated a better fitting model.

Human Subjects

This research was conducted on the NLSY79 and NLSY mother-child datasets. Because these are publicly available datasets, which do not allow for identification of the respondents, this research was exempted from Institutional Review Board oversight.

CHAPTER 4

RESULTS

This chapter begins by presenting descriptive statistics for the variables used in the analyses. The results of the multivariate hierarchical logistic regressions that examined the direct effects of the variables at different systems levels on peer and school externalizing behaviors are presented next. This chapter then presents the results of adding the moderators to the models, which tested whether three factors reduced peer and school externalizing behaviors more for Black and Hispanic youth than for white youth, and whether teacher involvement and ease of making friends buffered the associations between learning problems and peer and school externalizing behaviors. Finally, mediating effects are addressed.

Descriptive Statistics

Weighted means and standard deviations or percentages for the variables are presented in Table 1. To increase the interpretability of the descriptive statistics, out-of-range values, which are common when using the PROC MI procedure (Miller & Chen, 2006), were rounded off. As indicated in the table, 14.82% of youth displayed peer externalizing behavior and 18.66% displayed school externalizing behavior at Time 2. The average age of the youth was 132.20 months (11.02 years). The majority of youth were non-Hispanic, white (54.30%), followed by Black (26.33%) and Hispanic (19.37%). Slightly over half of the sample was male (51.02%), and approximately 5% were identified as having learning problems. In regards to mothers' socio-demographics, 68.22% of the mothers were married (spouse present), 22.78% were divorced or separated, and 9.0% were never married. In terms of educational status, few mothers had less than a high school education (8.43%), compared with having a high school (27.72%) and more than high school (63.85%) education. Approximately 10% of the families experienced poverty

the year prior to the interview. Approximately 19% of youth exhibited peer externalizing behavior at Time 1, and slightly over 17% of youth displayed school externalizing behavior at Time 1.

The microsystem level consisted of parenting practices (i.e., cognitive stimulation and emotional support), negative peer influence, and school environment variables (i.e., teacher involvement and ease of making friends). The average for the cognitive stimulation subscale was 101.88 (range 37.4 - 120.8) and the emotional support subscale was 100.97 (range 41.3 – 123.3). While the vast majority of youth reported no peer negative influences (90.47%), such as pressure from friends to engage in illegal behavior and to skip school, 4.25% experienced 1-2 types, and 5.28% experienced 3-5 types. For teacher involvement the response rate ranged from a low of approximately 14% for “not at all true/not too true,” to a high of approximately 54% for “very true,” suggesting that the majority of these youth perceived that teachers assisted them with personal problems. Similarly, a relatively low percentage (9.77%) of youth reported “not too true or not at all true” that it was easy to make friends at their schools, while the remaining youth felt that this was “somewhat or very true.” This suggests that the majority of these youth perceived their school climate to be friendly. At the exosystem level, which included neighborhood safety and SMSA residence, the majority of the youth (54.75%) perceived their neighborhoods as “very safe.” This was followed by 28.50% who felt their neighborhoods were “reasonably safe,” and 16.74% who felt their neighborhoods were “not at all or somewhat safe.” For SMSA residence, 65.28% of the youth resided in a SMSA, not central city; 21.66% in a SMSA, in central city; and 13.06% did not reside in a SMSA. These neighborhood results indicate that the majority of these youth felt some degree of safety in their neighborhood, and slightly over half of them lived in a metropolitan area that was not in a central city.

At the macrosystem level, which was composed of religious involvement and lack of school rules, slightly less than half of the youth’s mothers felt that religious involvement was “very important” to their youth, followed by “fairly important” (33.97%), “not important at all” (9.29 %), and “fairly unimportant” (7.66%). These results suggest that the majority of these youth felt that religious involvement is important, but to varying degrees. And finally, in terms of a lack of school rules (“can get away with anything at this school”), 50.01% responded “not at all true,” followed by “not too true” (31.23%), “somewhat true” (11.84%), and “very true” (6.93%). Approximately half of the respondents felt that there was a lack of school rules to some degree.

Table 1. Weighted means (standard deviation) or percentages of the sample (N = 733)

Variable	%	M	SD
<i>Dependent variables</i>			
Peer externalizing behavior (Time 2)			
Not at all true	85.18%		
Somewhat true/often true	14.82%		
School externalizing behavior (Time 2)			
Not at all true	81.34%		
Somewhat true/often true	18.66%		
<i>Independent variables</i>			
Socio-demographic characteristics			
Age in months (range 120-144)		132.20	6.81
Race/ethnicity			
Hispanic	19.37%		
Black	26.33%		
Non-Hispanic, white	54.30%		
Gender			
Male	51.02%		
Female	48.98%		
Learning problems			
No	94.91%		
Yes	5.09%		
Mothers’ marital status			
Never married	9.00%		
Married, spouse present	68.22%		
Other (divorced, separated)	22.78%		
Mothers’ educational status			
Less than high school	8.43%		
High school	27.72%		
More than high school	63.85%		

Table 1 (cont.)

Variable	%	M	SD
Poverty status			
No	90.36%		
Yes	9.64%		
Peer externalizing behavior (Time 1)			
Not at all true	81.26%		
Somewhat true/often true	18.74%		
School externalizing behavior (Time 1)			
Not at all true	82.73%		
Somewhat true/often true	17.27%		
Microsystem			
Parenting (HOME scale)			
Cognitive stimulation (range 37.4-120.8)		101.88	15.95
Emotional support (range 41.3-123.3)		100.97	15.61
Negative peer influence			
None	90.47%		
1-2	4.25%		
3-5	5.28%		
School environment			
Teacher involvement			
Not at all true/not too true	14.32%		
Somewhat true	31.96%		
Very true	53.72%		
Ease of making friends			
Not too true/not at all true	9.77%		
Somewhat true	33.37%		
Very true	56.86%		
Exosystem			
Neighborhood environment			
Neighborhood safety			
Not at all safe/somewhat safe	16.74%		
Reasonably safe	28.50%		
Very safe	54.75%		
SMSA residence			
Not in SMSA	13.06%		
SMSA, not central city	65.28%		
SMSA, central city	21.66%		
Macrosystem			
Religious involvement			
Not important at all	9.29%		
Fairly important	7.66%		
Fairly unimportant	33.97%		
Very important	49.08%		
Lack of school rules			
Not at all true	50.01%		
Not too true	31.23%		
Somewhat true	11.84%		
Very true	6.93%		

Note: Percentages for some variables do not add up to 100% due to rounding error.

Multivariate Results

Peer Externalizing Behavior

Direct effects. Results of the hierarchical logistic regression analysis for the direct effects of peer externalizing behavior at Time 2 are presented in Table 2. The results for Model 1, which consisted of only the socio-demographic characteristics including peer externalizing behavior at Time 1, indicate that youth's learning problems and peer externalizing behavior at Time 1 are statistically significantly related to peer externalizing behavior at Time 2. As indicated by the odds ratio, youth with learning problems had more than 3 times the risk of displaying peer externalizing behavior two years later than youth with no learning problems (OR = 3.22, $p < .01$). Youth who displayed peer externalizing behavior at Time 1 were 7.92 times more likely to exhibit peer externalizing behavior at Time 2 (OR = 7.92; $p < .001$) than those without peer externalizing behavior at Time 1.

The microsystem level variables—parenting, negative peer influence, and school environment—were included in Model 2, resulting in a significant improvement of fit over Model 1 (change in $-2 \log$ likelihood = 12.43, $df = 5$, $p < .05$). Results indicate that both learning problems and peer externalizing behavior at Time 1 remain statistically significant. In addition, only one school environment variable is associated with peer externalizing behavior at Time 2. Youth who felt that it was easier to make friends at their school were less likely to exhibit peer externalizing behavior (OR = -.45; $p < .01$).

In Model 3, the exosystem level variables, which consisted of variables measuring the neighborhood environment, were added to Model 2 (change in $-2 \log$ likelihood = 11.17, $df = 3$, $p < .01$). Although learning problems and peer externalizing behavior at Time 1 remain statistically significant, ease of making friends is now marginally significant (OR = .70; $p < .10$).

All of the exosystem variables, including neighborhood safety ($OR = .73; p < .01$); residence not in a SMSA ($OR = 2.64; p < .01$) and in a SMSA, not central city ($OR = 1.95; p < .01$), compared with residence in a SMSA, central city, are associated with Time 2 peer externalizing behavior. In other words, compared with youth living in a SMSA, central city, youth not residing in a SMSA were more than two times as likely, and those residing in a SMSA, not central city, were almost two times more likely to exhibit peer externalizing behavior two years later.

In Model 4, the macrosystem level variables, which include religious involvement and lack of school rules, were placed in the previous model. Learning problems, peer externalizing behavior at Time 1, and the neighborhood environment variables remain statistically significant. Religious involvement is not significant, although lack of school rules is marginally significant.

In summary, the results of the final hierarchical logistic model reveal that learning problems, peer externalizing behavior at Time 1, and all of the neighborhood environment variables are significantly related to peer externalizing behavior at Time 2. Youth with learning problems, those who displayed peer externalizing behavior at Time 1, and those not residing in a SMSA or a SMSA, not central city, compared to residing in a SMSA, in central city, were at risk of exhibiting peer externalizing behavior. On the contrary, those who perceived their neighborhood environments as safe were less likely to experience peer externalizing behavior two years later.

Table 2. Hierarchical logistic regression of peer externalizing behavior (N = 733)

Variable	Model 1		Model 2		Model 3		Model 4	
	B(SE)	Exp(B) OR	B(SE)	Exp(B) OR	B(SE)	Exp(B) OR	B(SE)	Exp(B) OR
Socio-demographic characteristics								
Age	.00(.02)	1.00	.00(.02)	1.00	.00(.02)	1.00	.01(.02)	1.01
Race/ethnicity (white)								
Hispanic	-.43(.35)	.65	-.48(.37)	.62	-.33(.38)	.72	-.32(.38)	.73
Black	.25(.28)	1.28	.20 (.30)	1.22	.39(.32)	1.48	.40(.33)	1.49
Gender (female)								
Male	.05(.24)	1.05	.11(.24)	1.12	.15(.25)	1.16	.20(.25)	1.22
Learning problems	1.17**(.39)	3.22	.97**(.41)	2.64	1.01**(.25)	2.75	.96**(.42)	2.61
Mothers' marital status (married, spouse present)								
Never married	.19(.44)	1.21	-.03(.46)	.97	-.15(.48)	.86	-.12(.48)	.89
Other	.01(.31)	1.01	-.14(.34)	.87	-.12(.35)	.89	-.10(.35)	.90
Mothers' educational status (less than high school)								
High school	-.37(.38)	.69	-.24(.39)	.79	-.37(.40)	.69	-.46(.41)	.63
More than high school	-.60(.38)	.55	-.41(.40)	.66	-.44(.41)	.64	-.50(.42)	.61
Poverty status	.07(.39)	1.07	-.05(.39)	.95	.05(.40)	1.05	.13(.40)	1.14
Peer externalizing (time 1)	2.07***(.23)	7.92	1.96***(.24)	7.10	2.05***(.25)	7.77	2.05***(.40)	7.77
Microsystem								
Parenting (HOME scale)								
Cognitive stimulation			-.00(.01)	1.00	-.00(.01)	1.00	-.00(.01)	1.00
Emotional support			-.01(.01)	.99	-.01(.01)	.99	-.01(.01)	.99
Negative peer influence			.12(.20)	1.13	.03(.21)	1.03	.11(.22)	1.12
School environment								
Teacher involvement			-.01(.16)	1.00	.01(.17)	1.01	-.00(.16)	1.00
Ease of making friends			-.45**(.18)	.64	-.35†(.19)	.70	-.34†(.19)	.71
Exosystem								
Neighborhood environment								
Neighborhood safety					-.31**(.14)	.73	-.33**(.14)	.72
SMSA residence (in SMSA, central city)								
Not in SMSA					.97**(.42)	2.64	.88**(.43)	2.41
SMSA, not central city					.67**(.30)	1.95	.68**(.31)	1.97

Table 2 (cont.)

Variables	Model 1		Model 2		Model 3		Model 4	
	<i>B</i> (<i>SE</i>)	Exp(<i>B</i>) OR	<i>B</i> (<i>SE</i>)	Exp(<i>B</i>) OR	<i>B</i> (<i>SE</i>)	Exp(<i>B</i>) OR	<i>B</i> (<i>SE</i>)	Exp(<i>B</i>) OR
Macrosystem								
Religious involvement							.68(.31)	1.97
Lack of school rules							-.10†(.15)	.90
-2 LL	511.55		499.12		487.95		483.45	
<i>df</i>	11		16		19		21	

Reference categories are denoted in parentheses

SE = standard error, *OR* = odds ratios, *SMSA* = standard metropolitan statistical area, LL = log likelihood. -2LL was averaged for the five implicates for each model.

For Model 2, change in -2LL = 12.43, *df* = 5, $p < .03$; for Model 3, change in -2 LL = 11.17, *df* = 3, $p < .01$; and for Model 4, change in -2LL = 4.5, *df* = 2, $p < .11$

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Moderating effects. The second hypothesis examined whether the factors that predict peer externalizing behaviors vary by race/ethnicity. When the interaction terms between race/ethnicity and cognitive stimulation, emotional support, and teacher involvement were entered separately into the peer externalizing behavior Model 4, none of the interactions are statistically significant.

The final hypothesis explored whether teacher involvement and ease of making friends moderate the association between learning problems and peer externalizing behaviors. Results indicate that none of the moderators are statistically significant for the peer externalizing behavior model (see APPENDIX A, Table 7).

Mediation. As previously mentioned, I hypothesized that negative peer influence will mediate the effects of poverty on peer externalizing behavior. However, because there is no direct effect of poverty on peer externalizing behavior, which must be established first (Baron & Kenny, 1986), no further testing of mediation was conducted.

School Externalizing Behavior

Direct effects. Results of the hierarchical logistic regression analysis for school externalizing behavior at Time 2 are presented in Table 3. The results for Model 1, which consisted of the socio-demographic characteristics, including school externalizing behavior at Time 1, indicate that males were more than two times more likely than females to display school externalizing behavior (OR = 2.36; $p < .01$). As expected, school externalizing behavior at Time 1 is significantly related to school externalizing behavior at Time 2. Youth who displayed school externalizing behavior at Time 1 were 11.24 times more likely to display school externalizing behavior two years later.

The microsystem level variables were entered into Model 2 (change in $-2 \log$ likelihood 15.24, $df = 5$, $p < .01$). Results indicate that Hispanic youth were more likely than whites to display school externalizing behavior, although the coefficient is only marginally significant ($\beta = -.66$; $p < .10$). Male gender and school externalizing behavior at Time 1 remain significant in Model 2. Cognitive stimulation (OR = .98; $p < .01$) and negative peer influence (OR = 1.58; $p < .01$) are also significantly associated with school externalizing behavior two years later. Youth with negative peer influences were at an increased risk of exhibiting school externalizing behavior. On the other hand, youth who received cognitive stimulation at home were less likely to exhibiting school externalizing behavior. However, the odds ratio for cognitive stimulation indicates little practical significance.

When the exosystem level variables were entered into Model 3, male gender, school externalizing behavior at Time 1, cognitive stimulation, and negative peer influence remain significant. However, none of the neighborhood environment variables are significant.

In Model 4, when the macrosystem level variables--religious involvement and lack of school rules--were entered into the previous model, male gender, school externalizing behavior at Time 1, cognitive stimulation, and negative peer influence remain statistically significant. However, neither religious involvement nor lack of school rules is statistically significant.

In summary, in the final model, male gender, school externalizing behavior at Time 1, cognitive stimulation, and negative peer influence are related to school externalizing behavior at Time 2. Male youth and those who exhibited school externalizing behavior at Time 1 had more negative peer influences were at increased risk of displaying school externalizing behavior two years later, while youth who experienced more cognitive stimulation at home had a decreased risk of displaying such behavior.

Table 3. Hierarchical logistic regression of school externalizing behavior (N = 733)

Variable	Model 1		Model 2		Model 3		Model 4	
	B(SE)	Exp(B) OR	B(SE)	Exp(B) OR	B(SE)	Exp(B) OR	B(SE)	Exp(B) OR
Socio-demographic characteristics								
Age	.03(.02)	1.03	.02(.15)	1.02	.02(.02)	1.02	.03(.02)	1.03
Race/ethnicity (white)								
Hispanic	-.33(.33)	.72	-.66†(.36)	.72	-.56(.36)	.57	-.57(.37)	.57
Black	.49†(.27)	1.63	.24(.29)	1.27	.37(.30)	1.45	.32(.31)	1.38
Gender (female)								
Male	.86**(.24)	2.36	.79**(.25)	2.20	.77**(.25)	2.16	.81**(.25)	2.25
Learning problems	.18(.44)	1.20	.00(.46)	1.00	.03(.46)	1.03	-.04(.47)	.96
Mothers' marital status (married, spouse present)								
Never married	.04(.41)	1.04	-.10(.45)	.90	-.06(.46)	.94	.03(.46)	1.03
Other	.38(.28)	1.46	.32(.31)	1.38	.36(.32)	1.43	.41(.32)	1.51
Mothers' educational status (less than high school)								
High school	.01(.38)	1.01	.03(.38)	1.03	-.08(.39)	.92	-.13(.39)	.88
More than high school	-.13(.37)	.88	.06(.39)	1.60	.01(.40)	1.01	-.03(.40)	.97
Poverty status	.14(.36)	1.15	-.00(.37)	1.00	.03(.37)	1.03	.07(.38)	1.07
School externalizing (Time 1)	2.42***(.24)	11.24	2.58***(.26)	13.20	2.62***(.27)	13.74	2.63***(.27)	13.87
Microsystem								
Parenting (HOME scale)								
Cognitive stimulation			-.02**(.01)	.98	-.02**(.01)	.98	-.02**(.01)	.98
Emotional support			.00(.01)	1.00	.00(.01)	1.00	.01(.01)	1.01
Negative peer influence			.46**(.21)	1.58	.44**(.21)	1.55	.49**(.22)	1.63
School environment								
Teacher involvement			.07(.15)	1.07	.08(.15)	1.08	.05(.15)	1.05
Ease of making friends			.22(.19)	1.25	.25(.19)	1.28	.25(.19)	1.28
Exosystem								
Neighborhood environment								
Neighborhood safety					-.04(.14)	.96	-.05(.14)	.95
SMSA residence (in SMSA, central city)								
Not in SMSA					.56(.41)	1.75	.53(.41)	1.70
SMSA, not central city					.47(.29)	1.60	.49†(.29)	1.63

Table 3 (cont.)

Variable	Model 1		Model 2		Model 3		Model 4	
	<i>B</i> (<i>SE</i>)	Exp(<i>B</i>) OR	<i>B</i> (<i>SE</i>)	Exp(<i>B</i>) OR	<i>B</i> (<i>SE</i>)	Exp(<i>B</i>) OR	<i>B</i> (<i>SE</i>)	Exp(<i>B</i>) OR
Macrosystem								
Religious involvement							.06(.14)	1.06
Lack of school rules							-.19(.14)	.83
-2 LL	540.38		525.14		521.76		518.89	
<i>df</i>	11		16		19		21	

Reference categories are in parentheses

SE = standard error, *OR* = odds ratios, *SMSA* = standard metropolitan statistical area, *LL* = log likelihood. -2LL was averaged for the five implicates for each model.

For Model 2, change in -2LL = 15.24, *df* = 5, $p < .01$; for Model 3, change in -2LL = 3.38, *df* = 3, $p < .34$; and for Model 4, change in -2LL = 2.87, *df* = 2, $p < .24$
 $\dagger p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Moderating effects. Similar to peer externalizing behavior, I investigated whether three predictors of school externalizing behavior vary by race/ethnicity. When the interaction terms between race/ethnicity and cognitive stimulation, emotional support, and teacher involvement were entered separately into Model 4 predicting school externalizing behavior, only the interaction between cognitive stimulation and Hispanic (OR = 1.05; $p < .05$) is statistically significant (change in $-2 \log$ likelihood = 6.43, $df = 2$, n.s.). In other words, as Hispanic youth received more cognitive stimulation at home, they were 1.05 times more likely to display school externalizing behavior. However, the change in $-2 \log$ likelihood is not statistically significant. In addition, the odds ratio is close to 1, indicating that this finding has little practical significance (see Table 4).

The interaction between ease of making friends and learning problems is significant when placed into Model 4 (OR = .23; $p < .05$). In addition, the model fit significantly improved after adding this interaction (change in $-2 \log$ likelihood = 6.03, $df = 2$, $p < .05$). The result indicates that youth with learning problems who believed more strongly that it was easy to make friends in their schools were less likely to display school externalizing behavior. The interaction between teacher involvement and learning problems, on the other hand, was not statistically significant when placed into Model 4.

Table 4. Moderators for school externalizing behavior (N = 733)

Variable	Model 5		Model 6		Model 7	
	B(SE)	Exp(B) OR	B(SE)	Exp(B) OR	B(SE)	Exp(B) OR
Socio-demographic characteristics						
Age	.03(.02)	1.03	.03†(.02)	1.03	.03†(.02)	1.03
Race/ethnicity (White)						
Hispanic	-.56(1.31)	.57	-.31(.37)	.73	-.56(.37)	.57
Black	.94(.97)	2.56	.28(.32)	1.32	.33(.31)	1.39
Gender (female)						
Male	.83***(.25)	2.29	.83***(.26)	2.29	.79***(.00)	2.20
Learning problems	-.03(.47)	.97	-.06(.48)	.94	.47(1.98)	1.60
Mothers' marital status (married, spouse present)						
Never married	.05(.47)	1.05	-.05(.47)	.95	.01(.47)	1.01
Other	.42(.32)	1.52	.36(.33)	1.43	.44(.32)	1.55
Mothers' educational status (less than high school)						
High school	-.11(.77)	.90	-.23(.39)	.79	-.09(.39)	.91
More than high school	-.03(.93)	.97	-.08(.40)	.92	.01(.98)	1.01
Poverty status	.05(.38)	1.05	.10(.39)	1.11	-.06(.39)	.94
School externalizing (Time 1)	2.63***(.27)	13.87	2.71***(.27)	15.03	2.68***(.27)	14.59
Microsystem						
Parenting (HOME scale)						
Cognitive stimulation	-.02**(.01)	.98	-.04**(.01)	.96	-.03**(.01)	.97
Emotional support	.00(.01)	1.00	.01(.28)	1.01	.00(.01)	1.00
Negative peer influence	.50*(.22)	1.65	.49(.03)	1.63	.52*(.22)	1.68
School environment						
Teacher involvement	.12(.20)	1.13	.06(.15)	1.06	.01(.96)	1.01
Ease of making friends	.24(.21)	1.27	.25(.19)	1.28	.37†(.07)	1.45
Exosystem						
Neighborhood environment						
Neighborhood safety	-.04(.76)	.96	-.05(.15)	.95	-.03(.14)	.97
SMSA residence (in SMSA, central city)						
Not in SMSA	.52(.22)	1.68	.46(.42)	1.58	.55(.42)	1.73
SMSA, not central city	.49†(.09)	1.63	.51†(.29)	1.67	.51†(.29)	1.67

Table 4 (cont.)

Variable	Model 5		Model 6		Model 7	
	<i>B</i> (<i>SE</i>)	Exp(<i>B</i>) OR	<i>B</i> (<i>SE</i>)	Exp(<i>B</i>) OR	<i>B</i> (<i>SE</i>)	Exp(<i>B</i>) OR
Macrosystem						
Religious involvement	.07(.14)	1.07	.05(.14)	1.05	.08(.14)	1.08
Lack of school rules	-.19(.14)	.83	-.21(.14)	.81	-.22(.14)	.80
Interaction by race/ethnicity						
Teacher involvement × Black	-.19(.29)	.83				
Teacher involvement × Hispanic	-.00(.38)	1.00				
Cognitive stimulation × Black			.02(.02)	1.02		
Cognitive stimulation × Hispanic			.05*(.02)	1.05		
Emotional support × Black			-.02(.02)	.98		
Emotional support × Hispanic			-.02(.03)	.98		
Moderators						
Teacher involvement × Learning problems					.83(.57)	2.29
Ease of making friends × Learning problems					-1.45*(.62)	.23
-2 LL	518.15		512.46		512.86	
<i>df</i>	23		25		23	

Reference categories are in parentheses

SE = standard error, *OR* = odds ratios, *SMSA* = standard metropolitan statistical area, LL = log likelihood. -2LL was averaged for the five implicates for each model.

For Model 5, change in -2LL = .74, *df* = 2 (ns); for Model 6, change in -2LL = 6.43, *df* = 4 (ns); and for Model 7, change in -2LL = 6.03, *df* = 2, *p* < .05

†*p* < .10; **p* < .05; ** *p* < .01; ****p* < .001

To further examine the finding that ease of making friends buffers the effect of having learning problems on school externalizing behavior, I divided the sample into high and low “ease of making friends.” I placed “very true” into the “high ease” group, and “not too true,” “not at all true,” and “somewhat true” into the “low ease group.” I then regressed the school externalizing behavior on the variables in Model 4 in each subgroup. Results indicate that neither of the odds ratios is statistically significant. However, the odds ratio indicates that youth with learning problems were .50 times as likely to display school externalizing behavior when they perceived a greater ease of making friends in their schools. In contrast, youth with learning problems were 1.70 times more likely to exhibit school externalizing behavior when they perceived that it was less easy to make friends in their schools (see Table 5).

Table 5. Results for logistic regression model of the effects of having learning problems on Time 2 school externalizing behavior by ease of making friends subgroup

Variable	Ease of Making Friends Subgroup (n = 41)			
	High (n = 20)		Low (n = 21)	
	<i>B</i> (SE)	Exp(<i>B</i>) OR	<i>B</i> (SE)	Exp(<i>B</i>) OR
Learning Problems	-.69(.72)	.50	.53(.66)	1.70

In order to determine whether the results were sensitive to the way the ease of making friends subgroups were categorized, I also included “somewhat true” into the high ease group, and “not too true” and “not at all true” into the low ease group. The odds ratio (OR = .48) for the high ease group is similar to the previous result (see Table 6). Also consistent with the previous result, the odds ratio (OR = 59.15, $p < .05$) for the low ease group indicates that youth with learning problems who felt that it was less easy to make friends in their schools had an increased risk of displaying school externalizing behavior. However, the odds ratio in this model is statistically significant and exceptionally high. I should note that because the sample size of the youth with learning problems who were categorized into the low ease group is small (n = 12), it is likely that these were unusual or outlying experiences that produced the high odds ratio. Bias

due to small numbers can easily inflate the magnitude of odds ratio (OR) estimates, even in the absence of confounding, selection bias, or measurement error (see Greenland, Schwartzbaum, & Finkle, 2000). In sum, the results suggest that when it is easier to make friends at school, youth with learning problems have a lower risk of displaying school externalizing behavior.

Table 6. Results for logistic regression model of the effects of having learning problems on Time 2 school externalizing behavior by ease of making friends subgroup

Variable	Ease of Making Friends Subgroup (n = 41)			
	High (n = 29)		Low (n = 12)	
	B(SE)	Exp(B) OR	B(SE)	Exp(B) OR
Learning Problems	-.74(.48)	.48	4.08*(.59)	59.15

Mediation. I also hypothesized that neighborhood safety will mediate the effects of poverty on school externalizing behavior. Because no statistically significant relationship between poverty and school externalizing behavior was found, no further tests for mediation were conducted.

Summary of Results

With regards to the first hypothesis, which investigated whether certain socio-demographic characteristics, including peer and school externalizing behaviors at Time 1, will increase the risk of peer and school externalizing behaviors at Time 2, I found that learning problems and peer externalizing behavior at Time 1 increased the risk of peer externalizing behavior two years later. In addition to the Time 1 measure of externalizing school behavior, males had an increased risk of exhibiting this behavior at Time 2. In all of the subsequent models for both types of behavior, the Time 1 measures remain statistically significant, indicating the importance of exhibiting these behaviors earlier in a youth's life. When the microsystem level factors were included in Model 2 predicting peer externalizing behavior, learning problems remain significant, and ease of making friends decreased the odds of

displaying such behavior two years later. For school externalizing behavior at Time 2, male gender remains significant; for the microsystem level factors, cognitive stimulation decreases this behavior, although there were little practical significance as the odds ratio is .98, while negative peer influence increases school externalizing behavior. In the peer externalizing model, when the exosystem level variables were entered in Model 3, learning problems remains significant, while ease of making friends is only marginally significant. However, even though the residence variables are related to the outcome in an unexpected direction, all of the exosystem level variables are significantly associated with peer externalizing behavior at Time 2. For the school externalizing behavior at Time 2, the variables in Model 1 and 2 remain significant, although none of the exosystem level variables are significant. When the macrosystem level variables were included in Model 4, learning problems and the exosystem variables remain significant, while none of the macrosystem level variables predict peer externalizing behavior at Time 2. For school externalizing behavior at Time 2, male gender and cognitive stimulation and negative peer influence remain significant. However, the exosystem and macrosystem variables do not predict school externalizing behavior two years later.

With regards to the moderators, positive teacher-student relationships and positive parenting did not reduce peer externalizing behavior more for Black and Hispanic youth than for White youth. Although cognitive stimulation surprisingly increased school externalizing behavior more for Hispanic youth than for white youth, adding these race/ethnic and microsystem level interaction terms into the model did not improve its fit over the previous model, and the odds ratio indicated that this finding had little practical significance. With regards to whether teacher involvement and ease of making friends moderate the effects of having learning problems on exhibiting peer and school externalizing behaviors, I found that ease of making

friends buffers the effect of learning problems on school externalizing behavior. This finding was confirmed in the subgroup analyses.

Although I hypothesized that negative peer influence and neighborhood safety will mediate the effects of poverty status on peer and school externalizing behaviors, there is no direct effect of poverty on either peer or school externalizing behavior. Thus, no further testing of mediation was conducted.

CHAPTER 5

DISCUSSION

This chapter presents and discusses the main descriptive and multivariate findings of the current study and compares them with past research, which is followed by a discussion of the limitations of the study. I then discuss implications for social work practice and policy, and provide suggestions for future research.

Main Findings

Using a nationally representative sample of early adolescents, the main purpose of this study was to identify ecological level factors that place youth at risk of displaying peer and school externalizing behaviors.

Descriptive Results

This section reports and discusses selective findings from the univariate analysis related to youth's peer and school externalizing behaviors and the school and neighborhood environments in which they live and interact with others. In this study, approximately 15% of youth 12 through 14 years of age exhibit peer externalizing behavior (bullies or is cruel/mean to other children; has trouble getting along with other children), and almost 19% display school externalizing behavior (disobedient at school; trouble getting along with teachers) to some degree, as reported by the mothers. Although these results suggest that exhibiting peer- and school-related externalizing behaviors is not a rare occurrence, school officials' reports of youth's bullying behavior and peer-related problems appear to be even higher than these mothers' reports. To illustrate, the most recent nationwide survey conducted by the Bureau of Justice, which sampled school officials in school districts nationwide, found that 23% of youth were involved in bullying (Robers, Zhang, & Truman, 2011). Likewise, the Bureau of Justice

report also indicated that 34% of teachers reported students' school misbehavior (Robers et al., 2011). These findings, which are higher than mothers' reports of youth's peer and school externalizing behaviors in the current study, are not surprising, given that school officials have more opportunities than mothers to observe students' peer interactions and school behaviors (Espelage & Swearer, 2003). These previous findings also suggest that the percentage of youth exhibiting peer and school externalizing behaviors found in the current study likely underestimate these problems.

The current descriptive results suggest that as youth grow older (from ages 10-12 to ages 12-14), they are less vulnerable to having negative interactions with peers (19% exhibit such behaviors at Time 1, and 15% two years later), but more likely to be disobedient in school or have negative interactions with their teachers (17% exhibit such behaviors at Time 1, and 19% two years later). Although studies have shown that negative peer interactions increase with age, as students in middle school are exposed to new social conditions (e.g., formation of peer cliques) that can lead to peer externalizing behaviors (Ray & Cohen; Sims, Hutchins, & Taylor, 1997), their social and cognitive skills also increase (Crick & Dodge, 1994). Increased social-cognitive abilities can lead to a lower likelihood of engaging in peer externalizing behavior (Smith, Madsen, & Moody, 1999). However, the finding of an increase in school externalizing behavior between the two time periods is consistent with previous research (e.g., Maggs, Almeida, & Galambos, 1995), and a limited number of studies suggest that as students grow older, they resist authority by displaying disruptive and defiant behaviors (e.g., Walker, Ramsey, & Gresham, 2003-2004).

In the current study, the majority of the youth (90.47%) reported experiencing no peer pressure to try cigarettes, alcohol, marijuana/other drugs, skip school, or commit crime/violence.

However, approximately 10% of youth are exposed to some type of negative peer influence to engage in unhealthy or illegal behavior. Peer influence can play a major role in youth behavioral development, particularly among early adolescents (Espelage, Bosworth, & Simon, 2000), and the current findings suggest that many youth are at risk of experiencing negative peer influences that can have a detrimental impact on their well-being.

Within the school setting, more than one-half of the youth responded “very true” when asked whether their teachers assisted them with personal problems (53.72%) and whether they felt that it was easy to make friends at their schools (56.86%). Although these results suggest that the majority of youth perceive their interactions with teachers and peers within their schools in a positive way, a notable percentage of youth reported “not at all true/not too true” that teachers assisted them with personal problems (14.32%) and they felt it was easy to make friends in school (9.77%). These results suggest that many youth perceive that their teachers are uninvolved in their personal lives, and they have difficulty in making friends at their schools. Despite the benefits that may result from teachers’ involvement with their students (e.g., Baker, Grant, & Morlock; Gregory & Ripski, 2008), other research supports students’ perceptions of a minimal involvement in their problems, particularly in bullying situations (Pepler, Craig, Ziegler, & Charach, 1994; Stephenson & Smith, 1999). Some early adolescents may have some difficulty in making friends at their schools, because of larger structures of peer groups and major changes in the school environment during this developmental period. Early adolescents normally interact with unfamiliar peers because of different classmates in each of their classes (Bukowski, Sippola, & Newcomb, 2000), which can make establishing close friendships more difficult.

At the neighborhood level, slightly over half of the youth reported feeling “very safe” (54.75%) walking and playing in their neighborhood, while the remaining youth perceived some

neighborhood safety issues. An earlier study using a nationwide survey also reported that between 25% and 42% of 2,023 public, private, and parochial school students in middle and high schools reported feeling unsafe in their neighborhoods, schools, and on their way to and from school (Bowen and Bowen, 1999), indicating that such fears are not uncommon.

Finally at the macro-level, when asked whether they felt they could easily get away with almost anything at their school, about half of the youth responded “not at all true,” followed by “not too true” (31.23%), “somewhat true” (11.84%), and “very true” (6.93%). Interestingly, a recent study conducted with teachers indicates that 72% of teachers surveyed nationwide agreed or strongly agreed that school rules were enforced by other teachers at their school, and 89% reported that school rules were enforced by the principal (Robers, Zhang, & Truman, 2011). Although the studies were conducted on different samples, the findings suggest that students’ and teachers’ perceptions of school rule enforcement might vary and that regardless of the reporter, school rules are not always enforced.

Multivariate Results of Peer Externalizing Behavior – Direct Effects

This section discusses the multivariate results of the socio-demographic characteristics, microsystem, exosystem, and macrosystem variables that were hypothesized to be associated with Time 2 peer externalizing behavior. I hypothesized that certain socio-demographic characteristics (e.g., learning problems, poverty, and peer externalizing behavior at Time 1); microsystem (e.g., positive parenting, teacher involvement, ease of making friends, and negative peer influence); exosystem (neighborhood safety and central city residence); and macrosystem level factors (e.g., religious involvement and lack of school rules) would be associated with peer externalizing behavior at Time 2.

Consistent with my hypothesis, I found that learning problems (OR = 2.61) and peer externalizing behavior at Time 1 (OR = 7.77) are significantly related to peer externalizing behavior at Time 2. This former finding is consistent with past research, which indicates that youth with learning problems have an increased risk of displaying bullying and experiencing peer conflicts (e.g., Kaukiainen et al., 2002). As discussed in Chapter 2, children with learning problems are more likely than children without such problems to have poor social skills (e.g., Kavale & Forness, 1995) and impulsive behavioral tendencies (Whitney et al., 1994), which heightens their risk of involvement in bullying and peer conflicts. Additionally, youth who previously displayed peer externalizing behavior have more than 7 times the odds of exhibiting such behavior two years later. Past longitudinal research has consistently reported that children who exhibit externalizing behavior at an early age are at later risk of displaying these behaviors (e.g., Campbell, Shaw, & Gilliom, 2000; Richman, Stevenson, & Graham, 1982). Children who frequently display externalizing behavior earlier also are likely to continue having these problems at school, if they receive no treatment (Campbell et al., 2000).

Contrary to my hypothesis, poverty is not associated with peer externalizing behavior at Time 2, which is also inconsistent with previous research (e.g., Civita, Pagani, Vitaro, & Trembaly, 2007). One possible explanation is that only a one-year measure of poverty was used in the current study, which might not adequately detect economic difficulties.

I also hypothesized that the microsystem level factors--positive parenting, teacher involvement, and ease of making friends--will decrease the risk of peer externalizing behavior at Time 2, while negative peer influence will increase the risk of this behavior. Contrary to my hypotheses and previous study findings (e.g., Glew et al., 2005), this study found no evidence that parenting practices, negative peer influence, teacher involvement, and ease of making

friends influence youths' peer externalizing behavior. One possible explanation for these inconsistencies is that peer externalizing behavior was measured using mothers' reports on only two questions rather than direct observation, normed scales, or reports from peers and teachers, which may have resulted in unmeasured biases. Moreover, early adolescence is a developmental period in which youth rely less on their caregivers and more on their peers for emotional support (Ayyash-Abdo, 2002), which might account for the lack of association between maternal cognitive stimulation and emotional support and peer externalizing behavior. Interestingly in the second model, I found that youth who felt that it was easy to make friends at their school (OR = .64) were less likely to exhibit peer externalizing behavior at Time 2. Although this variable is no longer significant when the exosystem and macrosystems variables were entered into the subsequent models, the statistical significance of ease of making friends is consistent with a limited number of studies that examined the influence of friendships. For instance, Hartup (1992) reported that friendships can result in better social adjustment and a lower likelihood of exhibiting externalizing behaviors. Friendships can assist youth as they make a transition from elementary to middle school. As previously mentioned, these youth are typically exposed to a new environment, consisting of larger classrooms and school size, making transitions stressful (Bukowski, Sippola, & Newcomb, 2000).

All of the neighborhood environment variables at the exosystem level are associated with peer externalizing behavior at Time 2. Consistent with my hypothesis, youth who feel safer in their neighborhoods (OR = .72) are at lower risk of exhibiting externalizing behavior. Although research on the relation between neighborhood factors and peer externalizing behavior is relatively scant, this finding is consistent with other study findings (e.g., Espelage, Bosworth, & Simon, 2000; Khury-Kassabri, Benbenishty, Astor, & Zeira, 2004; Winke Totura et al., 2008).

The current finding can be explained by a social disorganization perspective, which purports that residential instability in a neighborhood can lead to a decrease in residents' ability to exert social control and prevent delinquent and criminal behaviors (Sampson, 2012). Contrary to my hypotheses, the results of the current study found that youth living in areas other than in a central city, such as not in a SMSA (OR = 2.41) and in a SMSA, not central city (OR = 1.97) are more likely than those living in a central city to display peer externalizing behavior two years later. This finding might be the result of mothers living in central cities reporting fewer children's behavioral problems than mothers in other areas because they may be unaware of their youth's behaviors. Youth attending schools located in a central city, which is characterized as having high concentrations of low-income students, are less likely to have parents who are involved in the home and school than youth from schools located in other areas (e.g., National Center for Educational Statistics, 1996). Parents in high poverty neighborhoods experience stressors, which can disrupt effective parenting and undermine their involvement in their children's socio-emotional development. Consequently, these parents might not be fully aware of their children's behavior and interactions with their friends and peers. Further, parents residing in poor neighborhoods may have different standards for judging their youth's behaviors. Parents might be reluctant to recognize externalizing behaviors (e.g., aggression) if they reside in neighborhoods where exposure to such behavior is high, and such behavior is perceived as adaptive.

Contrary to my hypothesis, religious involvement is not significantly associated with peer externalizing behavior at Time 2, despite research supporting this association (e.g., Abbotts, Williams, Sweeting, & West, 2004; Ellison, Bartkowski, & Segal, 1996; Petts, 2009). In the current study, youth's religious involvement was measured based on mothers' perceptions,

which might not have accurately reflected the importance of religious involvement to the youth. Likewise, lack of school rules is not statistically significant (although it is marginally significant), which might be attributed to the one item measure that asked youth whether it was easy to get away with anything at their schools. As observed by Thornberg (2007), school rule systems are complex and inconsistent, and understanding the relation between school rule enforcement (or lack thereof) and youth behavior necessitates multiple measures that consider the complexity and inconsistencies of school rule enforcement.

Multivariate Results of School Externalizing Behavior – Direct Effects

This section discusses the multivariate results of the socio-demographic characteristics, microsystem, exosystem, and macrosystem variables related to school externalizing behavior at Time 2. Similar hypotheses as discussed in the previous section were made for the relationships between the socio-demographic characteristics and the systems level factors and school externalizing behavior.

In terms of the socio-demographic variables, both male gender and school externalizing behavior at Time 1 are related to school externalizing behavior at Time 2, of which the latter is consistent with my hypothesis. Males have more than two times the odds ($OR = 2.36$) of displaying school externalizing behavior at Time 2 than females, a finding that is consistent with other studies indicating that boys are more likely to display externalizing behavior in school (e.g., Bradshaw, Schaeffer, Petras, & Ialongo, 2010) and display “acting out” behaviors more than girls (Scaramella, Conger, & Simons, 1999). These findings are also consistent with gender role socialization theory, which purports that boys are more likely than girls to be socialized into using aggressive tactics, particularly during conflicts (Perry, Perry, & Weiss, 1989). Likewise, youth who exhibited school externalizing behavior at Time 1 are also at risk of exhibiting school

externalizing behavior at Time 2. Similar to peer externalizing behavior, there is a strong association between the Time 1 measure of school externalizing behavior (OR = 13.87) and the measure two years later. As previously discussed, if early externalizing behavior is left untreated, children are at greater risk of later exhibiting such behavior in school (Campbell et al., 2000).

Unlike peer externalizing behavior at Time 2, in which none of the microsystem variables are associated with this behavior, two microsystem variables—cognitive stimulation and negative peer influence—are statistically significantly related to school externalizing behavior two years later. Consistent with my hypothesis, early adolescents who receive cognitive stimulation from their mothers at home (OR = .98) are less likely to display school externalizing behavior at Time 2. Although the odds ratio indicates little practical significance, this finding is consistent with previous studies indicating that cognitive stimulation enhances youth's behavioral development outside the home such as in the school (e.g., Moss et al., 1998). An earlier study by Dodge, Pettit, and Bates (1994) found in a sample of low-income children that those who received less cognitive stimulation in their home environment displayed a greater frequency of teacher-reported externalizing behavior in school and peer-reported aggressive behavior. On the contrary, youth who are cognitively stimulated at home might be academically motivated and perform better in school (Gottfried, Fleming, & Gottfried, 1998), which can subsequently result in less likelihood of exhibiting externalizing behaviors (McEvoy & Welker, 2000). Although cognitive stimulation at home might result in fewer school externalizing behaviors, emotional support is not associated with school externalizing behavior. The lack of such an association might be because early adolescents are likely to rely less on their parents for emotional support (Ayyash-Abdo, 2002), as previously discussed.

Although negative peer influence is not associated with peer externalizing behavior, this study also found that early adolescents who experience a greater number of negative peer influences are at an increased risk of exhibiting school externalizing behavior two years later (OR = 1.63). Even though research has yet to examine the association between negative peer influence and specific types of school externalizing behaviors, such as conflict with teachers, this finding is not surprising, given that youth who are influenced by peers who are involved in deviant and delinquent behaviors are likely to model those behaviors. To illustrate, Eamon and Altshuler (2004) reported from a nationally representative sample that deviant peer pressure and associations had the strongest relationship with disruptive school behavior. The association between negative peer influence and youth behavior also can be explained by the previously mentioned homophily hypothesis in which peer groups typically form based on similarities in behavior (Espelage & Swearer, 2003).

Surprisingly, neither of the school environment variables (teacher involvement and ease of making friends) is significantly related to youth's school externalizing behavior, which is inconsistent with previous studies (e.g., Bowen & Bowen, 1999; Resnick et al., 1997). Research has consistently found that school environments can influence the development and maintenance of behavioral problems (Reinke & Herman, 2002). Similar to peer externalizing behavior, school externalizing behavior was measured using mothers' reports on only two items rather than other measures (e.g., direct observation, normed scales, or peer and teacher reports), which might have resulted in the failure to find the expected relationships. Further, school-related items in the current study, such as teacher involvement and ease of making friends at school might not have adequately measured school environment. Previous studies examining school environment have included relevant measures such as school danger (e.g., Bowen & Bowen, 1999).

Although the neighborhood environment variables, including neighborhood safety and place of residence, are statistically significantly related to peer externalizing behavior at Time 2, they are not associated with school externalizing behavior, which is contrary to previous research findings (e.g., Bowen, Bowen, & Ware, 2002). Similar to the school environment, the neighborhood environment used in past studies encompasses various measures, such as neighborhood quality and danger (Bowen & Bowen, 1999; Grogan-Kaylor, 2005), which were not captured in this study and could have led to the inconsistent findings. On the other hand, neighborhood environment variables in the current study may be related to peer externalizing behavior because certain aspects of the neighborhood (e.g., neighborhood safety and areas of residence) are potential factors in the development and maintenance of aggressive behaviors (Seidman et al., 1998), but not of school behaviors related to obedience and relationships with teachers. Because youth's perceptions of neighborhood safety is associated with their mental health (Aneshensel & Sucoff, 1996), youth who perceive their neighborhood environment as unsafe are likely to display aggressive peer interactions and behaviors (e.g., Fite et al., 2010). In addition, peer externalizing behavior might be reported more frequently among mothers in areas other than the central city because in central cities, aggressive behavior might be commonly perceived as the "norm" (Unnever & Cornell, 2004). Because youth's interactions with their peers also occur in the neighborhood and home, mothers might have more opportunity to witness youth's peer externalizing behaviors than school externalizing behaviors.

Inconsistent with my hypotheses and previous research findings, neither religious involvement nor lack of school rules is related to school externalizing behavior. As previously mentioned, youth's religious involvement was measured based on mothers' perceptions, which may not necessarily be accurate. Likewise, lack of school rules was measured by only one item,

which asked youth whether it was easy to get away with anything at their school. As previously discussed, understanding the relationship between school rule enforcement (or lack thereof) and youth behavior requires multiple measures that consider the complexity and inconsistencies of school rule enforcement (Thornberg, 2007).

Multivariate Results of Peer and School Externalizing Behaviors - Moderators

I hypothesized that positive teacher-student relationships and positive parenting would reduce peer and school externalizing behaviors at Time 2 more for Black and Hispanic youth than for white youth. Likewise, teacher involvement and ease of making friends would buffer the effects of having learning problems on exhibiting peer and school externalizing behaviors two years later.

Inconsistent with my hypotheses, teacher involvement did not reduce peer and school externalizing behaviors at Time 2 more for Black and Hispanic youth than for white youth. This finding is also contrary to prior research, which suggests that teachers perceived as caring can mitigate externalizing behaviors more for Blacks and Hispanics than for white youth (e.g., Murray, Waas, & Murray, 2008). My study also did not find that parents who provide more cognitive stimulation and emotional support to their children reduce peer or school externalizing behavior more for Blacks and Hispanics than for whites. Similar to teacher involvement, positive parenting might not decrease externalizing behaviors among racial and ethnic minority youth because such parenting is insufficient to overcome the more negative school environments that these youth might be exposed to compared with white youth. Unexpectedly, however, I found that Hispanic youth who receive more cognitive stimulation from their parents are more likely to display school externalizing behavior at Time 2, compared with white youth. I should note that the model fit did not improve significantly after adding this interaction, and the odds ratio was

close to 1, which denotes little practical significance. Also, these findings might be due to a lack of cultural validity in the scales used in the study (see Solano-Flores & Nelson-Barber, 2000), and the HOME scale might not be measuring parenting practices that are relevant for Blacks and Hispanics.

Likewise, teacher involvement and ease of making friends did not decrease the effects of having learning problems on exhibiting peer externalizing behavior at Time 2. Possibly, for youth with learning problems, even if they consider their school environment as positive, they might encounter harassment and ridicule from their peers outside the school, which can exacerbate their propensity to engage in externalizing behavior toward their peers. On the other hand, youth with learning problems who felt a greater ease of making friends at their schools are less likely to display school externalizing behavior. Friendship has been shown to be particularly important for youth with learning problems and is a protective factor, which can reduce the risk of engaging in behavioral problems (e.g., Bagwell, Newcomb, & Bukowski, 1998). As studies have shown, friendships can serve many functions, such as informing persons of their value, promoting the exploration and acquisition of new skills, and providing a protective buffer against negative factors (e.g., Bukowski, Hoza, & Boivin, 1994). Friends can also provide the support necessary to attenuate negative behaviors (e.g., bullying; Bollmer, Milich, Harris, & Maras, 2005). Theoretically, friends are an essential part of a child's development, as friendships provide warmth, affection, nurturance, and intimacy (Bollmer et al., 2005). For some youth, such as youth with learning problems, friendships might provide a template for healthy peer relationships, which can help them be attuned to the feelings of others and develop a greater sense of empathy.

Multivariate Results of Peer and School Externalizing Behaviors – Mediators

Finally, I hypothesized that negative peer influence and neighborhood safety would mediate the effects of poverty status on peer and school externalizing behaviors at Time 2. As described in the results section, mediation was not further explored because there was no direct relationship between poverty and peer and school externalizing behaviors.

Limitations

This study is not without limitations. First, the variables measuring peer and school externalizing behaviors were derived from only two items from the BPI and relied on mothers' assessments of these behaviors rather than on or in addition to youths' and teachers' reports. Using more items and items derived from other validated scales could have yielded greater accuracy. The second limitation of this study is also related to the measures of the dependent variables. Because the proportional odds assumption was not met for many of the models when ordinal regression models were estimated, the variables were dichotomized and logistics regression models were estimated. This does not allow for examining the degree of externalizing behavior exhibited by the youth. The third limitation is the absence of mesosystem factors (i.e., interrelations between two microsystems) and chronosystem (i.e., changes over the life course) factors that might be associated with peer and school externalizing behaviors at Time 2. Bronfenbrenner's (1977) ecological systems framework suggests that youth's externalizing behaviors are end results of a complex interplay between the characteristics of the individual within and among the micro-, meso-, exo-, macro-, and chrono-systems. The fourth limitation is that this study did not control for other parent-related factors such as mothers' psychological health and parental or spousal relationships, which also might influence youth externalizing behaviors. Fifth is the issue of generalizability of the findings. The results can only be

generalized to youth of mothers who were between the ages of 14 and 22 when they were first interviewed in 1979, and to youth who reside with their mothers rather than with other adult caregivers. Finally, among the shortcomings of the residualized change models, as indicated by Berger et al. (2009) and consistent with the chronosystem level, is that it does not adjust for factors that might change between the two time periods (e.g., a change in school) that might affect peer and school externalizing behaviors at Time 2.

Implications

As the findings of the current study demonstrate, correlates of peer and school externalizing behaviors among early adolescents are multifaceted, which provide important implications for practice, policy, and research. The findings of the current study also highlight the importance of practitioners (e.g., school counselors, psychologists, and social workers) in considering multiple, contextual factors and in developing and utilizing an ecological assessment to determine the need for prevention or intervention programs that can effectively prevent or reduce peer and school externalizing behaviors.

Practice Implications

As the current study suggests, youth with learning problems and those who previously exhibit peer externalizing behavior are more likely to display peer externalizing behavior two years later. Further, male youth and youth who previously display school externalizing behavior are at a significant risk of exhibiting school externalizing behavior two years later. Moreover, ease of making friends moderates the effects of learning problems on school externalizing behavior. These results suggest the need for practitioners to focus on addressing both individual and environmental factors that can affect a student as well as barriers to effective services for youth with learning problems rather than on emphasizing the deficits of the individual youth

(Brown, D'Emidio-Cason, & Benard, 2001). Thus, prevention and interventions programs should aim to not only reduce risk factors, but also enhance protective factors to improve the social functioning and peer relationships of youth with learning problems (Mishna, 2003). One such program that targets the youth is social skills training, a standard approach for children and adolescents with learning problems (Lewandowski & Barlow, 2000). Programs that reinforce positive social skills have been effective in reducing externalizing behavior (Pepler & Craig, 2005). Hepler (1997) developed a group cognitive-behavioral program that went one step further by involving youth with learning problems and peers without learning problems to increase friendships between these youth, thus creating a "friendlier" school environment. Components of the program consist of five areas of social skills, such as initiating conversations, maintaining conversations, entering ongoing activities, including others, and responding constructively to insults and verbal attacks. Participants of the program included small groups (4-5 members) of students with learning problems and those without learning problems who were liked by their peers who were randomly assigned to a treatment or a control group. Results of the study indicated that youth with learning problems in the treatment group had more positive interactions with their peers without learning problems compared with those in the control group.

Considering the significance of male gender in school externalizing behavior, it is important that intervention strategies are gender appropriate. I should mention however that developing and implementing intervention and prevention programs to specifically target socio-demographic factors, such as gender might overlook important experiences at other system levels that can add to the risk (Eamon & Altshuler, 2004), as there are no particular youth characteristics that can be "profiled" (Espelage & Swearer, 2008). Prevention and treatment must

look beyond the socio-demographic factors (Cohen, Hsueh, Russell, & Ray, 2006) and consider system levels, such as family, peer groups, school, and neighborhood.

Given the high risks of youth who previously exhibit peer and school externalizing behaviors of exhibiting these behaviors two years later, there is a major need for practitioners to assess externalizing behaviors early on and consider primary prevention programs. As suggested by Durlak and Wells (1997), primary prevention programs require clear specification of program procedures, goals, assessment of implementation, follow-up, and understanding how the characteristics of the intervention and participants relate to different outcomes. One such program is the Linking the Interest of Families and Teachers (LIFT), a primary prevention program designed to reduce behavioral problems by targeting elementary school students and their families. The program comprises parent training, a classroom-based social skills training program, a playground behavioral program, and communication between teachers and parents. A study conducted by Reid, Eddy, Fetrow, and Stoolmiller (1999) found in a sample of 671 students including those in fifth grade and their families, that the immediate impact of the LIFT program was encouraging, and children who participated in the program displayed a significant reduction of behavioral problems.

As evidenced by the current study findings, youth who receive more cognitive stimulation from their parents at home are less likely to exhibit school externalizing behavior. Even though the odds ratio was .98, indicating little decrease in externalizing behavior, practitioners still might educate parents on the importance of providing cognitive stimulation in the home, which might reduce behavioral problems in the school, and consider comprehensive training programs for parents that emphasize the importance of parental cognitive stimulation. One such example is the Incredible Years Training for Parents program, which focuses on

developmentally age-appropriate parenting skills that promote youth's social competence, emotion regulation, and academic skills, and reduces behavior problems (Webster-Stratton, 2011). A randomized control trial study of this program for parents of 8-16 year old children was conducted by Hutchings, Bywater, Williams, Shakespeare, and Whitaker (2009). Using t-test and intention-to-treat analyses, the researchers reported significant improvements in children's behavior.

Because negative peer influence is identified as a risk factor for school externalizing behavior in the current study, practitioners, particularly school social workers, need to be in the forefront of ensuring positive peer interactions (Eamon & Altshuler, 2004). In order to effectively target negative peer influences, practitioners need to first assess and monitor youth's peer ecology, which is a part of the youth's microsystem that involves youth interacting with, influencing, and socializing with one another (Rodkin & Hodges, 2003). Practitioners might also consider intervention programs, such as the Multi-Systemic Therapy, a family and community-based treatment that provides training to caregivers to monitor children's peer influences (Henggeler, 1999). Given that positive peer influence can be a protective factor, which can mitigate behavioral problems and deviant acts (Patterson, Cohn, & Kao, 1989), practitioners might also coordinate peer-led programs that use peers of the same age or slightly older to deliver classroom-based lessons. Most recently, peer-led programs, such as A Stop Smoking In Schools Trial (ASSIST) intervention has been found to effectively lead to a reduction in deviant behaviors, such as adolescent smoking (Campbell et al., 2008).

Finally, the neighborhood environment, including neighborhood safety and areas of residence, appears to influence peer externalizing behavior. Unlike previous research findings which indicate that central city youth are more likely than their peers in other residential areas to

display peer externalizing behavior, this study found that youth living in central cities are less likely than youth living in other areas to display this behavior. These findings together suggest the need to focus on neighborhood concerns in all areas of residence, including urban, suburban, and rural neighborhoods (see Stockdale, Hangaduambo, Duys, Larson, & Sarvela, 2002). The current research also indicates the need to address concerns of youth, which appear to increase the risk of peer externalizing behavior. One such program is the neighborhood watch program, which has reportedly been effective in lessening youth's feelings of fear in their schools and neighborhoods. For instance, Salcido, Ornelas, and Garcia (2002) used multiple-method strategies to examine a university-community-based neighborhood watch program called "Kid Watch." The findings indicate that program participants (148 youth; 40 adults) perceived a sense of community, given the collaborations among school officials, researchers, and law enforcement, which lessened their fears and experiences in peer violence. Salcido et al. (2002) also suggested that collaborative work for organizing neighborhood watch programs for youth require expanded roles and practices for school practitioners. Because social work as a profession has traditionally advocated for programs that are inclusive of voices, participation, solution, and input from the community, assessment and interventions can provide solutions if done in partnership with the neighborhood and the community stakeholders (Benbenishty, Astor, & Estrada, 2008).

In summary, prevention and intervention programs and strategies that consider the multiple levels of influences, such as socio-demographics, cognitive stimulation at home, negative peer influences, and neighborhood environment are likely to show promising results for preventing and reducing peer and school externalizing behaviors among early adolescents.

Policy Implications

Although peer externalizing behaviors are not always exhibited in the school, this section will focus on policy recommendations to reduce school-related externalizing behavior. The increasing recognition of peer and school externalizing behaviors, such as bullying, peer conflicts, conflicts with teachers, and school disobedience, as major school problems have prompted school officials and policy makers to rethink how school policies directed at increasing safety and decreasing conflicts and violence may be modified (Limber & Small, 2003). The descriptive results of the current study also support these previous findings, and indicate that peer and school externalizing behaviors, negative peer influences, and school environments that are unresponsive, unfriendly, and inconsistently enforce school rules tend to be problems for many youth. Although there are no specific policies to date that address peer and school externalizing behaviors in general, many states have passed measures that include bullying and peer conflicts in their school-based violence prevention efforts, in addition to programs for decreasing these behaviors. Although schools are governed by federal and state laws, the majority of policies and practices dealing with school safety have been created at the state and local levels (Limber & Small, 2003). As of today, 44 states have passed laws addressing bullying and peer conflicts among youth in schools. The implementation of these laws were motivated largely by major shootings in several school districts in the late 1990s, which reported that many of the shooters were bullied, harassed, or threatened by their peers in school. A report conducted by the U.S. Secret Services, which profiled 41 school shooters from 1974 to 2000, found that the majority of the shooters were bullying victims (Vossekuil, Fein, Reddy, Borum, & Modzeleski, 2002). However, not all state laws aimed at preventing bullying and peer conflicts have proven to be effective, and the question remain as to whether school laws can potentially be a useful

vehicle for reducing bullying and other forms of externalizing behaviors in school (Limber & Small, 2003).

At the local level, school districts vary on the extent to which they have implemented policies and measures to reduce bullying and other externalizing behaviors (Flanagan & Faison, 2001). Many local school districts responded to these concerns by enacting a "zero tolerance" policy, which was originally a national policy under the Gun Free Schools Act of 1994, signed by the Clinton administration to combat firearms possession by minors. The amendment was later broadened to include substance abuse as well as behavioral problems (Skiba, 2000). Zero tolerance policy mandates consequences or punishments for behavioral problems, such as suspension, expulsion, and arrest. However, this policy has been criticized by a number of scholars (e.g, Stinchcomb, Bazemore, & Riestenberg, 2006). Stinchcomb et al. (2006) assert that such policies overlook underlying risk factors for behavioral problems and maintain emphasis on punitive measures. Others (Dunbar, Jr. & Villarruel, 2002; Verdugo, 2002) also argue that zero tolerance policies negatively affect a disproportionately high number of racial/ethnic minority students, which reinforces the public misconception that Black and Hispanic youth are prone to engage in behavioral problems that threaten the safety of others. On the other hand, school administrators who adopt a laissez-faire approach are likely to believe that students must learn to resolve bullying and interpersonal conflicts on their own (Flanagan & Faison, 2001). Given that adult leadership is critical in deterring bullying and other externalizing behaviors, this approach will likely not effectively address bullying and other forms of behavioral problems.

Most schools in recent years have operated under legislative mandates to develop school safety plans to protect students from harm, and most school districts have long-standing programs and policies to address school behavioral problems (Limber & Small, 2003). A

common element in many of the statutes is a requirement or recommendation that school administrators develop a school-wide policy to prohibit bullying and other forms of behavioral problems (Limber & Small, 2003). Several state laws mandate local school districts to implement violence prevention programs. Other state laws include incorporating bullying prevention training for school officials, mandating reporting, instituting appropriate disciplinary measures, and improving communication between students and school officials (Limber & Small, 2003).

As suggested by Limber and Small (2003), and consistent with some of the current findings, laws need to also be inclusive of the following: establish a definition of bullying and other forms of behavioral problems that are consistent with the definition used by researchers; require local school districts to develop policies in collaboration with relevant stakeholders; recommend policies that adopts a whole-school approach to violence prevention; avoid and discourage policies that exclude students from school setting (e.g., zero tolerance); and allocate appropriate funds that support evidence-based prevention and intervention programs in school. In addition, state legislators should develop model policies and/or technical advisories that provide guidance to school officials concerning school policies. State and local legislators should also distribute information about the effectiveness of the existing prevention and intervention programs, and provide opportunities for training to professionals (e.g., school counselors, social workers) to educate them about the serious nature of externalizing behaviors in school.

In developing ecologically-based programs and services that target the entire school, school professionals need to also adopt a team approach by actively collaborating with multiple individuals (Biggs, Simpson, & Gaus, 2009) and local legislators in ensuring that the policies are consistent with the recommendations of school legislators (Limber & Small, 2003). To decrease

peer and school externalizing behaviors, school social workers in particular have an important role in developing and implementing programs and policies at the local, state, and national levels through educating students, school staff, the public, and legislators (Astor, Meyer, Benbenishty, Marachi, & Rosemond, 2005).

Research Implications

The literature review, findings, and limitations of the current study suggest implications for future research. The literature review indicates that little is known about the mesosystem factors associated with peer and school externalizing behaviors among early adolescents. As previously mentioned, a mesosystem is the interrelations between two microsystems, such as family and school environments. It is particularly important for future research to examine the interrelationship between the family and school (e.g., parents' school involvement) as correlates of externalizing behaviors among early adolescents, as these represent two primary systems in youth's lives, and both home and school are their primary learning contexts (Sheridan, Warnes, & Dowd, 2004). Research has demonstrated that productive, constructive, collaborative relationships between parents and school officials are essential for maximizing youth's potential, and parental involvement in youth's schools is positively related to grades (Epstein, 1991) and attitude toward school (Kellaghan, Sloane, Alvarez, & Bloom, 1993), as well as behaviors (Resnick et al., 1997). Therefore, such involvement also might reduce peer and school externalizing behaviors.

The two types of externalizing behaviors included in the current study were measured using two items from the mothers' report on the BPI. These are serious limitations. Researchers investigating externalizing behavior (particularly school externalizing behavior) among early

adolescents might consider collecting data or finding datasets that include more measures of the externalizing behaviors from multi-informants, such as classmates, peers, and school officials.

Furthermore, due to the limitation of the NLSY dataset, I was unable to control for certain parent-related factors, such as inter-parental violence, which might be relevant to youth's externalizing behaviors. Researchers have consistently reported that youth who witness inter-parental violence in the home are at risk of psychiatric disorder and behavioral problems (Cummings, Pepler, & Moore, 1999; Pelcovitz, Kaplan, DeRosa, Mandel, & Salzinger, 2000). Future research could investigate more thoroughly the association between inter-parental relations and the two types of externalizing behaviors among early adolescents.

Because mothers' socio-demographic information was collected only on the NLSY biological mothers and their households, youth residing with others and youth born to mothers of all age ranges were not included in the sample. Therefore, the generalizability of the findings is limited, and future research needs to pay attention to youth of mothers of more diverse ages and residing in other households, such as foster care. Studies have shown that youth living in other households are even more likely to engage in behavioral problems (Newton, Litrownik, & Landsverk, 2000; Zima et al., 2000). A case in point, Newton et al.'s (2000) study suggests that volatile foster care placement histories contribute to internalizing and externalizing behaviors of foster children, as these children are at an elevated risk of "disordered attachment."

Finally, the study discovered that neighborhood environment factors are related to peer externalizing behavior. In recent years, a limited number of studies have examined neighborhood environment as a correlate of peer externalizing behavior, such as bullying (Foster & Brooks-Gunn, in press). This study investigated neighborhood level predictors of school violence from a racially/ethnically diverse sample of 6-9 year old children in Chicago neighborhoods. Drawing

from the ecological systems theory, social disorganization theory, and neighborhood effects theory (Laub & Lauritsen, 1998; Sampson, 2012), the findings suggest that certain neighborhood environment factors, such as residential instability, can increase violence in school. The current study finding also suggests a major need to consider neighborhood influences, such as perceptions of neighborhood safety, when examining adolescent externalizing behavior at the peer level. Youth are embedded in the home and school, which are situated in the neighborhood (Brooks-Gunn 1995). Thus, future studies might collect data on or utilize a dataset that includes additional relevant measures of neighborhood characteristics and environment (e.g., concentrated poverty, residential instability, neighborhood danger) to determine how these may contribute to peer, and even school externalizing behaviors.

In conclusion, the current study suggests that research and practice on peer and school externalizing behaviors among early adolescents necessitate an understanding of the multiple level factors that are associated with these behaviors, such as the socio-demographic, microsystem (e.g., family, peer, school environments) and exosystem (e.g., neighborhood). Although the macrosystem variables were not found to be significant in this study, it is important to investigate other macrosystem factors. Assessing and targeting the ecological systems levels in turn will likely improve early adolescents' peer and school externalizing behaviors.

REFERENCES

- Abbotts, J. E., Williams, R. G. A., Sweeting, H. N., & West, P. B. (2003). Is going to church good or bad for you? Denomination, attendance and mental health of children in West Scotland. *Social Science and Medicine*, *58*, 645-656.
- Achenbach, T. M. (1978). The child behavior profile: I. Boys aged 6-11. *Journal of Consulting and Clinical Psychology*, *46*, 478-488.
- Ackerman, B. P., Brown, E., & Izard, C. E. (2003). Continuity and change in levels of externalizing behavior in school of children from economically disadvantaged families. *Child Development*, *74*, 694-709.
- Adams, R., & Laursen, B. (2004). The organization and dynamics of adolescent conflict with parents and friends. *Journal of Marriage and Family*, *63*, 97-110.
- Akers, R. (1998). *Social learning and social structure: A general theory of crime and deviance*. Boston: Northeastern University Press.
- Alexander, J., & McConnell, S. C. (1993). Children as peacemakers: Promoting the development of cooperation and conflict resolution. In V. K. Kool (Ed.), *Nonviolence: Social and psychological issues* (pp. 107-128). Lanham, MD: University Press.
- Algozzine, K., Christian, C., Marr, M. B., McClanahan, T., & White, R. (2008). Demography of problem behavior in elementary schools. *Exceptionality*, *16*, 93-104.
- Allison, P. D. (2001). *Logistic regression using the SAS system: Theory and application*. Cary, NC: SAS Institute.
- Alsaker, F. D., & Valkanover, S. (2001). Early diagnosis and prevention of victimization in kindergarten. In J. Juvonen & S. Graham (Eds.), *Peer harassment in schools: The plight of the vulnerable and victimized* (pp. 175-195). New York: The Guilford Press.
- American Academy of Child & Adolescent Psychiatry (2009). *Children with oppositional defiant disorder*. Retrieved October 16, 2010, from http://www.aacap.org/galleries/FactsForFamilies/72_children_with_oppositional_defiant_disorder.pdf
- American Academy of Child & Adolescent Psychiatry (2011). Normal adolescent development part I. Retrieved January 25, 2013, from http://www.aacap.org/galleries/FactsForFamilies/57_normal_adolescent_development.pdf
- Aneshensel, C., & Sucoff, C. (1996). The neighborhood context of adolescent mental health. *Journal of Health and Social Behavior*, *37*, 293-310.

- Anderson, C. A., & Bushman, B. J. (2001). Effects of violent video games on aggressive behavior, aggressive cognition, aggressive affect, physiological arousal, and prosocial behavior: A meta-analytic review of the scientific literature. *Psychological Science, 12*, 353-359.
- Anderson, E. (1999). *Code of the Street: Decency, violence and the moral life of the inner city*. New York: WW. Norton & Company.
- Arnold, D. H. (1997). Co-occurrence of externalizing behavior and emergent academic difficulties in young high-risk boys: A preliminary evaluation of patterns and mechanisms. *Journal of Applied Developmental Psychology, 18*, 317-330.
- Arora, C. M. J. (1996). Defining bullying: Towards a clearer general understanding and more effective intervention strategies. *School Psychology International, 17*, 317-329.
- Astor, R. A., Meyer, H. A., Benbenishty, R., Marachi, R., & Rosemond, M. (2005). School safety interventions: Best practices and programs. *Children and Schools, 27*, 17-32.
- Astor, R. A., Meyer, H. A., & Pitner, R. O. (2001). Elementary and middle school students' perceptions of violence-prone school subcontexts. *The Elementary School Journal, 101*, 511-528.
- Atlas, R. S., & Pepler, D. J. (1998). Observations of bullying in the classroom. *Journal of Educational Research, 92*, 86-97.
- Auslander, B. A., Rosenthal S. L., & Blythe, M. J. (2000). Sexual development and behaviors of adolescents. *Psychiatric Annals, 36*, 694-702.
- Ayyash-Abdo, H. (2002). Adolescent suicide: an ecological approach. *Psychology in the Schools, 39*, 459-475.
- Bagwell, C. L., Newcomb, A. F., & Bukowski, W. M. (1998). Preadolescent friendship and peer rejection as predictors of adult adjustment. *Child Development, 69*, 140-153.
- Baker, J. A., Clark, T. P., Crawl, A., & Carlson, J. S. (2009). The influence of authoritative teaching on children's school adjustment. *School Psychology International, 30*, 374-382.
- Baker, J., Grant, S., & Morlock, L. (2008). The teacher-student relationship as a developmental context for children with internalizing or externalizing behavior problems. *School Psychology Quarterly, 23*, 3-15.
- Baker, J. A., Terry, T., Bridger, R., & Winsor, A. (1997). Schools as caring communities: A relational approach to school reform. *School Psychology Review, 26*, 586-602.
- Ballard, M., Argus, T., & Remley, Jr., T. P. (1999). Bullying and school violence: A proposed prevention program. *NASSP Bulletin, 83*, 38-47.

- Bandura, A. (1973). *Aggression: A social learning analysis*. London: Prentice Hall.
- Barboza, G. E., Schiamberg, L. B., Oehmke, J., Korzeniewski, S. J., Post, L. A., & Heraux, C. G. (2009). Individual characteristics and the multiple contexts of adolescent bullying: An ecological perspective. *Journal of Youth and Adolescence*, *38*, 101-121.
- The Barna Research Group (1999, 2000). *Barna research online: Teenagers*. Retrieved February 16, 2013, from <http://www.barna.org/FlexPage.aspx?Page=Topic&TopicID=37>
- Baumeister, A. L., Storch, E. A., & Geffken, G. R. (2008). Peer victimization in children with learning disabilities. *Child and Adolescent Social Work Journal*, *25*, 11-23.
- Benbenishty, R., Astor, R. A., & Estrada, J. N. (2008). School violence assessment: A conceptual framework, instruments, and methods. *Children & Schools*, *30*, 71-81.
- Berger, L. M., Bruch, S. K., Johnson, E. I., James, S., & Rubin, D. (2009). Estimating the “impact” of out-of-home placement on child well-being: Approaching the problem of selection bias. *Child Development*, *80*, 1856-1876.
- Berman, S. L., Kurtines, W. M., Silverman, W. K., & Serafini, L. T. (1996). The impact of exposure to crime and violence on urban youth. *American Journal of Orthopsychiatry*, *66*, 329-336.
- Berton, M. W., & Stabb, S. D. (1996). Exposure to violence and post-traumatic stress disorder in urban adolescents. *Adolescence*, *31*, 489-498.
- Biggs, M. J. G., Simpson, C. G., & Gaus, M. D. (2009). A case of bullying: Bringing together the disciplines. *Children and Schools*, *31*, 39-42.
- Birch, S. H., & Ladd, G. W. (1997). The teacher-child relationship and children’s early school adjustment. *Journal of School Psychology*, *35*, 61-79.
- Bollmer, J. M., Milich, R., Harris, M. J., & Maras, M. A. (2005). A friend in need: The role of friendship quality as a protective factor in peer victimization and bullying. *Journal of Interpersonal Violence*, *20*, 701-712.
- Bosworth, K., Espelage, D. L., & Simon, T. R. (1999). Factors associated with bullying behavior in middle school students. *The Journal of Early Adolescence*, *19*, 341-362.
- Bowen, N. K., & Bowen, G. L. (1999). Effects of crime and violence in neighborhoods and schools on the school behavior and performance of adolescents. *Journal of Adolescent Research*, *14*, 319-342.
- Bowen, N. K., Bowen, G. L., & Ware, W. B. (2002). Neighborhood social disorganization, families, and the educational behavior of adolescents. *Journal of Adolescent Research*, *17*, 468-490.

- Bowen, G. L., & Chapman, M. V. (1996). Poverty, neighborhood danger, social support, and individual adaptation among at-risk youth in urban areas. *Journal of Family Issues*, *17*, 641-666.
- Bradshaw, C. P., Shaeffer, C. M., Petras, H., & Ialongo, N. (2010). Predicting negative life outcomes from early aggressive-disruptive behavior trajectories: Gender differences in maladaptation across life domains. *Journal of Youth and Adolescence*, *39*, 953-966.
- Breivik, K., & Olweus, D. (2006). Adolescent's adjustment in four post-divorce family structures: Single mother, stepfather, joint physical custody and single father families. *Journal of Divorce and Remarriage*, *44*, 99-124.
- Brockenbrough, K. K., Cornell, D. G., & Loper, A. B. (2002). Aggressive attitudes among victims of violence at school. *Education and Treatment of Children*, *25*, 273-287.
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, *32*, 513-531.
- Bronfenbrenner, U. (1979). *Ecology of human development: Experiments by nature and design*. Cambridge: Harvard University Press.
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, *22*, 723-742.
- Bronfenbrenner, U. (1994). Ecological models of human development. In T. Husen & T. N. Postlethwaite (Ed.), *The international encyclopedia of education* (2nd ed., pp. 1643-1647). New York: Elsevier Sciences.
- Brooks-Gunn, J. (1995). Children and families in communities: Risk and intervention in the Bronfenbrenner tradition. In P. Moen, G. H. Elder, & K. Lusher (eds.), *Examining lives in context: Perspective on the ecology of human development* (pp. 467-519). Washington, DC: American Psychological Association Press.
- Brown, J. H., D'Emidio-Cason, M., & Benard, B. (2001). *Resilience education*. Thousand Oaks, CA: Corwin Press.
- Bukowski, W. M., Hoza, B., & Boivin, M. (1994). Measuring friendship quality during pre- and early adolescence: The development and psychometric properties of the Friendship Qualities Scale. *Journal of Social and Personal Relationships*, *11*, 471-484.
- Bukowski, W. M., Sippola, L. K., & Newcomb, A. F. (2000). Variations in patterns of attraction of same- and other-sex peers during early adolescence. *Developmental Psychology*, *36*, 147-154.
- Bulach, C. R. (2001). A four-step process for identifying and reshaping school culture. *Principal Leadership*, *1*, 48-51.

- Burke, J. D., Loeber, R., & Birmaher, B. (2004). Oppositional defiant disorder and conduct disorder: A review of the past 10 years, Part II. *Focus, 11*, 558-576.
- Caldwell, B., & Bradley, R. (1984). *Home observation for measurement of the environment*. Little Rock: University of Arkansas.
- Campbell, R., Starkey, F., Holliday, J., Audrey, S., Bloor, M., ParryLangdon, N., et al. (2008). An informal school-based peer-led intervention for smoking prevention in adolescence (ASSIST): A cluster randomised trial. *Lancet, 371*, 1595–1602.
- Campbell, S. B., Shaw, D. S., & Gilliom, M. (2000). Early externalizing behavior problems: Toddlers and preschoolers at risk for later maladjustment. *Development and Psychopathology, 12*, 467-488.
- Carlson, K. T. (2006). Poverty and youth violence exposure: Experiences in rural communities. *Children and Schools, 28*, 87-96.
- Center for Human Resource Research. (2004). *NLSY 79 child & young adult data users guide*. Washington, DC: Author.
- Chauhan, P., & Reppucci, N. D. (2009). The impact of neighborhood disadvantage and exposure to violence on self-report of antisocial behavior among girls in the juvenile justice system. *Journal of Youth and Adolescence, 38*, 401-416.
- Chaux, E., Molano, A., & Podlesky, P. (2009). Socio-economic, socio-political and socio-emotional variables explaining school bullying: A country-wide multilevel analysis. *Aggressive Behavior, 35*, 520-529.
- Christakis, D. A., & Zimmerman, F. J. (2007). Violent television viewing during preschool is associated with antisocial behavior during school age. *Pediatrics, 120*, 993-999.
- Christie-Mizell, C. A. (2003). Bullying: The consequences of interparental discord and child's self-concept. *Family Process, 42*, 237-251.
- Civita, M. D., Pagani, L. S., Vitaro, F., & Tremblay, R. E. (2007). Does maternal supervision mediate the impact of income source on behavioral adjustment in children from persistently poor families? *Journal of Early Adolescence, 27*, 40-66.
- Clausen, J. A. (1986). *The life course: A sociological perspective*. Prentice-Hall, Englewood Cliffs: New Jersey.
- Cnaan, R. A., Gelles, R. J., & Sinha, J. W. (2004). Youth and religion: The Gameboy generation goes to “church.” *Social Indicators Research, 68*, 175-200.

- Cohen, R., Hsueh, Y., Russell, K. M., & Ray, G. E. (2006). Beyond the individual: A consideration of context for the development of aggression. *Aggression and Violent Behavior, 11*, 341-351.
- Conger, R. D., & Simons, R. L. (1997). Life course contingencies in the development of adolescent antisocial behavior: A matching law approach. In T. P. Thornberry (ed.), *Developmental theories of crime and delinquency*. New Brunswick: Transaction.
- Cornell, D. G., Callahan, C. M., Bassin, I. E., & Ramsay, S. G. (1991) Affective development in accelerated students. In W. Southern & E. Jones (Eds.), *Academic acceleration of gifted children* (pp. 74-101). New York: Teachers College press.
- Cornwall, A., & Bawden, H. N. (1992). Reading disabilities and aggression: A critical review. *Journal of Learning Disabilities, 25*, 281-288.
- Costenbader, V., & Markson, S. (1998). School suspension: A study with secondary school students. *Journal of School Psychology, 36*, 59-82.
- Crandell, L. E., Fitzgerald, H. E., & Whipple, E. E. (1998). Dyadic synchrony in parent-child interactions: A link with maternal representations of attachment relationships. *Infant Mental Health Journal, 18*, 247-264.
- Crick, N. R., Casas, J. F., & Ku, H. C. (1999). Relational and physical forms of peer victimization in preschool. *Developmental Psychology, 35*, 376-385.
- Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin, 115*, 74-101.
- Crick, N. R., & Werner, N. E. (1998). Response decision processes in relational and overt aggression. *Child Development, 69*, 1630-1639.
- Cummings, J. G., Pepler, D. J., & Moore, T. E. (1999). Behavior problems in children exposed to wife abuse: Gender differences. *Journal of Family Violence, 14*, 133-156.
- Cunningham, B., & Sugawara, A. (1988). Preservice teachers' perceptions of children's problem behavior. *The Journal of Educational Research, 82*, 34-39.
- Curtner-Smith, M. E., Culp, A. M., Culp, R., Scheib, C., Owen, K., Tilley, A., et al. (2006). Mothers' parenting and young economically disadvantaged children's relational and overt bullying. *Journal of Child and Family Studies, 15*, 181-193.
- Damon, W. (2000). Setting the stage for the development of wisdom: Self-understanding and moral identity during adolescence. In W. S., Brown (Ed.), *Understanding wisdom: Sources, science, and society* (pp. 361-391). Philadelphia: Templeton Foundation.

- David-Ferdon, C., & Hertz, M. F. (2007). Electronic media, violence, and adolescents: An emerging public and health problem. *Journal of Adolescent Health, 41*, S1-S5.
- Deater-Deckard, K., Dodge, K. A., Bates, J. E., & Pettit, G. S. (1996). Physical discipline among African American and European American mothers: Links to children's externalizing behaviors. *Developmental Psychology, 32*, 1065-1072.
- Deater-Deckard, K., Dodge, K. A., Bates, J. E., & Pettit, G. S. (1998). Multiple risk factors in the development of externalizing behavior problems: Group and individual differences. *Development and Psychopathology, 10*, 469-493.
- Dekovic, M. (1999). Risk and protective factors in the development of problem behavior during adolescence. *Journal of Youth and Adolescence, 28*, 667-685.
- Deiro, J. A. (1996). *Teaching with heart: Making healthy connections with students*. Thousand Oaks, CA: Corwin Press.
- DiClemente, R. J., Hansen, W. B., & Ponton, L. E. (1996). Adolescents at risk. In R. J. DiClemente, W. B. Hansen & L. E. Ponton (eds), *Handbook of adolescent health risk behavior* (pp. 1-4). New York: Plenum Press.
- Dietz, T. L. (1998). An examination of violence and gender role portrayals in video games: Implications for gender socialization and aggressive behavior. *Sex Roles, 38*, 425-442.
- Dinkes, R., Kemp, J., Baum, K., & Snyder, T. D. (2009). *Indicators of school crime and safety: 2009* (NCES 2010-012/NCJ 228478). National Center for Education Statistics, Institute of Education Science, U.S. Department of Justice. Washington, DC.
- Dishion, T. J., Patterson, G. R., Stoolmiller, M., & Skinner, M. L., (1991). Family, school, and behavioral antecedents to early adolescent involvement with antisocial peers. *Developmental Psychology, 27*, 172-180.
- Dodge, K. A., Pettit, G. S., & Bates, J. E. (1994). Socialization mediators of the relation between socioeconomic status and child conduct problems. *Child Development, 65*, 649-665.
- Doyle, W. (1990) Classroom management techniques. In O. C. Moles (Ed.), *Student discipline strategies: research and practice* (pp. 113-127). New York: State University of New York Press.
- Dunbar, Jr., C., & Villarruel, F. A. (2002). Urban school leaders and the implementation of zero-tolerance policies: An examination of its implications. *Peabody Journal of Education, 77*, 82-104.

- Duncan, R. D. (2004). The impact of family relationships on school bullies and victim. In D. L. Espelage & S. M. Swearer (Eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 227-244). Mahwah, N.J.: Lawrence Erlbaum Associates, Publishers.
- Duncan, G. J., & Brooks-Gunn, J. (1997). *Consequences of growing up poor*. New York: Russell Sage.
- Durlak, J. A., & Wells, A. M. (1997). Primary prevention mental health programs for children and adolescents: A meta-analytic review. *American Journal of Community Psychology, 25*, 115-152.
- Eamon, M. K. (2000). Structural model of the effects of poverty on externalizing and internalizing behaviors of four- to five-year-old children. *Social Work Research, 24*, 143-154.
- Eamon, M. K. (2001a). The effects of poverty on children's socioemotional development: An ecological systems analysis. *Social Work, 46*, 256-266.
- Eamon, M. K. (2001b). Poverty, parenting, peer, and neighborhood influences on young adolescent antisocial behavior. *Journal of Social Service Research, 28*, 1-23.
- Eamon, M. K., & Altshuler, S. J. (2004). Can we predict disruptive school behavior? *Children & Schools, 26*, 23-37.
- Eamon, M. K., & Mulder, C. (2005). Predicting antisocial behavior among Latino young adolescents: An ecological systems analysis. *American Journal of Orthopsychiatry, 75*, 117-127.
- Eamon, M. K., & Zhehl, R. M. (2001). Maternal depression and physical punishment as mediators of the effect of poverty on socioemotional problems of children in single-mother families. *American Journal of Orthopsychiatry, 71*, 218-226.
- Eisenberg, N., Cumberland, A., Spinrad, T. L., Fabes, R. A., Shepard, S. A., Reiser, M., et al. (2001). The relations of regulation and emotionality to children's externalizing and internalizing problem behavior. *Child Development, 72*, 1112-1134.
- Elder, G. H., Jr., Modell, J., & Parke, R. D. (1993). *Children in time and place: Individual, historical and developmental insights*. Cambridge University Press: New York.
- Ellison, C. G., Bartkowski, J. P., & Segal, M. L. (1996). Conservative Protestantism and the parental use of corporal punishment. *Social Forces, 74*, 1003-1028.
- Englund, M. M., Luckner, A. E., Whaley, G. J. L., & Egeland, B. (2004). Children's achievement in early elementary school: Longitudinal effects of parental involvement, expectations, and quality of assistance. *Journal of Educational Psychology, 96*, 723-730.

- Epstein, J. L. (1991). Effects on student achievement of teachers' practice of involvement. In B.S. Silvern (Eds.), *Advances in reading/language research: Vol. 5. Literacy through family, community, and school interaction* (pp. 261-276). Greenwich, CT: JAI Press.
- Espelage, D. L., Bosworth, K., & Simon, T. R. (2000). Examining the social context of bullying behaviors in early adolescence. *Journal of Counseling and Development, 78*, 326-333.
- Espelage, D. L., Holt, M. K., & Henkel, R. R. (2003). Examination of peer-group contextual effects on aggression during early adolescence. *Child Development, 74*, 205-220.
- Espelage, D. L., Mebane, S. E., & Swearer, S. M. (2004). Gender differences in bullying: Moving beyond mean level differences. In D. L. Espelage & S. M. Swearer (eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 15-35). Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Espelage, D. L., & Swearer, S. M. (2003). Research on school bullying and victimization: What have we learned and where do we go from here? *School Psychology Review, 32*, 365-383.
- Espelage, D. L., & Swearer, S. M. (2008). Current perspectives on linking school bullying research to effective prevention strategies. In T. W. Miller (Ed.), *School violence and primary prevention* (pp. 335-353). New York: Springer-Verlag.
- Fabes, R. A., & Eisenberg, N. (1992). Young children's coping with interpersonal anger. *Child Development, 63*, 116-128.
- Farrington, D. P. (2005). Childhood origins of antisocial behavior. *Clinical Psychology & Psychotherapy, 12*, 177-190.
- Farrington, D. P., & West, D. J. (1993). Criminal, penal, and life histories of chronic offenders: Risk and protective factors in early identification. *Criminal Behavior and Mental Health, 3*, 492-523.
- Feagans, L. V., Merriwether, A. M., & Haldane, D. (1991). Goodness of fit in the home: Its relationship to school behavior and achievement in children with learning disabilities. *Journal of Learning Disabilities, 24*, 413-420.
- Ferguson, A. A. (2000). *Bad boys: Public school and the making of Black masculinity*. Ann Arbor, MI: University of Michigan Press.
- Fergusson, D. M., Swain-Campbell, N. R., & Horwood, L. J. (2002). Deviant peer affiliations, crime and substance use: A fixed effects regression analysis. *Journal of Abnormal Child Psychology, 30*, 419-430.
- Fite, P. J., Vitulano, M., Wynn, P., Wimsatt, A., Gaertner, A., & Rathert, J. (2010). Influence of perceived neighborhood safety on proactive and reactive aggression. *Journal of Community Psychology, 38*, 757-768.

- Flanagan, C. A., & Faison, N. (2001). Youth civic development: Implications of research for social policy and programs. *Social Policy Report, XV*, Ann Arbor, MI: Society for Research on Child Development.
- Flaspohler, P. D., Elfstrom, J. L., Vanderzee, K. L., Sink, H. E., & Birchmeier, Z. (2009). Stand by me: The effects of peer and teacher support in mitigating the impact of bullying on quality of life. *Psychology in the Schools, 46*, 636-649.
- Flouri, E., & Buchanan, A. (2003). The role of mother involvement and father involvement in adolescent bullying behavior. *Journal of Interpersonal Violence, 18*, 634-644.
- Fosse, G. K., & Holen, A. (2002). Childhood environment of adult psychiatric outpatients in Norway having been bullied in school. *Child Abuse and Neglect, 26*, 129-137.
- Foster, H., & Brooks-Gunn, J. (in press). Neighborhood, family and individual influences on school physical victimization. *Journal of Youth and Adolescence*. Advance online publication. doi: 10.1007/s10964-012-9890-4
- Fraser, M. W. (Ed.). (1997). *Risk and resilience in childhood: An ecological perspective*. Washington, DC: NASW Press.
- Frey, A., Ruchkin, V., Martin, A., & Schawb-Stone, M. (2009). Adolescents in transition: School and family characteristics in the development of violent behaviors entering high school. *Child Psychiatry & Human Development, 40*, 1-13.
- Garbarino, J. (2004). Foreword. In D. L. Espelage & S. M. Swearer (Eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. xi-xii). Mahwah, NJ: Lawrence Erlbaum Associates.
- Garbarino, J., DuBrow, N., Kostelny, K., & Pardo, C. (1992). *Children in danger: Coping with the consequences of community violence*. San Francisco: Jossey-Bass.
- Garland, A. F., & Zigler, E. (1999). Emotional and behavioral problems among highly intellectually gifted youth. *Roeper Review, 22*, 41-44
- Georgiou, S. N. (2009). Personal and maternal parameters of peer violence at school. *Journal of School Violence, 8*, 100-119.
- Gershoff, E. T. (2002). Corporal punishment by parents and associated child behaviors and experiences: A meta-analytic and theoretical review. *Psychological Bulletin, 128*, 539-579.
- Glew, G. M., Fan, M. Y., Katon, W., Rivara, F. P., & Kernic, M. A. (2005). Bullying, psychosocial adjustment, and academic performance in elementary school. *Archives of Pediatrics & Adolescent Medicine, 159*, 1026-1031.

- Gordon, R., Della Piana, L., & Keleher, T. (2000). *Facing the consequences*. Oakland, CA: Applied Research Center.
- Gorman-Smith, D., & Tolan, P. (1998). The role of exposure to community violence and developmental problems among inner-city youth. *Development and Psychopathology, 10*, 101-116.
- Gottfredson, D. C., Gottfredson, G. D., & Hybl, L. G. (1993). Managing adolescent behavior: A multiyear, multischool study. *American Educational Research Journal, 30*, 179-215.
- Gottfried, A. E., Fleming, J. S., & Gottfried, A. W. (1998). Role of cognitively stimulating home environment in children's academic intrinsic motivation: A longitudinal study. *Child Development, 69*, 1448-1460.
- Graham, S., & Juvonen, J. (2002). Ethnicity, peer harassment, and adjustment in middle school: An exploratory study. *The Journal of Early Adolescence, 22*, 173-199.
- Grant, K. E., O'Koon, J. H., Davis, T. H., Roache, N. A., Poindexter, L. M. Armstrong, M. L., et al. (2000). Protective factors affecting low-income urban African American youth exposed to stress. *Journal of Early Adolescence, 20*, 388-417.
- Greenham, S. L. (1999). Learning disabilities and psychosocial adjustment: A critical review. *Child Neuropsychology: A Journal on Normal and Abnormal Development in Childhood and Adolescence, 5*, 171-196.
- Greenland, S., Schwartzbaum, J. A., & Finkle, W. D. (2000). Problems due to small samples and sparse data in conditional logistics regression analysis. *American Journal of Epidemiology, 151*, 531-539.
- Gregory, A., & Ripski, M. B. (2008). Adolescent trust in teachers: Implications for behavior in the high school classroom. *School Psychology Review, 37*, 337-353.
- Gregory, A., & Weinstein, R. S. (2008). The discipline gap and African Americans: Defiance or cooperation in the high school classroom. *Journal of School Psychology, 46*, 455-475.
- Griffith, J. (1998). The relation of school structure and social environment to parent involvement in elementary schools. *The Elementary School Journal, 99*, 53-80.
- Griffin, R. S., & Gross, A. M. (2004). Childhood bullying: Current empirical findings and future directions for research. *Aggression and Violent Behavior, 9*, 379-400.
- Grogan-Kaylor, A. (2005). Relationship of corporal punishment and antisocial behavior by neighborhood. *JAMA Pediatrics, 159*, 938-942.
- Grolnick, W. S., & Ryan, R. M. (1989). Parent styles associated with children's self-regulation and competence in school. *Journal of Educational Psychology, 81*, 143-154.

- Gropper, N., & Froschl, M. (2000). The role of gender in young children's teasing and bullying behavior. *Equality and Excellence in Education, 33*, 48-56.
- Guerra, N. G., Tolan, P. H., Huesmann, R., Van Acker, R., & Eron, L. D. (1995). Stressful events and individual beliefs as correlates of economic disadvantage and aggression among urban children. *Journal of Consulting and Clinical Psychology, 63*, 518-528.
- Gupta, V. B., Nwosa, N. M., Nadel, T. A., & Inamdar, S. (2001). Externalizing behavior and television viewing in children of low-income minority parents. *Clinical Pediatrics, 40*, 337-341.
- Halliday-Boykins, C. A., & Graham, S. (2001). At both ends of the gun: Testing the relationship between community violence exposure and youth violent behavior. *Journal of Abnormal Child Psychology, 29*, 383-402.
- Hamre, B. K., & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development, 72*, 625-638.
- Hanish, L. D., & Guerra, N. G. (2000). The roles of ethnicity and school context in predicting children's victimization by peers. *American Journal of Community Psychology, 28*, 201-223.
- Harnish, J. D., Dodge, K. A., & Valente, E. (1995). Mother-child interaction quality as a partial mediator of the roles of maternal depressive symptomatology and socioeconomic status in the development of child behavior problem. *Child Development, 66*, 739-753.
- Hartup, W. W. (1992). *Having friends, making friends, and keeping friends: Relationships as educational contexts*. ERIC Digest [Online]. Retrieved February 12, 2013, from <http://ericecece.org/pubs/digests/1992/hartup92.html>
- Hay, D. F. (1984). Social conflict in early childhood. In G. Whitehurst (Ed.), *Annals of child development* (Vol. 1, pp. 1-44). Greenwich, CT: JAI.
- Haynie, D. L., Nansel, T., Eitel, P., Crump, A. D., Saylor, K., & Yu, K. (2001). Bullies, victims, and bully/victims: Distinct groups of at-risk youth. *Journal of Early Adolescence, 21*, 29-49.
- Henggeler, S. W. (1999). Multisystemic Therapy: An overview of clinical procedures, outcomes, and policy implications. *Child and Adolescent Mental Health, 4*, 2-10.
- Hepler, J. B. (1997). Evaluating a social skills program for children with learning disabilities. *Social Work with Groups, 20*, 21-36.
- Hetherington, E. M., & Elmore, A. M. (2003). Risk and resilience in children coping with their parents' divorce and remarriage. In S. S. Luthar (Ed.), *Resilience and vulnerability: Adaption in the context of childhood adversities* (pp. 182-212). New York: Cambridge University.

- Hill, N. E., Castellino, D. R., Lansford, J. E., Nowlin, P., Dodge, K. A., Bates, J. E., & Pettit, G. S. (2004). Parent academic involvement as related to school behavior, achievement, and aspirations: Demographic variations across adolescence. *Child Development, 75*, 1491-1509.
- Holt, M. K., & Espelage, D. L. (2007). Perceived social support among bullies, victims, and bully-victims. *Journal of Youth and Adolescence, 36*, 984-994.
- Holt, M. K., & Keyes, M. A. (2004). Teachers' attitudes toward bullying. In D. L. Espelage & S. M. Swearer (Eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 121-139). Mahwah, N.J.: Lawrence Erlbaum Associates, Publishers.
- Howes, C., Matheson, C. C., & Hamilton, C. E. (1994). Maternal, teacher, and child care history correlates of children's relationships with peers. *Child Development, 65*, 264-273.
- Huessman, L. R., Moise-Titus, J., Podolski, C. L., & Eron, L. D. (2003). Longitudinal relations between children's exposure to TV violence and their aggressive and violent behavior in young adulthood: 1977-1992. *Developmental Psychology, 39*, 201-221.
- Hughes, J. N., Cavell, T. A., & Jackson, T. (1999). Influence of the teacher-student relationship on childhood conduct problems: A prospective study. *Journal of Clinical Child Psychology, 28*, 173-184.
- Humphrey, J. L., Storch, E. A., & Geffken, G. R. (2007). Peer victimization in children with attention-deficit hyperactivity disorder. *Journal of Child Health Care, 11*, 248-260.
- Hutchings, J., Bywater, T., Williams, M. E., Shakespeare, M. K., & Whitaker, C. (2009). *Evidence for the extended school aged Incredible Years Parent programme with parents of high-risk 8 to 16 year olds*. Retrieved March 19, 2013, from <http://www.incredibleyears.com/library/paper.asp?nMode=1&nLibraryID=599>.
- Hyde, J. S. (1986). Gender differences in aggression. In J. S. Hyde & M. C. Linn (Eds.), *The psychology of gender: Advances through meta-analysis* (pp. 51-66). Baltimore, MD: Johns Hopkins University Press.
- Indicators of School Crime and Safety (2007). *Indicators of School Crime and Safety: 2007*. Washington, DC: Author.
- Johnston, L. D., Bachman, J. G., O'Malley, P. M. (1995). *Monitoring the future: Questionnaire responses from the nation's high school seniors*. Ann Arbor, Michigan: Institute for Social Research, The University of Michigan.
- Jozefowicz-Simbeni, D. M. H., & Allen-Meares, P. (2002). Poverty and schools: Intervention and resource building through school-linked services. *Children & Schools, 24*, 123-136.

- Juvonen, J. (2007). Reforming middle schools: Focus on continuity, social connectedness, and engagement. *Educational Psychologist, 42*, 197-208.
- Juvonen, J., Graham, S., & Shuster, M. A. (2003). Bullying among young adolescents: The strong, the weak, and the troubled. *Pediatrics, 112*, 1231-1237.
- Kalb, L. M., & Loeber, R. (2003). Child disobedience and noncompliance: A review. *Pediatrics, 111*, 641-652.
- Kasen, S., Berenson, K., Cohen, P., & Johnson, J. G. (2004). The effects of school climate on changes in aggressive and other behaviors related to bullying. In D. L. Espelage & S. M. Swearer, (Eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 187-210). Mahwah, NJ: Lawrence Erlbaum.
- Katsiyannis, A., Ryan, J. B., Zhang, D., & Spann, A. (2008). Juvenile delinquency and recidivism: The impact of academic achievement. *Reading & Writing Quarterly, 24*, 177-196.
- Kaukiainen, A., Salmivalli, C., Lagerspetz, K., Tamminen, M., Vauras, M., Maki, H., & Poskiparta, E. (2002). Learning difficulties, social intelligence, and self-concept: Connections to bully-victim problems. *Scandinavian Journal of Psychology, 43*, 269-278.
- Kavale, K. A., & Forness, S. R. (1995). Social skill deficits and training: A meta-analysis of the research in learning disabilities. In T. E. Scruggs & M. A. Mastropieri (Eds.), *Advances in learning and behavioral disabilities* (Vol. 9, pp. 119-160). Greenwich, CT: JAI Press.
- Kawachi, I., & Kennedy, B. P. (2002). *The health of nations: Why inequality is harmful to your health*. New York: New Press.
- Kellaghan, T., Sloane, K., Alvarez, B., & Bloom, B. S. (1993). *The home environment and school learning: Promoting parental involvement in the education of children*. San Francisco: Jossey-Bass.
- Kesner, J. E., (2000). Teacher characteristics and the quality of child-teacher relationships. *Journal of School Psychology, 28*, 133-149.
- Khoury-Kassabri, M., Benbenishty, R., Astor, R. A., & Zeira, A. (2004). The contributions of community, family, and school variables to student victimization. *American Journal of Community Psychology, 34*, 187-204.
- Killen, M., & Turiel, E. (1991). Conflict resolution in preschool and social interactions. *Early Education and Development, 2*, 240-255.
- Koo, D. J., Peguero, A. A., & Shekarkhar, Z. (2012). Gender, immigration, and school victimization. *Victims & Offenders, 7*, 77-96

- Kuperminc, G. P., Leadbeater, B. J., Emmons, C., & Blatt, S. J. (1997). Perceived school climate and difficulties in the social adjustment of middle school students. *Applied Developmental Science, 1*, 76-88.
- Kupersmidt, J. B., & Coie, J. D. (1990). Preadolescent peer status, aggression and school adjustment as predictors of externalizing problems in adolescence. *Child Development, 61*, 1350-1362.
- Ladd, G. W., & Burgess, K. B. (2001). Do relational risks and protective factors moderate the linkages between childhood aggression and early psychological and school adjustment? *Child Development, 72*, 1579-1601.
- Lahey, B. B., Waldman, I. D., & McBurnett, K. (1999). Annotation: The development of antisocial behavior: An integrative causal model. *Journal of Child Psychology and Psychiatry, 40*, 669-682.
- Lamden, A. M., King, M. J., & Goldman, R. K. (2002). Divorce: Crisis intervention and prevention with children of divorce and remarriage. In J. Sandoval (ed.), *Handbook of crisis counseling, intervention, and prevention in the schools* (2nd ed., pp. 83-104). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Lapointe, J. M. (2003). Teacher-student conflict and misbehavior: Toward a model of the extended symmetrical escalation. *Journal of Classroom Interaction, 38*, 11-19.
- Latipun, S., Nasir, R., Zainah, A. Z., & Khairudin, R. (2012). Effectiveness of peer conflict resolution focused counseling in promoting peaceful behavior among adolescents. *Asian Social Science, 8*, 8-16.
- Laub, J. H., & Lauritsen, J. L. (1998). The interdependence of school violence with neighborhood and family conditions. In D. S. Elliott, B. A. Hamburg, & K. R. Williams (eds.), *Violence in American schools* (pp. 127-155). Cambridge, UK: Cambridge University Press.
- Laukkanen, E., Shemeikka, S., Notkola, I. -L., Koivumaa-Honkanen, H., & Nissinen, A. (2002). Externalizing and internalizing problems at school as signs of health-damaging behaviour and incipient marginalization. *Health Promotion International, 17*, 139-146.
- Laursen, B. (1993). Conflict management among close friends. In B. Laursen (Ed.), *Close friendships in adolescence : new directions for child development* (pp. 39-54). San Francisco : Jossey-Bass.
- Laursen, B., & Collins, W. A. (1994). Interpersonal conflict during adolescence. *Psychological Bulletin, 115*, 197-209.
- Laursen, B., & Hartup, W. W. (1989). The dynamics of preschool children's conflicts. *Merrill-Palmer Quarterly, 35*, 281-297.

- Lewandowski, L. J., & Barlow, J. R. (2000). Social cognition and verbal learning disabilities. *Journal of Psychotherapy in Independent Practice, 4*, 35–47.
- Lewis, R., Romi, S., Qui, X., & Katz, Y. J. (2005). Teachers' classroom discipline and student misbehavior in Australia, China and Israel. *Teaching and Teacher Education, 21*, 729-741.
- Limber, S. P., & Small, M. A. (2003). State laws and policies to address bullying in schools. *School Psychology Review, 32*, 445-455.
- Little, E. (2005). Secondary school teachers' perceptions of students' problem behaviours. *Educational Psychology, 25*, 369-377.
- Liu, J. (2004). Childhood externalizing behavior: Theory and implications. *Journal of Child and Adolescent Psychiatric Nursing, 17*, 93-103.
- Loeber, R., Burke, J. D., Lahey, B. B., Winters, A., & Zera, M. (2000). Oppositional defiant and conduct disorder: A review of the past 10 years, Part I. *Journal of the American Academy of Child & Adolescent Psychiatry, 39*, 1468-1484.
- Maggs, J. L., Almeida, D. M., & Galambos, N. L. (1995). Risky business: The paradoxical meaning of problem behavior for young adolescents. *Journal of Early Adolescence, 15*, 344-362.
- Malloy, H. L., & McMurray, P. (1996). Conflict strategies and resolutions: Peer conflict in an integrated early childhood classroom. *Early Childhood Research Quarterly, 11*, 185-206.
- Mayer, G. R. (1995). Preventing antisocial behavior in the schools. *Journal of Applied Behavior Analysis, 28*, 467-478.
- Mayer, G. R. (2001). Antisocial behavior: Its causes and prevention within our schools. *Education and Treatment of Children, 24*, 414-429.
- Mayer, G. R. (2002). Behavioral strategies to reduce school violence. *Child & Family Behavior Therapy, 24*, 83-100.
- Mayer, G. R., Nafpaktitis, M., Butterworth, T., & Hollingsworth, P. (1987). A search for the elusive setting events of school vandalism: A correlational study. *Education and Treatment of Children, 10*, 259-270.
- McConville, D. W., & Cornell, D. G. (2003). Aggressive attitudes predict aggressive behavior in middle school students. *Journal of Emotional and Behavioral Disorders, 11*, 179-187.
- McDermott, P. A. (1996). A nationwide study of developmental and gender prevalence for psychopathology in childhood and adolescence. *Journal of Abnormal Child Psychology, 24*, 53-66.

- McEvoy, A., & Welker, R. (2000). Antisocial behavior, academic failure, and school climate: A critical review. *Journal of Emotional and Behavioral Disorders*, 8, 130–140.
- McGinnis, J. C., Frederick, B. P. & Edwards, R. (1995). Enhancing classroom management through proactive rules and procedures. *Psychology in the Schools*, 32, 220-224.
- McPherson, M, Smith-Lovin, L., & Cook, J. M. (2001). Birds of a feather: Homophily in social networks. *Annual Review of Sociology*, 27, 415-444.
- Meehan, B. T., Hughes, J. N., & Cavell, T. A. (2003). Teacher-student relationships as compensatory resources for aggressive children. *Child Development*, 74, 1145-1157.
- Mendez, L. M. R., & Knoff, H. M. (2003). Who gets suspended from school and why: A demographic analysis of schools and disciplinary infractions in a large school district. *Education and Treatment of Children*, 26, 30-51.
- Meyer-Adams, N., & Conner, B. T. (2008). School violence: Bullying behaviors and the psychosocial school environment in middle schools. *Children and Schools*, 30, 211-221.
- Miller, D., & Chen, V. (2006, December). *Imputation methods document*. Retrieved February 26, 2010, from http://search-results.aset.psu.edu/search?q=imputation+methods+document&btnG=Search&client=PennState&proxystylesheet=PennState&output=xml_no_dtd&site=PRI
- Mishna, F. (2003). Learning disabilities and bullying: Double jeopardy. *Journal of Learning Disabilities*, 36, 336-347.
- Moffitt, T. E., & Caspi, A. (2001). Childhood predictors differentiate life-course persistent and adolescence-limited antisocial pathways among males and females. *Development and Psychopathology*, 13, 355-375.
- Monks, C. P., Smith, P. K., Naylor, P., Barter, C., Ireland, J. L., & Coyne, I. (2009). Bullying in different contexts: Commonalities, differences and the role of theory. *Aggressive and Violent Behavior*, 14, 146-156.
- Morrison, G. M., & Cosden, M. A. (1997). Risk, Resilience, and adjustment of individuals with learning disabilities. *Learning Disability Quarterly*, 20, 43-60.
- Moss, E., Rousseau, D., Parent, S., St-Laurent, D., & Saintonge, J. (1998). Correlates of attachment at school age: Maternal reported stress, mother-child interaction, and behavior problem. *Child Development*, 69, 1390-1405.
- Mouttapa, M., Valente, T., Gallaher, P., Rohrbach, L. A., & Unger, J. B. (2004). Social network predictors of bullying and victimization. *Adolescence*, 39, 315-335.

- Mulvaney, M. K., & Mebert, C. J. (2007). Parental corporal punishment predicts behavior problems in early childhood. *Journal of Family Psychology, 21*, 389-397.
- Murphy, B. C. (2002). An integrative examination of peer conflict: Children's reported goals, emotions, and behaviors. *Social Development, 11*, 534-557.
- Murray, C., & Murray, K. M. (2004). Child level correlates of teacher–student relationships: An examination of demographic characteristics, academic orientations, and behavioral orientations. *Psychology in the Schools, 41*, 751-762.
- Murray, C., Waas, G. A., & Murray, K. M. (2008). Child race and gender as moderators of the association between teacher-child relationships and school adjustment. *Psychology in the Schools, 45*, 562-578.
- Nagin, D., & Tremblay, R. E. (1999). Trajectories of boys' physical aggression, opposition, and hyperactivity on the path to physically violent and nonviolent juvenile delinquency. *Child Development, 70*, 1181-1196.
- Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morten, B., & Scheidt, P. (2001). Bullying behaviors among U.S. youth: Prevalence and association with psychosocial adjustment. *Journal of the American Medical Association, 285*, 2094-2100.
- Nansel, T. R., Overpeck, M. D., Haynie, D. L., Ruan, J., & Scheidt, P. C. (2003). Relationships between bullying and violence among US youth. *Archives of Pediatrics and Adolescent Medicine, 157*, 348-353.
- Nash, J. K. (2002). Neighborhood effects on sense of school coherence and educational behavior in students at risk of school failure. *Children & Schools, 24*, 73-89.
- National Center for Education Statistics (n.d.). *Safety in numbers: Collecting and using crime, violence, and discipline incident data to make a difference in schools*. Retrieved October 4, 2010, from <http://nces.ed.gov/pubs2002/2002312.pdf>
- National Center for Education Statistics (1996). *Urban schools: The challenge of location and poverty* (NCES 96-184). U.S. Department of Education, Office of Education Research and Improvement. Retrieved February 14, 2013, from <http://nces.ed.gov/pubs/96184all.pdf>
- National Institute of Child Health & Human Development. (2001). *Bullying widespread in U.S. schools, survey finds*. Retrieved May 4, 2007, from <http://www.nichd.nih.gov/news/releases/bullying.cfm>
- National Longitudinal Survey of Youth Codebook Supplement (n.d.). *NLSY79 Appendix 6: 1979-2004 Urban-rural variables*. Retrieved March 30, 2013, from <http://www.nlsinfo.org/nlsy79/docs/79html/codesup/appen6.htm>

- National Youth Violence Prevention Resource Center (n.d.). *Bullying*. Retrieved May 4, 2007, from <http://www.safeyouth.org/scripts/teens/bullying.asp>
- Nelson, J. R., Benner, G. J., Lane, K., & Smith, B. W. (2004). Academic achievement of K-12 students with emotional and behavioral disorders. *Council for Exceptional Children, 71*, 59-73.
- Newton, R. R., Litrownik, A. J., & Landsverk, J. A. (2000). Children and youth in foster care. Disentangling the relationship between problem behaviors and number of placements. *Child Abuse & Neglect, 24*, 1363-1374.
- Noakes, M. A., & Rinaldi, C. M. (2006). Age and gender differences in peer conflict. *Journal of Youth and Adolescence, 35*, 881-891.
- O'Connell, P., Pepler, D., & Craig, W. (1999). Peer involvement in bullying: Insights and challenges for intervention. *Journal of Adolescence, 22*, 437-452.
- O'Keefe, M., & Sela-Amit, M. (1997). An examination of the effects of race/ethnicity and social class on adolescents' exposure to violence. *Journal of Social Service Research, 22*, 53-71.
- Ohene, S. A., Ireland, M., McNeely, C., Borowsky, I. (2006). Parental expectations, physical punishment, and violence among adolescents who score positive on a psychosocial screening test in primary care. *Pediatrics, 117*, 441-447.
- Olson, S. L., Bates, J. E., Sandy, J. M., & Lanthier, R. (2000). Early developmental precursors of externalizing behavior in middle childhood and adolescence. *Journal of Abnormal Child Psychology, 28*, 119-133.
- Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Oxford & Cambridge: Blackwell Publishers.
- Opatow, S. (1991). Adolescent peer conflicts: Implications for students and for schools. *Education and Urban Society, 23*, 416-441.
- Patterson, C. J., Vaden, N. A., & Kupersmidt, J. B. (1991). Family background, recent life events and peer rejection during childhood. *Journal of Social and Personal Relationships, 8*, 347-361.
- Patterson, G. R. (1986). Performance models for antisocial boys. *American Psychologist, 41*, 432-444.
- Patterson, C. J., Cohn, D. A., & Kao, B. T. (1989). Maternal warmth as a protective factor against risks associated with peer rejection among children. *Development and Psychopathology, 1*, 21-38.

- Paulson, S. E. (1994). Relations of parenting style and parental involvement with ninth-grade students' achievement. *Journal of Early Adolescence, 14*, 250-267.
- Pelcovitz, D., Kaplan, S. J., DeRosa, R. R., Mandel, F. S., & Salzinger, S. (2000). Psychiatric disorders in adolescents exposed to domestic physical abuse. *American Journal of Orthopsychiatry, 70*, 360-369.
- Pellegrini, A. D. (2002). Bullying, victimization, and sexual harassment during the transition to middle school. *Educational Psychologist, 37*, 151-163.
- Pellegrini, A. D., & Bartini, M. (2000). A longitudinal study of bullying, victimization, and peer affiliation during the transition from primary school to middle school. *American Educational Research Journal, 37*, 699-725.
- Pepler, D. J., & Craig, W. M. (1995). A peer behind the fence: Naturalistic observations of aggressive children with remote audiovisual recording. *Developmental Psychology, 31*, 548-553.
- Pepler D. J., & Craig, W. M. (2005) Aggressive girls on troubled trajectories: A developmental perspective. In D. J. Pepler, K. C. Madsen, C. Webster & K. S. Levene (eds.), *The development and treatment of girlhood aggression* (pp. 3-28). Mahwah, NJ: Lawrence Erlbaum.
- Pepler, D.J., Craig, W. M., Ziegler, S., & Charach, A. (1994). An evaluation of an anti-bullying intervention in Toronto schools. *Canadian Journal of Community Mental Health, 13*, 95-110.
- Perry, D. G., Perry, L. C., & Weiss, R. J. (1989). Sex differences that children anticipate for aggression. *Developmental Psychology, 25*, 312-319.
- Pervin, K., & Turner, A. (1994). An investigation into staff and pupil knowledge, attitudes, and beliefs about bullying in an inner city school. *Pastoral Care in Education, 27*, 113-122.
- Peterson, J. S., & Ray, K. E. (2006). Bullying and the gifted: Victims, perpetrators, prevalence, and effects. *Gifted Child Quarterly, 50*, 148-168.
- Petts, R. J. (2009). *Fathers' religious involvement and early childhood behavior* (Fragile Families Working Paper 2009-22-FF). Muncie, IN: Author.
- Pettit, G. S., Bates, J. E., Dodge, K. A., & Meece, D. W. (1999). The impact of after-school peer contact on early adolescent externalizing problems is moderated by parental monitoring, perceived neighborhood safety, and prior adjustment. *Child Development, 70*, 768-778.
- Phillips, D. A. (2007). Punking and bullying: Strategies in middle school, high school, and beyond. *Journal of Interpersonal Violence, 22*, 158-178.

- Phillips, M., & Chin, T. (2004). School inequality: What do we know? In K. M. Neckerman (Ed.), *Social inequality* (pp. 467-519). New York: Russell Sage Foundation.
- Pianta, R. C., Steinberg, M. S., & Rollins, K. B. (1995). The first two years of school: Teacher-child relationships and deflections in children's classroom adjustment. *Development and Psychopathology, 7*, 295-312.
- Plybon, L. E., & Kliwer, W. (2001). Neighborhood types of externalizing behavior in urban school-age children: Tests of direct, mediated, and moderated effects. *Journal of Child and Family Studies, 10*, 419-437.
- Poulin, F., Dishion, T. J., & Burraston, B. (2001). 3-year iatrogenic effects associated with aggregating high-risk adolescents in cognitive-behavioral preventive interventions. *Applied Developmental Science, 5*, 214-224.
- Qin, D. B., Way, N., & Rana, M. (2008). The "model minority" and their discontent: Examining peer discrimination and harassment of Chinese American immigrant youth. *New Directions for Child and Adolescent Development, 121*, 27-42.
- Ramey, E., Patterson, G. R., & Walker, H. M. (1990). Generalization of the antisocial trait from home to school settings. *Journal of Applied Developmental Psychology, 11*, 209-223.
- Ray, G. E., & Cohen, R. (2000). Children's evaluations of peer group entry and limited resource situations. *Merrill-Palmer Quarterly, 46*, 71-89.
- Reid, J. B. (1993). Prevention of conduct disorder before and after school entry: Relating interventions to developmental findings. *Development and Psychopathology, 5*, 243-262.
- Reid, J. B., Eddy, J. M., Fetrow, R. A., & Stoolmiller, M. (1999). Description and immediate impacts of a preventive intervention for conduct problems. *American Journal of Community Psychology, 27*, 483-517.
- Reinke, W. M., & Herman, K. C. (2002). Creating school environments that deter antisocial behaviors in youth. *Psychology in the Schools, 39*, 549-559.
- Reitz, E., Dekovic, M., Meijer, A. M., & Engels, R. C. M. E. (2006). Longitudinal relations among parenting, best friends, and early adolescent problem behavior: Testing bidirectional effects. *Journal of Early Adolescence, 26*, 272-295.
- Resnick, M., Bearman, P., Blum, R., Bauman, K., Harris, K., Jones, J. et al. (1997). Protecting adolescents from harm: Findings from the National Longitudinal Study on Adolescent Health. *The Journal of the American Medical Association, 278*, 823-832.

- Richards, C. M., Symons, D. K., Greene, C. A., & Szuszkiewicz, T. A. (1995). The bidirectional relationship between achievement and externalizing behavior problems of students with learning disabilities. *Journal of Learning Disabilities, 28*, 8-17.
- Richman, M., Stevenson, J., & Graham, P. J. (1982). *Preschool to school: A behavioural study*. London: Academic Press.
- Robers, S., Zhang, J., & Truman, J. (2011). *Indicators of school crime and safety: 2011*. (NCES 2012-002/NCJ 236021). National Center for Education Statistics, U.S. Department of Education, and Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice. Washington, DC.
- Rodkin, P. C. (2004). Peer ecologies of aggression and bullying. In D. L. Espelage & S. M. Swearer (Eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 15-35). Mahwah, N.J.: Lawrence Erlbaum Associates, Publishers.
- Romo, H. D., & Falbo, T. (1996). *Latino high school graduation*. Austin, TX: University of Texas at Austin.
- Rose, C. A., Monda-Amaya, L. E., & Espelage, D. L. (2011). Bullying perpetration and victimization in special education: A review of the literature. *Remedial and Special Education, 32*, 114-130.
- Rose, R. A., & Fraser M. W. (2008). A simplified framework for using multiple imputation in social work research. *Social Work Research, 32*, 171-178.
- Rowe, D. C., Vazsonyi, A. T., & Flannery, D. J. (1994). No more than skin deep: Ethnic and racial similarity in developmental process. *Psychological Review, 19*, 396-413.
- Ryan, R. M., Stiller, J., & Lynch, J. H. (1994). Representations of relationships to teachers, parents, and friends as predictors of academic motivation and self-esteem. *Journal of Early Adolescence, 14*, 226-249.
- Salcido, R. M., Ornelas, V., & Garcia, J. A. (2002). A neighborhood watch program for inner-city school children. *Children & Schools, 24*, 175-187.
- Salmivalli, C., Lagerspetz, K., Bjorkvist, K., Osterman, K., & Kaukiainen, A. (1996). Bullying as a group process: Participant roles and their relations to social status within the group. *Aggressive Behavior, 22*, 1-15.
- Sampson, R. J. (2012). *Great American city: Chicago and the enduring neighborhood effect*. Chicago: University of Chicago Press.
- Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science, 277*, 918-924.

- Savage, R. (2005). Friendship and bullying patterns in children attending a language base in a mainstream school. *Educational Psychology in Practice: Theory, Research and Practice in Educational Psychology*, 21, 23-36.
- Saylor, M. F., & Brookshire, W. K. (1993). Social, emotional, and behavioral adjustment of accelerated students, students in gifted classes, and regular students in eighth grade. *Gifted Children Quarterly*, 37, 150-154.
- Saylor, C. F., & Leach, J. B. (2009). Perceived bullying and social support in students accessing special inclusion programming. *Journal of Developmental and Physical Disabilities*, 21, 69-80.
- Scaramella, L. V., Conger, R. D., & Simons, R. L. (1999). Parental protective influences and gender-specific increases in adolescent internalizing and externalizing problems. *Journal of Research on Adolescence*, 9, 111-141.
- Schantz, C. U. (1987). Conflicts between children. *Child Development*, 58, 283-305.
- Schubiner, H., Scott, R., & Tzelepis, A. (1993). Exposure to violence among inner-city youth. *Journal of Adolescent Health*, 14, 214-219.
- Seals, D., & Young, J. (2003). Bullying and victimization: Prevalence and relationship to gender, grade level, ethnicity, self-esteem, and depression. *Adolescence*, 38, 735-747.
- Sebald, H. (1992). *Adolescence*. Upper Saddle River, NJ: Prentice Hall.
- Seidman, E., Yoshikawa, H., Roberts, A., Chesir-Teran, D., Allen, L., Friedman, J. L., & Aber, J. L. (1998). Structural and experiential neighborhood contexts, developmental stage, and antisocial behavior among urban adolescents in poverty. *Development and Psychopathology*, 10, 259-281.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton-Mifflin.
- Shann, M. H. (1999). Academic and a culture of caring: The relationship between school achievement and prosocial and antisocial behaviors in four urban middle schools. *School Effectiveness and School Improvement*, 10, 390-413.
- Shaw, C. R., & McKay, H. D. (1942). *Juvenile delinquency and urban areas: A study of rates of delinquents in relation to differential characteristics of local communities in American cities*. Chicago: University of Chicago Press.
- Shaw, D. S., & Winslow, E. B. (1997). Precursors and correlates of antisocial behavior from infancy to preschool. In D. M. Stoff, J. Breiling & J. D. Maser (Eds.), *Handbook of antisocial behavior* (pp. 148–158). New York: John Wiley & Sons.

- Sheets, R. H. (1996). Urban classroom conflict: Student-teacher perception ethnic integrity, solidarity and resistance. *Urban Review*, 28, 165-183.
- Sheridan, S. M., Warnes, E., & Dowd, S. (2004). Home-school collaboration and bullying: An ecological approach to increase social competence in children and youth. In D. L. Espelage & S. M. Swearer (eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 245-267). Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Shore, R. E., Gunter, P. L., & Jack, S. L. (1993). Classroom management strategies: Are the setting events for coercion? *Behavioral Disorders*, 18, 92-102.
- Sidorowicz, K., & Hair, E. C. (2009). Assessing peer conflict and aggressive behaviors: A guide for out-of-school time program practitioners. Child Trends. Retrieved December 31, 2012, from http://www.childtrends.org/files/child_trends-2009_10_29_rb_assessingpeer.pdf
- Silver, R. B., Measelle, J. R., Armstrong, J. M., & Essex, M. J. (2005). Trajectories of classroom externalizing behavior: Contributions of child characteristics, family characteristics, and the teacher-child relationship during the school transition. *Journal of School Psychology*, 43, 39-60.
- Sims, M., Hutchins, T., & Taylor, M. (1997). Conflict as social interaction: Building relationship skills in child care settings. *Child and Youth Care Forum*, 26, 247-260.
- Simons, R. L., Wu, C. I., Lin, K. H., Gordon, L., & Conger, R. D. (2000). A cross-cultural examination of the link between corporal punishment and adolescent antisocial behavior. *Criminology*, 38, 47-79.
- Skiba, R. J. (2000). *Zero tolerance, zero evidence: An analysis of school disciplinary practice*. Bloomington, IN: Indiana University Education Policy Center.
- Skiba, R. J., Peterson, R. L., & Williams, T. (1997). Office referrals and suspension: Disciplinary intervention in middle schools. *Education and Treatment of Children*, 20, 295-315.
- Smith, J. D., Schneider, B. H., Smith, P. K., & Ananiadou, K. (2004). The effectiveness of whole school antibullying programs: A synthesis of evaluation research. *School Psychology Review*, 33, 547-560.
- Smith, P. K., Madsen, K. C., & Moody, J. C. (1999). What causes the age decline in reports of being bullied at school? Toward a developmental analysis of risks of being bullied. *Educational Research*, 41, 267-285.

- Smith, P. K., Madsen, K. C., & Moody, J. C. (1999). What causes the age decline in reports of being bullied at school? Towards a developmental analysis of risks of being bullied. *Educational Research, 41*, 267-285.
- Smith, P. K., & Myron-Wilson, R. (1998). Parenting and school bullying. *Clinical Child Psychology and Psychiatry, 3*, 405-417.
- Smokowski, P. R., & Kopasz, K. H. (2005). Bullying in school: An overview of types, effects, family characteristics, and intervention strategies. *Children & Schools, 27*, 101-110.
- Solano-Flores, G., & Nelson-Barber, S. (2000). On the cultural validity of science assessments. *Journal of Research in Science Teaching, 38*, 553-573.
- Somerville, C. (2010). *The effects of parental attitudes and practices on the peer victimization of their children*. Unpublished master's thesis, Brandeis University.
- Spencer, M. B., Noll, E., Stoltzfus, J., & Harpalani, V. (2001). Identity and school adjustment: Revisiting the "acting White" assumption. *Educational Psychologist, 36*, 21-30.
- Spigelman, G., Spigelman, A., & Englesson, I. (1991). Hostility, aggression, and anxiety levels of divorce and nondivorce children as manifested in their responses to projective tests. *Journal of Personality Assessment, 56*, 438-452.
- Spriggs, A. L., Iannotti, R. J., Nansel, T. R. & Haynie, D. L. (2007). Adolescent bullying involvement and perceived family, peer and school relations: Commonalities and differences across race/ethnicity. *Journal of Adolescent Health, 41*, 283-293.
- Steinberg, L. (1986). Latchkey children and susceptibility to peer pressure: An ecological analysis. *Developmental Psychology, 22*, 433-439.
- Steinberg, L. D., Brown, B. B., & Dornbusch, S. M. (1996). *Beyond the classroom: Why school reform has failed and what parents need to do*. New York: Simon & Schuster.
- Steinberg, L., Lamborn, S. D., Dornbusch, S. M., & Darling, N. (1992). Impact of parenting practices on adolescent achievement: Authoritative parenting, school involvement, and encouragement to succeed. *Child Development, 63*, 1266-1281.
- Stephenson, J., Linfoot, K., & Martin, A. (2000). Behaviours of concern to teachers in the early years of school. *International Journal of Disability, Development and Education, 47*, 225-235.
- Stephenson, P., & Smith, D. (1989). Bullying in the junior high. In D. Tattum & D. Lane (Eds.), *Bullying in schools* (pp.45-48). Stoke-on-Trent: Trentham Books.
- Stinchcomb, J. B., Bazemore, G., & Riestenberg, N. (2006). Beyond zero tolerance: Restoring justice in secondary schools. *Youth Violence and Juvenile Justice, 4*, 123-147.

- Stockdale, M. S., Hangaduambo, S., Duys, D., Larson, K., & Sarvela, P. D. (2002). Rural elementary students', parents', and teachers' perceptions of bullying. *American Journal of Health Behavior, 26*, 266-277.
- Stone, W. L., La Greca, A. M. (1990). The social status of children with learning disabilities: A reexamination. *Journal of Learning Disabilities, 23*, 32-37.
- Stormont, M. (2002). Externalizing behavior problems in young children: Contributing factors and early intervention. *Psychology in the Schools, 39*, 127-138.
- Stormshak, E. A., Bierman, K. L., McMahon, R. J., Lengua, L., & Conduct Problems Prevention Research Group, (2000). Parenting practices and child disruptive behavior problems in early elementary school. *Clinical Child and Adolescent Psychology, 29*, 17-29.
- Straus, M. A., Sugarman, D. B., & Giles-Sims, J. (1997). Spanking by parents and subsequent antisocial behavior of children. *Archives of Pediatric and Adolescent Medicine, 151*, 761-767.
- Sutton, J., Smith, P. K., & Sweetenham, J. (1999). Social cognition and bullying: Social inadequacy or skilled manipulation? *British Journal of Developmental Psychology, 17*, 435-450.
- Swearer, S. M., & Doll, B. (2001). Bullying in school: An ecological framework. *Journal of Emotional Abuse, 2*, 7-23.
- Swearer, S. M., & Espelage, D. L. (2004). Introduction: A social-ecological framework of bullying among youth. In D. L. Espelage & S. M. Swearer (Eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 1-12). Mahwah, N.J.: Lawrence Erlbaum Associates, Publishers.
- Tattum, D. (1982). *Disruptive pupils in schools and units*. Chichester, U.K.: John Wiley & Sons.
- Taylor, G. H. (1989). Learning disabilities. In E. Mash & R. Barkley (eds.), *Treatment of childhood disorders* (pp. 347-380). New York: Guilford.
- Thernstrom, A., & Thernstrom, S. (2003). *No excuses: Closing the racial gap in learning*. New York: Simon & Schuster Paperbacks.
- Thornberg, R. (2007). Inconsistencies in everyday patterns of school rules. *Ethnology and Education, 3*, 401-416.
- Tobin, T., & Sprague, J. (2000). Alternate education strategies: Reducing violence in school and the community. *Journal of Emotional and Behavioral Disorders, 8*, 177-186.

- Twemlow, S. W., Sacco, F. C., & Williams, P. (1996). A clinical and interactionist perspective on the bully-victim-bystander relationship. *Bulletin of the Menninger Clinic*, 60, 296-313.
- Tynan, W. D. (2008). *Oppositional defiant disorder*. Retrieved September 27, 2010, from <http://emedicine.medscape.com/article/918095-overview>
- Unnever, J. D., & Cornell, D. G. (2004). Middle school victims of bullying: Who reports being bullied? *Aggressive Behavior*, 30, 373-388.
- United States Census Bureau (2011). *Poverty: highlights*. U.S. Department of Commerce. Retrieved February 16, 2013, from <http://www.census.gov/hhes/www/poverty/about/overview/>
- U.S. Department of Education, Office of Special Education and Rehabilitative Services. (2006). *Twenty-sixth annual report to Congress on the implementation of the Individuals with Disabilities Education Act*. Washington, DC: Author.
- Varjas, K., Henrich, C. C., & Meyers, J. (2009). Urban middle school students' perceptions of bullying, cyberbullying, and school safety. *Journal of School Violence*, 8, 159-176.
- Verdugo, R. R. (2002). Race-ethnicity, social class, and zero-tolerance policies. *Education and Urban Society*, 35, 50-75.
- Vervoort, M. H., Scholte, R. H. J., & Oberbeek, G. (2008). Bullying and victimization among adolescents: The role of ethnicity and ethnic composition of school class. *Journal of Youth and Adolescence*, 39, 1-11
- Vossekuil, B., Fein, R. A., Reddu, M., Borum, R., & Modzeleski, W. (2002). *The final report and findings of the Safe School Initiative: Implications for the prevention of school attacks in the United States*. Washington, D.C.: U.S. Secret Service and U.S. Department of Education.
- Walker, H. M., Ramsey, E., & Gresham, F. M. (2003-2004, Winter). Heading off disruptive behavior: How early intervention can reduce defiant behavior- and win back teaching time. *American Educator*. Retrieved March 29, 2013, from http://www.aft.org/pubs-reports/american_educator/winter03-04/early_intervention.html
- Wallerstein, J., & Kelly, J. (1980). *Surviving the breakup*. New York: Basic Books.
- Wang, J., Iannotti, R. J., & Nansel, T. R. (2009). School bullying among adolescents in the United States: Physical, verbal, relational, and cyber. *Journal of Adolescent Health*, 45, 368-375.
- Webster-Stratton, C. (2011). *The Incredible Years: Parents, teachers, and children's training series*. Seattle: Incredible Years, Inc.

- Webster-Stratton, C., & Hammond, M. (1988). Maternal depression and its relationship to life stress, perceptions of child behavior problems, parenting behaviors, and child conduct problems. *Journal of Abnormal Child Psychology*, *16*, 299-315.
- Weiss, B., Caron, A., Ball, S., Tapp, J., Johnson, M., & Weisz, J. R. (2005). Iatrogenic effects of group treatment for antisocial youths. *Journal of Consulting and Clinical Psychology*, *73*, 1036-1044.
- Welsh, W., Stokes, R., & Greene, J. (2000). A macro-level model of school disorder. *Journal of Research in Crime and Delinquency*, *37*, 243-283.
- Wentzel, K. R., Barry McNamara, C., & Calwell, K. (2004). Friendships in middle school: Influences on motivation and school adjustment. *Journal of Educational Psychology*, *96*, 195-203.
- Wheeler, E. J. (1994). Peer conflicts in the classroom: Drawing implications from research. *Childhood Education*, *70*, 296-299.
- Whitney, I., Smith, P. K., & Thompson, D. (1994). Bullying and children with special educational needs. In P. K. Smith & S. Sharp (Eds.), *School bullying: Insights and perspectives*. London: Routledge.
- Wiener, J., & Schneider, B. H. (2002). A multisource exploration of the friendship patterns of children with and without learning disabilities. *Journal of Abnormal Child Psychology*, *30*, 127-141.
- Wienke Totura, C. M., MacKinnon-Lewis, C., Gesten, E. L., Gadd, R., Divine, K. P., Dunham, S., & Kamboukos, D. (2008). Bullying and victimization among boys and girls in middle school. *Journal of Early Adolescence*. Online first, published on November 17, 2008 as doi: 10.1177/0272431608324190.
- Williams, K. R., & Guerra, N. G. (2007). Prevalence and predictors of internet bullying. *Journal of Adolescent Health*, *41*, S14-S21.
- Wilson, K. E. (1988). *Development of conflict and conflict resolution among preschool children*. Unpublished master's thesis, Pacific Oaks College, Pasadena, CA.
- Wilson, W. J. (1987). *The truly disadvantaged*. Chicago: University of Chicago Press.
- Windle, M. (2000). Parental, sibling, and peer influences on adolescent substance use and alcohol problems. *Applied Developmental Science*, *4*, 98-110.
- Winter, J., Neal, J. C., & Waner, K. K. (2005). Student teams learning to cope with conflict. *The Delta Pi Epsilon Journal*, *85*, 67-74.

- Woods, S., Wolke, D. (2004). Direct and relational bullying among primary school children and academic achievement. *Journal of School Psychology, 42*, 135-155.
- World Health Organization (2002). *World report on violence and health*. Retrieved February 14, 2010, from http://www.who.int/violence_injury_prevention/violence/world_report/en/full_en.pdf
- Yoon, J. S. (2002). Teacher characteristics as predictors of teacher-student relationships: Stress, negative affect, and self-efficacy. *Social Behavior and Personality, 30*, 485-494.
- You, S., Furlong, M. J., Felix, E., Sharkey, J. D., Tanigawa, D., & Green, J. G. (2008). Relations among school connectedness, hope, life satisfaction, and bully victimization. *Psychology in the Schools, 45*, 446-460.
- Zima, B. T., Bussing, R., Freeman, S., Yang, X., Berlin, T. R., & Forness, S. R. (2000). Behavior problems, academic skill delays and school failure among school-aged children in foster care: Their relationship to placement characteristics. *Journal of Child and Family Studies, 9*, 87-103.
- Zimmerman, F. J., Glew, G. M., Christakis, D. A., & Katon, W. (2005). Early cognitive stimulation, emotional support, and television watching as predictors of subsequent bullying among grade-school children. *Archives of Pediatrics and Adolescent Medicine, 159*, 384-388.

APPENDIX A

Table 7. Moderators for peer externalizing behavior (N = 733)

Variable	Model 5		Model 6		Model 7	
	B(SE)	Exp(B) OR	B(SE)	Exp(B) OR	B(SE)	Exp(B) OR
Socio-demographic characteristics						
Age	.01(.00)	1.01	.01(.02)	1.10	.01(.02)	1.01
Race/ethnicity (white)						
Hispanic	-.79(1.40)	.45	-.34(.47)	.71	-.32(.39)	.73
Black	1.76(1.19)	5.81	.27(.36)	1.31	.39(.26)	1.48
Gender (female)						
Male	.25(.26)	1.28	.21(.26)	1.23	.19(.26)	1.21
Learning problems	.99*(.43)	2.69	.97*(.43)	2.64	.11(1.73)	1.12
Mothers' marital status (married, spouse present)						
Never married	-.10(.49)	.90	-.17(.49)	.84	-.10(.49)	.90
Other	-.13(.35)	.88	-.02(.36)	.98	-.11(.35)	.90
Mothers' educational status (less than high school)						
High school	-.40(.42)	.67	-.41(.42)	.66	-.47(.41)	.63
More than high school	-.48(.42)	.62	-.46(.43)	.63	-.52(.42)	.59
Poverty status	.13(.40)	1.14	.05(.41)	1.05	.13(.40)	1.14
Peer externalizing (Time 1)	2.05***(.25)	7.77	2.12***(.26)	8.33	2.06***(.25)	7.85
Microsystem						
Parenting (HOME scale)						
Cognitive stimulation	-.00(.01)	1.00	.01(.02)	1.01	-.00(.01)	1.00
Emotional support	-.01(.01)	.99	-.01(.02)	.99	-.01(.01)	.99
Negative peer influence	.11(.23)	1.12	.07(.22)	1.07	.11(.22)	1.12
School environment						
Teacher involvement	.12(.27)	1.13	-.02(.17)	.98	-.02(.18)	.98
Ease of making friends	-.38†(.27)	.68	-.36†(.20)	.70	-.36†(.20)	.70
Exosystem						
Neighborhood environment						
Neighborhood safety						
SMSA residence (in SMSA, central city)	-.34*(.14)	.71	-.35*(.15)	.70	-.33*(.14)	.72
Not in SMSA	.86(.43)	2.36	.86*(.44)	2.36	.88*(.43)	2.41
SMSA, not central city	.67(.43)	1.95	.70*(.31)	2.01	.67*(.31)	1.95

Table 7 (cont.)

Variable	Model 5		Model 6		Model 7	
	<i>B</i> (<i>SE</i>)	Exp(<i>B</i>) OR	<i>B</i> (<i>SE</i>)	Exp(<i>B</i>) OR	<i>B</i> (<i>SE</i>)	Exp(<i>B</i>) OR
Macrosystem						
Religious involvement	-.08(.15)	.92	-.07(.15)	.93	-.10(.15)	.90
Lack of school rules	-.25(.16)	.78	-.25(.16)	.78	-.26(.16)	.77
Interaction by race/ethnicity						
Teacher involvement × Black	-.43(.36)	.65				
Teacher involvement × Hispanic	-.15(.41)	1.16				
Cognitive stimulation × Black			-.02(.02)	.98		
Cognitive stimulation × Hispanic			-.03(.03)	.97		
Emotional support × Black			-.02(.02)	.98		
Emotional support × Hispanic			.02(.03)	.98		
Moderators						
Teacher involvement × Learning problems					.14(.56)	1.15
Ease of making friends × Learning problems					.17(.62)	1.19
-2 LL	480.190		478.26		482.87	
<i>df</i>	23		25		23	

Reference categories are in parentheses

SE = standard error, *OR* = odds ratios, *SMSA* = standard metropolitan statistical area, LL = log likelihood. -2LL was averaged for the five implicates for each model.

For Model 5 change in -2LL = 3.26, *df* = 2 (ns); for Model 6, change in -2LL = 5.19, *df* = 4 (ns); and for Model 7, change in -2LL = .58, *df* = -2 (ns)

†*p* < .10; **p* < .05; ** *p* < .01; ****p* < .001