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UNDERSTAND THE LINK BETWEEN EARLY EXPOSURE TO FAMILY VIOLENCE AND LATER INVOLVEMENT IN SCHOOL BULLYING: HOW CAN SCHOOL CONNECTEDNESS HELP?

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by

Pei-Hsuan Liu

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The dissertation of Pei-Hsuan Liu was reviewed and approved* by the following:

SeriaShia J. Chatters
Assistant Professor of Education
Dissertation Adviser
Chair of Committee

JoLynn V. Carney
Associate Professor of Education

Carlomagno Panlilio
Assistant Professor of Education

Amy Marshall
Associate Professor of Psychology

Peggy Lorah
Affiliate Assistant Professor of Education
Special Member

Carlos Zalaquett
Professor in Charge of Counselor Education

*Signatures are on file in the Graduate School

ABSTRACT

The purpose of this study was to examine the association between early exposure to family violence, including domestic violence and child maltreatment, and later involvement in bullying perpetration and peer victimization, as well as the moderating role of school connectedness in this relationship. I conducted a secondary data analysis using data from the Fragile Family and Child Wellbeing Study (FFCWS), and examining a total of 1,630 cases. Controlling for demographic variables including child's gender, race/ethnicity, family income, and mother's age, I used two models separately to examine how children's exposure to family violence at age three predicted their involvement in bullying perpetration and peer victimization at age nine, and how school connectedness moderated the effect of family violence on bullying-related behaviors. Using the Bioecological Theory of Human Development, I applied the Process-Person-Context-Time (PPCT) model to examine school bullying issues from a social-ecological perspective.

My analysis indicated that, when demographic variables were controlled for, being exposed to family violence at age three significantly predicted bullying perpetration and peer victimization at age nine. Although the analysis did not find that school connectedness moderated the relationship between family violence and bullying, it showed a significant association between school connectedness and bullying-related behaviors. The study's findings suggest that addressing trauma-related issues may be crucial to addressing bullying issues, which indicates that school bullying needs to be addressed through a trauma-informed lens. I conclude this dissertation with a discussion of the study's findings, implications, strengths and limitations, and by making recommendations for future research.

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Chapter 1

INTRODUCTION

School bullying is a pressing issue in the United States and around the world (Hong & Espelage, 2012; Nansel et al., 2001). In a recent survey of approximately 100,000 young people from over 20 countries conducted by The United Nations Children's Fund (UNICEF, 2016), 67% of participants reported being bullied. Dinkes, Kemp, Baum, and Snyder (2009) found that 32% of students between 12 and 18 years old in the United States were victims of bullying; 7% of the students that reported being bullied indicated that the bullying occurred on a daily basis. The problem extends to younger children as well. In a survey of approximately three thousand third to fifth grade students, Glew and associates (2005) found that 22% were involved in bullying perpetration or peer victimization. In addition, based on school reports in the National Center for Education Statistics, bullying occurred on a daily or weekly basis in 25% of public schools (Robers, Zhang, Truman, & Snyder, 2010).

Olweus (1993) defined bullying as intentional and repetitive “behavior that inflicts injury or discomfort upon another individual” and characterized by an imbalance of power. Common types of school bullying include physical, verbal, or social forms of aggression that perpetrators inflict upon victims (Olweus, 1993). Involvement in bullying and peer victimization has been shown to lead to negative emotional, social, psychological, and academic outcomes (Espelage, Rao, & De La Rue, 2013). Studies have found that children involved in bullying perpetration and victimization were more likely to experience poor academic achievement (Glew, Fan, Katon, Rivara, & Kernic, 2005), anxiety and depression (Gladstone, Parker, & Malhi, 2006; Ttofi, Farrington, Lösel, & Loeber, 2011), psychosomatic complaints (Gini & Pozzoli, 2013), as well as adjustment problems (Nansel et al., 2001).

As bullying has received increasing attention, a considerable amount of research has examined risk factors of bullying perpetration as well as peer victimization (Cook, Williams, Guerra, Kim, & Sadek, 2010; Hong & Espelage, 2012). Several studies have linked bullying-related behaviors to child maltreatment (Hong, Espelage, Grogan-Kaylor, & Allen-Meares, 2012). Dussich and Maekoya (2007) reported that physically abused children were more likely to become bullying perpetrators and victims in school. Chapple, Tyler, and Bersani (2005) also found that children who experienced physical and emotional abuse were likely to suffer peer rejection, which could lead to peer victimization.

In addition to examining how child abuse and neglect relate to bullying, research has explored the connection between exposure to domestic violence and school bullying. In a cross-sectional study involving around 1000 elementary and middle school-aged students in Italy, Baldry (2003) found a significant association between exposure to domestic violence and bullying perpetration/victimization in school. Similarly, Holt, Kantor, and Finkelhor (2009) investigated 205 fifth-graders and their parents and reported that children who bullied others were more likely to live in households where child maltreatment and domestic violence occurred.

However, research has shown that children rarely become violent immediately after they are exposed to violence; instead, they follow complex pathways through developmental processes (Moffitt & Caspi, 2001). Most of the studies examining child maltreatment and exposure to domestic violence emphasized on risk factors; however, not every child with history of maltreatment becomes bullying perpetrator or victim. School is the major unfamilial environment that children are exposed to; therefore, school-related protective factors are needed to be investigated in order for school to support children with history of maltreatment. Using the term *family violence* to encompass both child maltreatment and exposure to domestic violence,

the impact of early experience of family violence on later involvement of school bullying and peer victimization was explored in this study. The role of school connectedness as a moderator of the association between family violence and bullying/peer victimization was also investigated in this study.

Statement of the Problem

Bullying is a major issue in schools in the United States (Hymel & Swearer, 2015; Olweus, 2013; UNICEF, 2016). Research has suggested that experiencing bullying negatively impacts children's psychological, social, and behavioral well-being (Nansel et al., 2004). Because bullying typically occurs in schools, it falls to teachers and administrators to implement anti-bullying programs, curriculum, and school policies to prevent bullying, help bullies and victims develop social and emotional skills, promote bystander intervention, and encourage students to report bullying to school personnel (Lee, Kim, & Kim, 2015; Sherer & Nickerson, 2010). However, the research linking bullying perpetration and peer victimization to adverse childhood experiences suggested that conditions at home might have a stronger impact on bullying-related behaviors than conditions at schools (Dussich & Maekoya, 2007; Espelage, Low, & De La Rue, 2012).

Scholars began devoting increased attention to the impacts of childhood adversities after Felitti et al. (1998) conducted the Adverse Childhood Experiences study (ACEs study). Based on a survey of approximately 17,000 adults, the ACEs study explored the relationship between adverse childhood experiences and health status in adulthood (Felitti et al., 1998). The ACEs study indicated that people who experienced more types of childhood adversities were at a higher risk of experiencing physical and mental health issues in adulthood (Felitti et al., 1998).

Since then, studies have investigated the impacts of adverse childhood experiences on the well-being of children (Centers for Disease Control and Prevention; CDC, 2019). School bullying literature has also linked early childhood victimization and adverse family relationship to children's bullying-related behaviors at schools (Dussich & Maekoya, 2007; Duncan, 2004; Espelage, Low, Rao, Hong, & Little, 2014; Mohr, 2006). Within different type of adverse childhood experiences, research has found the association between family violence, including child maltreatment and exposure to domestic violence, to bullying-related behaviors in school (Hong et al., 2012; Voisin & Hong, 2012). However, most of these studies used cross-sectional data to associate the relation between family violence and bullying (Baldry, 2003; Cluver, Bowes, & Gardner, 2010; Espelage et al., 2012; Holt et al., 2009), a gap thus remains in the literature when it comes to examining the impact of early experience of family violence on later involvement in bullying from the longitudinal data, as well as examining the school-related protective factors that moderate this relationship.

Research studying child maltreatment and exposure to domestic violence together is similarly lacking. Most of the previous studies investigated family violence only focused on one category of familial victimizations such as physical abuse (Hamby, Finkelhor, Turner, & Ormrod, 2010). However, Turner, Finkelhor, and Ormrod (2010) asserted that researchers should consider various types of victimization when examining the impacts of childhood victimization because children commonly experience multiple forms of victimization.

Research Questions

The prediction of bullying and peer victimization from early experience of family violence, as well as the buffering role of school connectedness, were examined in this study. The research questions included:

RQ1: To what extent do children in the Fragile Family and Child Wellbeing Study experience family violence at age three and bullying/victimization at age nine?

RQ2: After controlling for demographic variables (child's gender, mother's race/ethnicity, mother's age, family income), to what extent does exposure of family violence (including child maltreatment and domestic violence) at age three predict bullying perpetration at age nine?

RQ3: To what extent does school connectedness moderate the impact of early exposure of family violence on later involvement of bulling perpetration?

RQ4: After controlling for demographic variables (child's gender, mother's race/ethnicity, mother's age, family income), to what extent does exposure of family violence (including child maltreatment and domestic violence) at age three predict bullying perpetration at age nine?

RQ5: To what extent does school connectedness moderate the impact of early exposure to family violence on later involvement of peer victimization?

Several hypotheses were formulated in this study. First of all, I hypothesized that early experiences of family violence would predict later involvement in both bullying perpetration and peer victimization. In addition, I hypothesized that school connectedness would moderate the relationship between family violence and bullying perpetration, as well as the relationship between family violence and peer victimization.

Significance of the Study

A growing body of literature has linked family violence to bullying-related behaviors in schools. Previous studies examining the association between familial victimization and bullying have found that children who experienced family violence, including child maltreatment and exposure to domestic violence, were at higher risk of becoming bullying perpetrators or victims

in school. Espelage and associates (2012) identified family violence as a strong predictor of school bullying and peer victimization.

To date, most studies exploring family violence and school bullying have been cross-sectional (Baldry, 2003; Cluver et al, 2010; Espelage et al., 2012; Holt et al., 2009); therefore, an additional study is needed in order to fully investigate this association from the longitudinal perspective. I utilized the Fragile Families and Child Wellbeing Study (FFCWS)—a longitudinal survey that followed a cohort of around 5,000 newborns through the first fifteen years of their lives—to conduct a secondary data analysis. The FFCWS dataset's large sample size made it possible to analyze the association between family violence and school bullying from data of various stages of child development. Hong and Espelage (2012) asserted the importance of using an ecological model to study school bullying. Therefore, I applied the Bioecological Theory of Human Development (Bronfenbrenner, 1994) to explore the child's ecological contexts on family violence and bullying-related behaviors.

In addition, I investigated the moderating role of school connectedness in the association between early exposure to family violence and later involvement in bullying-related behaviors. The literature of school connectedness has been focused on the importance of feeling connected to schools for adolescence and early adolescence (Monahan, Oesterle, & Hawkins, 2010), leading to the needs of investigating the impact of school connectedness on younger children in middle childhood. Up to date, only a few studies examined the impact of school connectedness for children with history of maltreatment (Crooks, Scott, Wolfe, Chiodo, & Killip, 2007; Saewyc, Wang, Chittenden, Murphy, & The Mc-Creary Centre Society, 2006); research has yet not explored the moderating effect of school connectedness on the association between early exposure of family violence and later involvement in school bullying. Establishing the

moderating factors of this relationship will lead to a fuller understanding of the needs of children who experience family violence and will inform school programs designed to support the needs of these children.

Research implied that most previous studies tended to examine only one type of childhood victimization or examine domestic violence and child maltreatment separately (Hamby et al., 2010). However, it is a common phenomenon that children experience multiple types of familial victimization at the same time (Finkelhor, Ormrod, & Turner, 2007). Several studies therefore emphasized the needs to examine child maltreatment and exposure to domestic violence together because analyzing only one type might risk overestimating its impact (Espelage et al., 2012; Hamby et al., 2010; Herrenkohl, Sousa, Tajima, Herrenkohl, Moylan, 2008). The results and implications of this study contributed to existing literature by examining children's experiences of domestic violence and child maltreatment together.

In this study, it was aimed to further elucidate the relationship between early experience of family violence and later involvement in school bullying, as well as the moderating effect of school connectedness. Bender (2010) asserted that examining moderators is essential because such examinations inform the design and implementation of more effective intervention programs. Although school-based programs may not be able to prevent familial victimization, a better understanding of the relationship between family violence and school bullying will enable school-based programs to more effectively address the needs of children with history of family violence (Hong et al., 2012). Mercy and Saul (2009) emphasized the importance of implementing early interventions for children because early childhood experiences profoundly impact adolescent and adult health. Analyzing longitudinal data in this study thus contributed to

existing literature by examining this relationship fuller and identifying moderating factor throughout the child development process that inform the implement of early interventions.

Limitations

Certain limitations accompanied this study's use of an existing large-scale dataset. First of all, because the FFCWS study was initially conducted for another primary purpose, I did not have control over the measurements and instruments that were used in FFCWS, which presented a major limitation of not being able to use well-established measurements to examine the concepts in this current study (Bryan, Day-Vines, Holcomb-McCoy, & Moore-Thomas, 2010). For example, the measurements of bullying perpetration and peer victimization did not capture the definition of bullying by Olweus (1994), which included the aspects of intentionality, repetitiveness, and an imbalance of power. Espelage (2015) pointed out that this limitation was common in most large-scale educational research datasets due to the lack of accurate bullying assessments. In addition, the current study did not use well-established assessments to examine family violence. Another major limitation was the attrition issue in longitudinal study (Young, Powers, & Bell, 2006). In this current study, only cases of families that completed all the information of the targeted variables were examined, which was limited in losing the cases of families that did not follow through the participation in different waves. Further discussion of limitation of this study was illustrated in chapter 5.

Definitions of Terms

Bullying Perpetration

Olweus (1978) defined bullying as a form of aggressive behavior characterized by intentionality, repetition, and an imbalance of power. Bullying perpetration can take various forms, including physical assault (hitting, pushing, kicking, and punching), verbal aggression

(threatening, teasing, and name-calling), as well as relational bullying (isolating, excluding, and rumor-spreading).

Peer Victimization

Peer victimization occurs when a child becomes a target of repeated aggression from one or more other children (Mohr, 2006). Peer victimization consists of different forms of aggressive acts, including physical, verbal, and relational aggression. Peer victimization is a broad category of behaviors that includes bullying victimization as a sub-category (Mohr, 2006).

Domestic Violence

Domestic violence, also referred as Intimate Partner Violence, is defined as aggressive acts between current or former intimate partners (CDC, 2019). The four major types of domestic violence include physical violence, sexual violence, stalking, and psychological aggression (CDC, 2019).

Child Maltreatment

Child maltreatment is also referred to as *child abuse and neglect*. According to the Centers for Disease Control and Prevention (CDC, 2019), child maltreatment includes acts of abuse and neglect of a child under the age of 18 by a caregiver or another adult serving in a custodial capacity such as a teacher or a coach. The four major types of child maltreatment include physical abuse, sexual abuse, emotional abuse, and neglect.

Family Violence

Family violence is defined as "family members' acts of omission or commission resulting in physical abuse, sexual abuse, emotional abuse, neglect, or other forms of maltreatment that hamper individuals' healthy development" (Levesque, 2001, p.13). In this study, family violence was used to refer to only child maltreatment and exposure of domestic violence.

School Connectedness

Centers for Disease Control and Prevention (CDC, 2009) defined school connectedness as in an academic environment in which “students believe that adults in the school care about their learning and care about them as individuals” (p.3).

Chapter 2

REVIEW OF THE LITERATURE

This chapter provides a comprehensive overview of scholarship related to the current prevalence of school bullying, the impacts of bullying perpetration/peer victimization, as well as the prevalence and impacts of family violence on children, including child maltreatment and exposure to domestic violence. The Bioecological Theory of Human Development (Bronfenbrenner, 1994; Bronfenbrenner, 2001; Bronfenbrenner & Morris; 2006) was applied to explore the ecological contexts in the child's life. This chapter also reviews how to use Bronfenbrenner's ecological theory to examine the relationship between family violence and school bullying in child development processes.

School Bullying

Research into bullying and victimization has expanded dramatically over the past decades (Hymel & Swearer, 2015; Olweus, 2013). Scholars began studying bullying in the 1970s when Heinemann (1972) first used the term *mobbing* to describe the concept of peer bullying that characterized the violence inflicted by a group on an individual. Dan Olweus (1978), a pioneer in bullying research, was the first to conduct empirical studies of bullying. Concerns related to school bullying increased profoundly in the United States during the late 1990s because young people began committing suicides as a result of bullying (Marr, Fields, & Stoppard, 2001). Since then, awareness of school bullying has grown considerably (Hymel & Swearer, 2015).

Olweus (1994) first defined bullying as aggressive behaviors that someone intentionally inflicts on others. He wrote: "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.1173). In addition, Olweus (1994) described three criteria of bullying: first of all, the aggression is

intentional; second, the aggressive acts are carried out repeatedly over time; and third, the interpersonal relationship is characterized by an imbalance of power. The American Psychological Association (APA; 2019) provided a broader definition of bullying as aggressive behaviors that are directed at others intentionally and repeatedly. The various bullying behaviors include: physical bullying such as hitting, kicking, pushing; verbal bullying such as name-calling, teasing, or threatening; and relational bullying including isolating, exclusion, and rumor-spreading (Olweus, 1994). Olweus defined physical and verbal bullying as direct bullying because perpetrators openly attack victims, while he categorized the various forms of relational bullying as indirect bullying (Olweus, 1994).

Prevalence and Outcomes of Bullying

The United Nations Educational, Scientific, and Cultural Organization (UNESCO, 2017) estimated that every year around the world 246 million children and adolescents experience bullying-related behaviors. An additional survey that collected data from 18 different countries indicated that two-thirds of surveyed students experienced bullying victimization (UNESCO, 2017). Analyzing around 15,000 U.S. students from sixth grade to tenth grade in a nationally representative sample, Nansel et al. (2001) reported that 30% of surveyed students were involved in bullying-related behaviors. Frey and colleagues (2009) surveyed approximately 600 children from third to fifth grade and reported that 30% of children were either perpetrators or victims of bullying. Studies have suggested that bullying starts as early as preschool, usually reaches its peak during middle school years, and declines by the end of high school (Hymel & Swearer, 2015; Nansel et al., 2001).

The potential negative impacts of bullying on children and adolescents include anxiety, depression, conduct problems, delinquency, substance use, and poor social skills (Gladstone et

al., 2006; Luk, Wang, & Simons-Morton, 2010; Mitchell, Ybarra, & Finkelhor, 2007; Nansel et al., 2001). In addition, research has shown a relationship between bullying and school homicide or suicide. After investigating 28 cases of random school shooting in American middle schools and high schools, Kimmel and Mahler (2003) found that most of the shooters had been bullied and used shooting as retaliation. Klomek (2009) examined a sample of 5,000 children in a longitudinal data and reported a significant association between bullying victimization and both suicidal ideation and suicide attempts.

Risk Factors of Bullying

As bullying in American schools became a more prominent issue, research increasingly examined the risk factors of bullying and victimization (Hong & Espelage, 2012). Cook and associates (2010) conducted a meta-analysis investigating the predictors of bullying and peer victimization. Regarding to individual predictors, their findings identified significant predictors of bullying perpetration including exhibition of externalizing and internalizing behaviors, social incompetence, and negative attitudes towards self and others (Cook et al., 2010). They also found that victims of bullying displayed externalizing and internalizing behaviors, poorer social skills, and feelings of rejection and isolation (Cook et al, 2010). Farrington and Baldry (2010) examined 400 boys from a longitudinal study and reported having low impulsiveness and low empathy as the most important risk factor. Contextual predictors for bullying perpetration and victimization include peer relationship, community factors, family environment, and school climate (Cook et al., 2010).

Family Violence

Research has identified family violence as a predictor of bullying and peer victimization (Cook et al., 2010). Family violence was defined as “family members’ acts of omission or

commission resulting in physical abuse, sexual abuse, emotional abuse, neglect, or other forms of maltreatment that hamper individuals' healthy development" (Levesque, 2001, p.13). Examples of family violence include child abuse and caregiver neglect, corporal punishment, domestic violence between intimate partners, as well as violence between siblings. In this study, family violence was used to refer to child maltreatment and in-home exposure to domestic violence. This section provided a comprehensive review of literature related to child maltreatment and exposure to domestic violence.

Child Maltreatment

Often used interchangeably with *child abuse and neglect*, child maltreatment is a serious public health issue in the United States (Fang, Brown, Florence, & Mercy, 2012). The Child Abuse Prevention and Treatment Act (Child Welfare Information Gateway, 2019) defined child maltreatment as "any recent act or failure to act on the part of a parent or caretaker, which results in death, serious physical or emotional harm, sexual abuse or exploitation, or an act or failure to act which presents an imminent risk of serious harm" (p. 6). A U.S. Department of Health and Human Services (2014) report found that, as of 2014, Child Protective Services had investigated maltreatment cases for approximately three million children every year.

The four major types of child maltreatment include *physical abuse*, *sexual abuse*, *psychological ab*use, and *neglect* (Leeb, Paulozzi, Melanson, Simon, & Arias, 2008). *Physical abuse* refers to the intentional use of physical force on a child potentially resulting in physical injury (Leeb et al., 2008). Examples of physical acts include hitting, kicking, beating, pushing, shoving, burning, and choking. Leeb et al. (2008) defined *sexual abuse* as "any completed or attempted (non-completed) sexual act, sexual contact with, or exploitation (i.e., noncontact sexual interaction) of a child by a caregiver" (p.14). *Psychological abuse*, also known as

emotional abuse, refers to caregiver behaviors—including blaming, degrading, belittling and terrorizing—that make children feel unwanted, unloved, or worthless (Leeb et al., 2008). *Neglect*, the last type of child maltreatment, occurs when caregivers fail to fulfill children's physical, psychological, medical, and educational needs, or fail to provide adequate supervision (Leeb et al., 2008).

Around 679,000 children were officially documented as having experienced maltreatment in 2013 (U.S. Department of Health & Human Services, 2015). However, this number might represent just a fraction of actual child maltreatment cases because many cases may have never been reported to Child Protective Services. Finkelhor and colleagues (2015) analyzed a nationally representative sample of around 4,500 children aged 0 to 17 and found that 1 in 10 participants had experienced one type of child maltreatment in the preceding year. The economic cost of child maltreatment is substantial. Fang and associates (2012) estimated that average lifetime cost was $210,012 for each nonfatal victim of child maltreatment and was $1,272,900 for each death of maltreatment.

Impact of Child Maltreatment

Research has begun to link the experience of child maltreatment with short- and long-term consequences. Shonk and Cicchetti (2001) examined 229 children aged 5 to 12 years old and found that children with histories of maltreatment struggled with academic engagement, social skills, and both the internalization and externalization of behavioral problems. McLeer et al. (1998) showed that children who experienced maltreatment had higher chances of suffering posttraumatic stress symptoms, anxiety, and depression. Finally, Crooks and colleagues (2007) found that youth who experienced multiple forms of child maltreatment were more likely to exhibit violent delinquency.

More recent studies also indicated the negative impacts of child maltreatment. Moylan et al. (2010) demonstrated that adolescents with histories of maltreatment were more likely to exhibit internalizing and externalizing behavioral problems. Children who were neglected were also shown to have poorer academic performance compared with non-neglected group (Manly, Lynch, Oshri, Herzog, & Wortel, 2013). De Bellis, Woolley, and Hopper (2013) compared maltreated children and non-maltreated children and reported that children with history of maltreatment had lower IQ and academic achievement.

Studies have also linked child maltreatment to mental health issues in adulthood. Herrenkohl and colleagues (2013) examined around 450 individuals in a longitudinal study and found that adults who had histories of child maltreatment were more likely to experience depression, anxiety, and substance abuse. Allen (2008) conducted a survey of college students that established a link between psychological maltreatment (including caregiver degradation and terrorization) and occurrence of anxiety, depression, somatic complaints, and borderline personality disorder in young adulthood.

Domestic Violence

According to Centers of Disease Control and Prevention (CDC, 2019), *domestic violence* refers to physical, sexual, or psychological harm inflicted by a current or former spouse or intimate partner. In addition to the term domestic violence, researchers also use the *intimate partner violence* and *inter-parental violence* to describe violence between parents or intimate partners in a household. The CDC (2019) has defined four types of domestic violence: physical violence, sexual violence, stalking, and psychological aggression. *Physical violence* refers to the use of physical force to cause harm; examples of physical violence include choking, punching, and slapping. *Sexual violence* refers to attempted or completed sexual acts without consent.

Stalking refers to repeated actions committed by a partner that cause fear and concern for the victim's safety. Examples of stalking include repeated unwanted phone calls and texts as well as making threats to harm the victim. The fourth type of domestic violence is *psychological aggression*, which refers to the use of verbal or non-verbal communication—including name-calling, humiliating, controlling, threatening, and ghosting—to inflict psychological harm (CDC, 2019).

Both men and women can become victims of domestic violence. However, women are much more likely than men to suffer from domestic violence (Rennison & Welchans, 2000). The National Intimate Partner and Sexual Violence Survey (Breiding et al., 2014) estimated the lifetime prevalence of rape by an intimate partner for women and men to be 8.8% and 0.5%, respectively. Breiding et al. (2014) reported that approximately 22.3% of women and 14% of men experienced at least one act of severe physical violence in intimate relationships during their lifetimes.

Children Exposed to Domestic Violence

Sadly, many acts of domestic violence take place in the presence of children. Hutchison and Hirschel (2001) claimed that children were present in the home most of the time when domestic violence occurred. In the past, children were considered "silent witnesses" and viewed as disconnected from violence between their parents because they were not directly targeted (Mclntosh, 2003). In the past decades, as research has started to highlight the negative impacts exposure to domestic violence has on children, this perception has begun to change (Øverlien, 2010). Holden (2003) promoted use of the term "exposure" rather than "witness" or "observe" because "exposure" encompassed different types of exposure and did not assume that children always saw the violence.

The U.S. Department of Justice (2011) estimated that, as of 2011, 1 in 15 children had been exposed to domestic violence every year, and 90% of these children had witnessed acts of violence. In their examination of police department data, Fantuzzo and Fusco (2007) found that children were present for 44% of domestic violence events. Graham-Bermann, Gruber, Howell, and Girz (2009) surveyed 219 mothers who experienced domestic violence in the preceding year and found that children were reported as being present at 100% of the events when threats and mild violence occurred and as being present for 78% of incidents where severe violence occurred.

Impacts of Domestic Violence on Children

Exposure to violent interactions between parents can generate tremendous fear, as children worry that their caregivers might be hurt or killed. Janoff-Bulmann (1992) reported: “The most devastating negative life events on children are likely to be those that involve victimization by the very people who are looked to for protection and safety” (p. 86). Research has suggested that children exposed to domestic violence were more likely to experience internalizing behavioral problems such as depression, anxiety, and posttraumatic stress symptoms (Graham-Bermann & Seng, 2005; Kitzmann, Gaylord, Holt, & Kenny, 2003; Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003). In a study of 160 preschoolers, Graham-Bermann and Seng (2005) found that 20% of the children exposed to domestic violence met the criteria of the Posttraumatic Stress Disorder (PTSD) diagnosis and almost 90% of the children displayed at least one traumatic stress symptom for longer than one month.

In addition to internalizing behavioral problems, several meta-analysis studies have linked exposure to domestic violence with exhibition of externalizing behavior in children such as aggression, conduct problems, and disruptive behavior disorders (Evans, Davies, & DiLillo,

2008; Kitzmann et al., 2003; Miranda, de la Osa, Granero, & Ezpeleta, 2011; Wolfe et al., 2003). Huang and colleagues (2015) examined a longitudinal dataset and found that children who were exposed to domestic violence during early childhood were more likely to exhibit delinquent behaviors by the time they reached 9 years of age. Another study also indicated that children exposed to domestic violence engaged in aggression more easily compared with their non-exposed peers (Koutselini & Valanidu, 2014). In addition, studies have found that children exposed to domestic violence were more likely to display aggression or violence towards peers and romantic partners in adolescence or adulthood (Ehrensaft, et al. 2003; Grych & Kinsfogel, 2010).

Family Violence and School Bullying

A considerable amount of research has linked family violence to involvement in bullying perpetration/peer victimization (Hong et al., 2012). This section reviewed studies that have examined how child maltreatment and exposure to domestic violence were associated with bullying-related behaviors. Mohr (2006) stressed the importance of considering how family variables such as family violence influenced peer relationships outside the home.

Child Maltreatment and Bullying

Several studies have suggested that maltreatment at home can place children at greater risk of bullying-related behaviors. In a retrospective study, Dussich and Maekoya (2007) examined around 800 college students from three countries and reported that students who were physically maltreated during childhood had higher chances of becoming bullying perpetrators and victims. Another study indicated that children who experienced neglect were more likely to suffer peer rejection and later exhibit violent behaviors (Chapple et al., 2005). In a similar vein, Bolger and Patterson (2001) compared maltreated children and non-maltreated children in a

longitudinal study and found that children who had histories of maltreatment were more likely to experience peer rejection and engage in aggressive behaviors. Wolfe, Crooks, Chiodo, and Jaffe (2009) highlighted the importance of continuing to connect early experience of child maltreatment to later involvement in bullying behaviors and dating violence.

Exposure to Domestic Violence and Bullying

Research has also begun to link exposure to domestic violence to bullying perpetration and peer victimization. Dauvergne and Johnson (2001) examined a national dataset and found that children exposed to domestic violence were almost three times more likely to display physical aggression and bullying behaviors than their non-exposed counterparts. In addition, children exposed to domestic violence were two times more likely to be involved in relational bullying (i.e., spreading rumors or excluding peers) than unexposed children (Dauvergne & Johnson, 2001).

Several additional studies have identified similar, if occasionally conflicting, associations between exposure to domestic violence and school bullying. Baldry (2003) conducted a cross-sectional study of around 1000 elementary and middle school-aged students in Italy and found a significant relationship between exposure to domestic violence and bullying/victimization in school. However, in a longitudinal study of 112 children aged 6 to 13, Bauer et al. (2006) reported that children's self-report measurement showed no significant link between exposure to domestic violence and relational bullying or peer victimization. Bauer et al. (2006) also found an association between exposure to domestic violence and parental reports of children's physically aggressive behaviors. Meanwhile, a more recent study concluded that children exposed to domestic violence were more likely to become bullies, victims, or both bullies and victims (Mustanoja et al., 2011).

Co-occurrence of Child Maltreatment and Domestic Violence

Finkelhor, Ormrod, and Turner (2007) coined the term *polyvictimization* to describe the phenomenon that children experience multiple types of victimization as opposed to a single type of victimization. In a study investigating a nationally representative sample of children aged 2 to 17, Finkelhor et al. (2007) reported that 69% of surveyed children had experienced at least two forms of victimization in the past year. Another study suggested that, on average, children experience 2.63 types of victimization (Finkelhor, Hamby, Ormrod, & Turner, 2005). Espelage and colleagues (2012) emphasized the importance of examining different types of victimization together because analyzing an isolated category might risk overestimating the influence of any one type of victimization.

Indeed, studies of family violence have found substantial overlap between exposure to domestic violence and experience of other types of maltreatment. In their examination of around 4,500 children aged 0 to 17, Hamby and colleagues (2010) reported that 33.9% of children exposed to domestic violence had also been abused or neglected in the past years; regarding to lifetime data, more than half of the children exposed to domestic violence experienced child maltreatment. Chan (2011) surveyed around 1000 youths in Hong Kong and reported that children exposed to domestic violence were likely to experience physical abuse, emotional abuse, and neglect.

Given that they have numerous features in common, such a high co-occurrence between child maltreatment and exposure to domestic violence should not be surprising (Bourassa, 2007). Unfortunately, most previous studies only emphasized a single category of childhood victimization when examining family violence (Finkelhor et al., 2007). In addition, previous studies that investigated domestic violence and child maltreatment together only focused on

physical abuse (Bourassa, 2007; Hamby et al., 2010). Acknowledging the overlap between exposure to domestic violence and child maltreatment, this current study was designed to examine exposure to domestic violence and child maltreatment together.

School Connectedness

School is the main environment that children spend time at every day and are exposed to unfamilial adults and peers. Among various school-related factors that help children succeed, school connectedness has been shown to serve as a protective factor in promoting the positive development and academic achievement of young people (CDC, 2009).

The concept of school connectedness has been studied throughout different disciplines, resulting in the exchange of phrases in the literature such as school engagement and school bonding (Blum, 2005). While *school engagement* and *school bonding* emphasize more on students' behavioral engagement and academic commitment, *school connectedness* focuses on an affective and interpersonal aspect. School connectedness is defined as academic environment in which "students believe that adults in the school care about their learning and care about them as individuals" (CDC, 2009, p.3). This definition is considered the most widely used definition of school connectedness (Marraccini & Brier, 2017). In practice, this definition means a safe school environment, positive relationships between teachers and students, as well as supportive academic expectations (Blum, 2005; Waters, Cross, & Runions, 2009).

A substantial research has suggested that feeling connected to school promotes short-term and long-term positive youth development, especially for adolescents because they spend more time in school than other contexts (Monahan et al., 2010; Resnick et al., 1997). Marraccini and Brier (2017) conducted a meta-analysis to examine the relationships between school connectedness and suicidal behaviors among students ranged from grade 6 to 12; they found that

students with higher level of school connectedness had reduced reports of suicidal thoughts. Bond et al. (2007) found that students who felt more connected to school were less likely to experience issues of mental health and substance use in a longitudinal study among secondary school students. Loukas, Ripperger-Suhler, and Horton (2009) reported that students in middle school with lower level of school connectedness had higher chances of developing conduct problems after one year. Study has also found that early adolescents who were more connected to school were associated with less engagement in risk-taking behaviors and injuries (Chapman, Buckley, Sheehan, Shochet, Romaniuk, 2011). In addition, school connectedness has been shown to be negatively related to cigarette smoking, marijuana use, delinquency, and violent behavior (Dornbusch, Erickson, Laird, & Wong, 2001). A few studies also examined the impact of school connectedness on elementary-aged students. Rice and colleagues (2008) reported that higher level of school connectedness is significantly associated with better social confidence and behavior control among fourth grade students.

The bullying literature also examined the relation between school connectedness and bullying/peer victimization. Skues and colleagues (2005) examined 975 students between age 7 to 12 and found that students who experienced bullying in school had lower levels of connectedness compared to their peers. Research has also shown that both victims and bully/victims reported feeling unsafe and disconnected from their school (O'Brennan, Bradshaw, & Sawyer, 2009). In another study, Loukas and Pasch (2013) concluded that school connectedness moderated the subsequent adjustment problems for girls who experienced overt victimization.

For children who have experienced family violence, school can provide an opportunity to counter patterns that children have learned from the abusive home environment (Crooks et al.,

2007). So far, only a few studies examined the importance of school connectedness for children with history of family violence. Saewyc and colleagues (2006) surveyed more than 30,000 Canadian youth with history of physical abuse, sexual abuse, and violence at home, and they found that school connectedness was the strongest protective factors and was influential for vulnerable youth. Crooks and associates (2007) reported that students with history of child maltreatment were less likely to engage in violent delinquency if they attended a school that was considered as safe by students (Crooks et al., 2007). Up to date, study has not investigated the moderating effect of school connectedness on bullying for children with history of family violence.

Bioecological Theory of Human Development

This study's theoretical framework was based on the Bioecological Theory of Human Development (Bronfenbrenner, 1994; Bronfenbrenner, 2001). Bronfenbrenner (2001) defined his theory as "an evolving theoretical system for the scientific study of human development over time" (pp. 6963–6964); before his death in 2005, the theory underwent continuous evolution. This section discussed the theory's development from its early version, which included four contextual systems, to its mature version, which included the Process-Person-Context-Time model. This section also elucidated how I applied the mature version of Bronfenbrenner's theory to explore the relationship between early exposure to family violence and later involvement in bullying-related behaviors.

The original version of Bronfenbrenner's theory emphasized that a child's development should be evaluated within his or her environmental context: it viewed the child as the center of the developmental process impacted by his or her interactions with four environmental layers: the microsystem, the mesosystem, the exosystem, and the macrosystem (Bronfenbrenner, 1994).

The child's individual characteristics such as gender, temperament, and disability, are at the center of this system. The innermost layer around the child is the *microsystem*, comprised of the child's interpersonal relationships with his or her immediate environment, including relationships with parents and teachers. The second layer is the *mesosystem*, which consists of the interactions between the components in the microsystems, such as inter-parental relationships as well as parent-teacher interactions. The third layer is the *exosystem*, which includes factors affecting the microsystem such as parent unemployment and financial stress. The fourth layer is the *macrosystem*, which encompasses the political, social, and cultural factors that impact the child's environment (Bronfenbrenner, 1994).

This version of Bronfenbrenner's theory has also been adapted as the social-ecological framework in bullying research (Espelage & Swearer, 2004). Researchers have implemented it to examine the child's contexts to better inform bullying intervention and prevention (Espelage et al., 2013; Hong & Espelage, 2012; Espelage & Swearer, 2004). Espelage and colleagues (2013) asserted that scholars should understand and evaluate the bullying issue not only by analyzing the individual but also by considering the child's the interactions with different context systems.

Although Bronfenbrenner's theory has evolved from its original version, the majority of research claiming to use the bioecological theory has not used the mature version of the theory appropriately (Tudge, Mokrova, Hatfield, & Karnik, 2009; Tudge et al., 2016). Tudge et al. (2016) emphasized the importance of using the comprehensive version of Bronfenbrenner's theory, which included four major concepts: Process-Person-Context-Time (PPCT). Bronfenbrenner (2001) suggested these four elements influence child development in a simultaneous and synergistic manner. Research that uses Bronfenbrenner's bioecological theory of human development thus needs to examine *proximal processes*, *person characteristics*,

context, and *time* (Tudge et al., 2009; Tudge et al., 2016). The comprehensive version of Bronfenbrenner's theory, which incorporated the PPCT model, was used to examine the relationship between early exposure to family violence and later involvement in school bullying.

Proximal Processes

In the 1990s, Bronfenbrenner defined the concept of proximal processes and framed these processes as key factors in development. He wrote: "human development takes place through processes of progressively more complex reciprocal interaction between an active evolving biopsychological human organism and the persons, objects, and symbols in its immediate environment" (Bronfenbrenner & Ceci, 1993, p. 317). In other words, proximal processes are ongoing reciprocal social interactions that occur repeatedly. Bronfenbrenner believed these processes act as the "primary engine of development" (Bronfenbrenner & Morris, 1998). Therefore, studies using Bronfenbrenner's theory must focus on the proximal processes that the theory hypothesizes will influence developmental outcomes.

Because family interactions are central to child development, it was focused on, in this study, how the proximal processes of family violence, which included domestic violence and child maltreatment, impacted the outcomes of bullying perpetration and peer victimization. Previous studies have concluded that children who experienced family violence were more likely to become bullies or victims. Children who experienced family violence may establish the beliefs that aggression was an acceptable way to solve conflicts or the belief that being treated violently was normal (Fosco, DeBoard, & Grych, 2007). In addition, family violence has also been shown to compromise parenting (Levendosky, Leahy, Bogat, Davidson, & Eye, 2006). In a similar vein, Huth-Bocks & Hughes (2008) found that mothers who were victims of domestic violence were

more likely to have higher parenting stress, which might lead to problematic parenting and child maltreatment.

Person Characteristics

Bronfenbrenner also considered the influence of individual biology and genetics on the proximal processes (Bronfenbrenner & Morris, 1998). He divided personal characteristics into three categories: *demand*, *resource*, and *force* characteristics. *Demand* characteristics refer to "personal stimulus" such as age, gender, and skin color that might impact social interactions immediately (Bronfenbrenner & Morris, 1998). *Resource* characteristics refer to a person's mental and social resources such as educational opportunities, skills, and access to housing and food. *Force* characteristics include a person's temperament or motivation. Personal characteristics including children's gender, race/ethnicity, and mother's age were examined in this study.

Gender. Some studies have reported that boys were more likely to be involved in bullying compared with girls (Nansel et al., 2001; Varjas, Henrich, & Meyers, 2009). Cook and associates (2010) found that boys reported more bullying perpetration and girls reported more victimization. Other research has indicated that gender played a role in different types of bullying, where boys were more likely to be involved in physical bullying and girls were more likely to be involved in relational bullying (Jeffrey, Miller, & Linn, 2001). However, other studies have found that gender did not make a difference in bullying perpetration and peer victimization (Barboza et al., 2009; Goldstein, Young, & Boyd, 2008; Seals & Young, 2003).

Race/Ethnicity. Previous research produced inconsistent findings regarding the impact of race/ethnicity on bullying-related behaviors. Nansel et al. (2001) reported that Hispanic youths were slightly more likely to be involved in bullying perpetration, and African American students

underwent higher rates of victimization. Wang, Iannotti, and Nansel (2009) investigated nationally representative sample of students from sixth grade to tenth grade in the United States and reported that African Americans youths were more involved in bullying perpetration. Another study analyzed around 15,000 high-school students and suggested that White students reported more overall bullying than Hispanic or African American students (Messias, Kindrick, & Castro, 2014). However, other studies reported no racial differences in bullying perpetration or peer victimization (Seals & Young, 2003; Wang, Iannotti, Luk, & Nansel, 2010). The FFCWS study did not have variable about the child's race/ethnicity. Therefore, mother's race/ethnicity was used as proxy.

Mother's Age. Children born to youngest mothers are at substantial risk for child maltreatment such as neglect and abuse compared with children with older mothers (Bartlett & Easterbrooks, 2012; de Paúl & Domenech, 2000). Research has also indicated that adolescent mothers who had history of maltreatment were more likely to pass the maltreatment to next generation (Putnam-Hornstein, Cederbaum, King, Eastman & Trickett, 2015). Studies have also found that adolescent females who were pregnant or parenting were more vulnerable to be the victims of violence such as experiencing domestic violence (Lindhorst, Beadnell, Jackson, Fieland, & Lee, 2009; Roberts, Auinger, & Klein, 2005). Half of the mothers in this current study were adolescent mothers when the focal child was born. No research so far has illustrated the relation between mother's age and children's bullying-related issues at school.

Context

The third major element in the PPCT model is context, which consists of the four environmental systems: microsystem, mesosystem, exosystem, and macrosystem (Bronfenbrenner, 1994). Context also impacts the proximal processes; therefore, a study that

uses Bronfenbrenner's theory needs to evaluate at least two systems in a child's context. Two systems were examined in this current study: the exosystem (socioeconomic status) and the microsystem (school connectedness).

Socioeconomic Status. Socioeconomic status (SES) consists of resource- and prestige-based indicators of socioeconomic status, which can be measured across education, income, or occupation (Tippett & Wolke, 2014). Research has linked SES to family violence as well as school bullying. Gonzalez and MacMillan (2008) reported that children with low socioeconomic status were more likely to be abused and neglected. Research regarding SES and bullying has also connected low SES to peer victimization (Tippett & Wolke, 2014). Other studies found that youths with low SES were more likely to hold positive attitude toward aggressive acts and were at risks of bullying and victimization (Unnever & Cornell, 2003). In this current study, the household income was used as the indicator of socioeconomic status.

School Connectedness. School is a major place that children spend time at outside of the family and thus it can provide an opportunity to help children encounter patterns that they have established from abusive environment at home (Crooks et al., 2007). Especially for children who experience maltreatment or trauma, relational resource is fundamental to healing and growth (Meichenbaum, 2006). Feeling connected to school has been shown to be the protective factor for promoting positive outcomes for children and adolescents (CDC, 2009). Through conducting a longitudinal study with adolescents, Yeung and Leadbeater (2010) reported that the emotional support from school teachers moderated the impact of peer victimization on displaying emotional and behavioral problems, and thus highlighted the importance of interpersonal relationships within the school context. The moderating role of school connectedness was examined in this study.

Time

The fourth element in bioecological theory of human development is *time*. Time is imperative because all the concepts of the PPCT model change across time; studies that apply Bronfenbrenner's theory should therefore be longitudinal (Tudge et al., 2009). Taking this into account, I utilized three waves of data from the Fragile Families and Child Wellbeing Study. In short, the comprehensive application of Bronfenbrenner's bioecological theory involves the longitudinal examination of proximal processes, person characteristics, and context.

The Current Study

The literature review in this chapter has established the needs to use Bronfenbrenner's (2001) ecological framework to examine the relationship between early exposure to family violence and later involvement in school bullying, as well as to investigate the moderating effect of school connectedness in this relationship. Figure 2.1 illustrates this current study's application of the PPCT model.

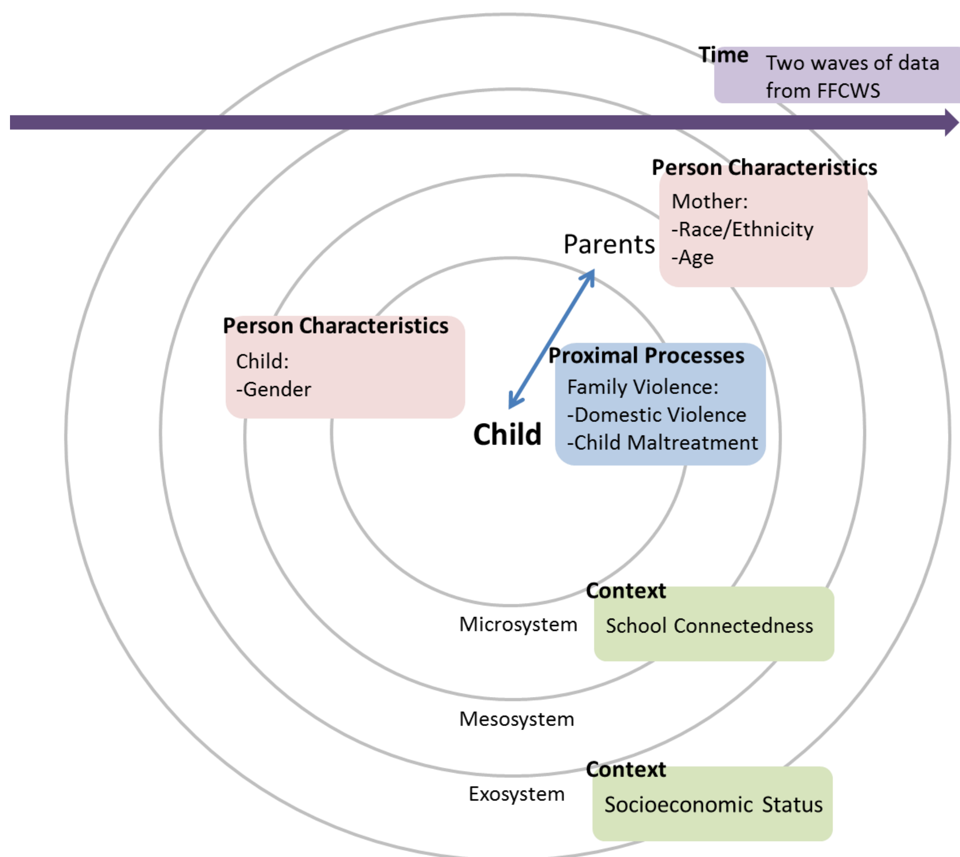

Figure 2.1. The use of PPCT model in this study

Using the longitudinal national dataset, the Fragile Families and Child Wellbeing Study, I examined how children's experience of both child maltreatment and domestic violence at age three predicted later bullying-related behaviors at age nine. Although the research has built the linkage between family violence and school bullying, not every child who experienced family violence became a bully or a victim at school. Protective factors have been shown to enhance adaptation in childhood development (Martinez-Torteya, Anne Bogat, von Eye, & Levendosky, 2009). Therefore, a more comprehensive understanding of this relationship and the protective role of school connectedness was needed to inform developing school-based interventions that can deal with school bullying issues effectively.

Although bullying reaches its peak during middle school, research has indicated that bullying can start early in elementary school (Nansel et al., 2001). Therefore, I focused on elementary-aged children in this current study, examining bullying perpetration and victimization behaviors at nine years old (outcome), school connectedness (moderator), and the experience of family violence when children were three years old. By focusing on younger children, I aimed to generate insights that can enable school and social welfare programs to implement early interventions that will prevent later involvement in school bullying.

Chapter 3

METHODOLOGY

Studies have shown associations between family violence and school bullying; however, additional research using longitudinal data remains necessary to develop a fuller understanding of this relationship (Hong et al., 2012; Voisin & Hong, 2012). In this study, I conducted a secondary data analysis using a large longitudinal dataset, the Fragile Family and Child Wellbeing Study (FFCWS), to examine the relationship between early exposure to family violence and later involvement in bullying-related behaviors, as well as the moderating role of school connectedness. This chapter describes the study's research design, procedures, participants, measures, variables, and analytical approach.

Description of Data

The Fragile Families and Child Wellbeing Study

In this study, I conducted a secondary data analysis using data from the Fragile Family and Child Wellbeing Study (FFCWS). The FFCWS is a longitudinal survey study that followed a cohort of approximately 5,000 newborn children and their parents in 20 cities in the United States. The FFCWS was designed to collect information about new unwed parents and their children's wellbeing and thereby make up for a lack of information about unmarried families (Reichman, Teitler, Garfinkel, & McLanahan, 2001). According to the Centers for Disease Control and Prevention (2015), around 40% of newborn babies in the United States were born to unmarried mothers in 2015. The proportions were higher for minority populations, at 40% among Hispanics and 70% among African Americans (Ventura et al., 1995). Because of the higher risks to child wellbeing and increased child vulnerabilities in unmarried families, the FFCWS called families with unmarried parents *fragile families* (Reichman et al., 2001).

Between 1998 and 2000, FFCWS researchers conducted initial baseline interviews with the new mothers and fathers at the hospitals when the children were born. The baseline data included interview responses from 4,898 mothers, approximately 3,700 of whom were unwed at the time of their children's births. Subsequently, FFCWS researchers conducted follow-up interviews when the focal children were one, three, five, nine, and fifteen years old.

FFCWS researchers used a stratified random sample to select participants. They first sampled cities, then the hospitals within the cities, and finally the births within the hospitals (Reichman et al., 2001). Initially, FFCWS researchers selected 77 US cities with populations of 200,000 or more; they then stratified the cities into nine types of environments based on the criteria of welfare generosity (high, moderate, and low benefits), child support enforcement (strict, moderate, and lenient), and the strength of the local labor market (strong, average, and weak) (Reichman et al., 2001). Using a stratified random sample, the researchers selected 16 cities for the *national sample*. In addition to the 16 cities, FFCWS researchers conducted surveys in four other cities that were of special interest to specific foundations, so the full sample is a *20-city sample*.

After sampling the cities, FFCWS researchers sampled the birthing hospitals in the cities by selecting all birthing hospitals within each city, and rank-ordering them or creating a simple random sample based on the conditions of each city (Reichman et al., 2001). The researchers designed the FFCWS to oversample unmarried births so that they could investigate the resources and relationship dynamics of unwed families. They randomly sampled births for each hospital from a list of all possible maternity beds (Reichman et al., 2001).

FFCWS researchers contacted and interviewed eligible mothers at the hospitals where they delivered their babies. They interviewed most mothers in person at the hospitals within 48

hours of the births and interviewed fathers either in-person at the hospitals or later by telephone. They conducted the Years 3, 5, and 9 follow-up interviews by telephone using a Computer Assisted Telephone Instrument (CATI) and through home visits. The Year 9 follow-up included evaluations from the children's schoolteachers; study administrators mailed paper copies of assessments to the teachers and teachers mailed them back after completion.

Data Availability and Format

The public version of the FFCWS data is available and can be downloaded from the Princeton University Office of Population Research Data Archive (URL: https://opr.princeton.edu/archive/ff/). To access the data, I completed a brief application and a 25-word abstract for this study. The OPR Data Archive provides data files in Stata, SPSS, and SAS, both in separate files (for each wave) or as one combined file. Public data documentation (user guide, codebook, and original surveys) can be accessed through the FFCWS website (URL: https://fragilefamilies.princeton.edu/). To conduct this study, I used the *All Waves* data file (all the FFCWS public data from Baseline to Year 15). I selected the variables in this study from the FFCWS *All Waves* data file using the codebooks at the Baseline, Year 3, and Year 9 waves. Table 3.1 displays the case numbers for the mothers surveyed in the Baseline, Year 3, and Year 9 waves.

Table 3.1

Sample Size in Each Wave Examined in this Study.

Wave	Data Collection Timeframe	Mothers (20 cities sample)
Baseline (Birth)	1998-2000	4,789
Year 3	2003-2006	4,231
Year 9	2007-2010	3,515

Sample Description

In this study, I used three waves of public version data from the FFCWS: the Baseline wave (when the focal children were born), the Year 3 wave (when the focal children were age 3), and the Year 9 wave (when the focal children were age nine). After downloading the *All Waves* dataset (which includes all FFCWS public data from Baseline to Year 15), I used the codebooks to extract the variables examined in this study. The main predictor (family violence, including child maltreatment and exposure to domestic violence) came from the Year 3 wave, and the outcome variables (bullying perpetration and peer victimization) came from the Year 9 wave. In this study, I focused on cases in which participants (children, parents, and school teachers) provided complete information for all the variables examined. I deleted the cases of participants who were not interviewed in the Years 3 and 9 waves.

The analytic sample included 1,630 total cases in which the participants provided information regarding all the measures in the Baseline, Year 3, and Year 9 waves that were being examined in this study. Table 3.2 presents the characteristics of this study's sample; as it shows, 24.66% of mothers (n=402) were White/non-Hispanic, and 75.34% (n=1228) of mothers were people of color—48.83% (n=796) were Black/non-Hispanic, 22.76% (n=371) were Hispanic, and 3.74% (n=61) were considered other race/ethnicity. The FFCWS did not include focal child race/ethnicity; therefore, I used mother's race/ethnicity as a proxy. Regarding the children's genders, 52.27% of children were boys (n=852) and 47.73% of children were girls (n=778). Mothers' ages, measured when the focal children were born, ranged from 15 to 43 years old (n=1630, Mean= 25.21, SD=6.08). Household income, measured when the focal children were 3 years old, ranged from no income to $133,750 (n=1,630, Mean= 33,609.42, SD=32,315.38). Mothers' education levels were measured in the Baseline wave; 30.10% of mothers had not

completed high school (n=490), 58.23% of mothers had completed some college (n=948), and 11.67% of mothers had completed at least a bachelor's degree (n=190). Figure 3.1 shows the sample characteristics in pie charts.

Table 3.2

Sample Characteristics.

Variable	n	Percentage
Mother's race/ethnicity (Baseline)		
White, non-Hispanic	402	24.66
Black, non-Hispanic	796	48.83
Hispanic	371	22.76
Others	61	3.74
Child's gender (Baseline)		
Boys	852	52.27
Girls	778	47.73
Mother's age (Baseline)		
15-24	877	53.80
25-29	374	22.94
30-34	220	13.50
35-39	126	7.73
40-44	33	2.03
Household income (Year 3)		
Less than $20,000	705	43.25
$20,000 to $34,999	395	24.23
$35,000 to $49,999	202	12.39
$50,000 to $74,999	196	12.02
$75,000 to $99,999	4	0.25
Over $100,000	128	7.85
Mother's education (Baseline)		
No high school diploma	490	30.10
Some college	948	58.23
Bachelor or above	190	11.67

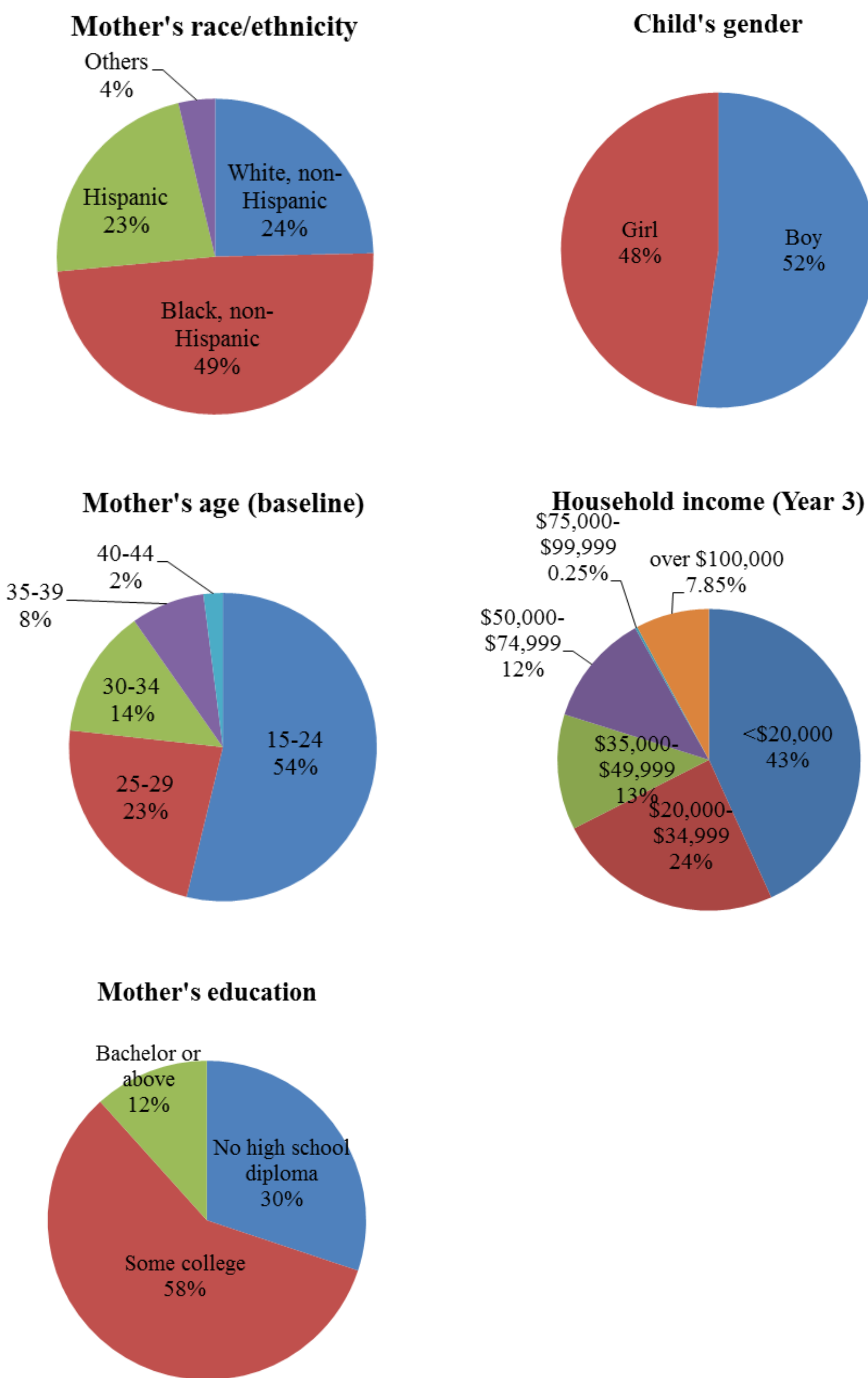

Figure 3.1. Sample characteristics

Conceptual Model

In this study, I used data from the FFCWS to examine how early exposure to family violence (including child maltreatment and exposure to domestic violence) when the focal children were three years old predicted bullying perpetration and victimization when the focal children were nine years old and to gauge the moderating effect of school connectedness. Figure 3.2 shows the model for bullying perpetration and Figure 3.3 presents the model for peer victimization. School connectedness was examined as a moderator in both models. A moderator is a variable that affects the magnitude or direction of the relationship between an independent variable and an outcome variable (Baron & Kenny, 1986). I hypothesized that exposure to family violence at age three would predict both bullying perpetration and victimization at age nine. I also hypothesized that school connectedness would moderate the impact of family violence on bullying perpetration and peer victimization.

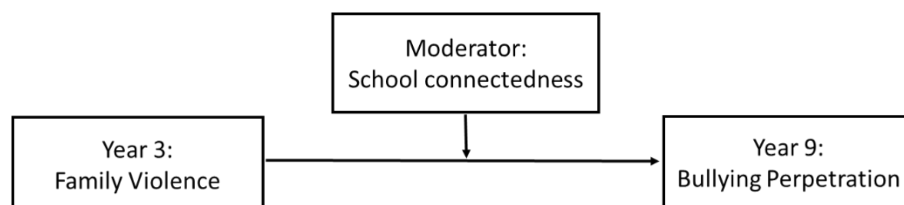

Figure 3.2. Moderation model for family violence and bullying perpetration outcomes.

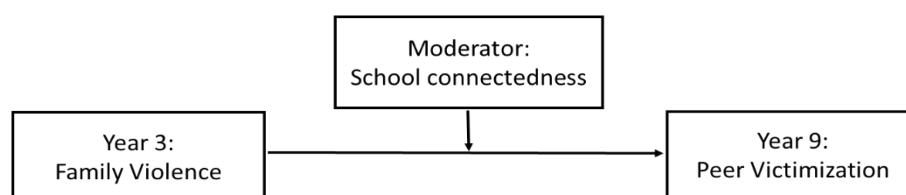

Figure 3.3. Moderation model for family violence and peer victimization outcomes.

Measurements and Variables

Bullying Perpetration

I followed the approach developed by Turns and Sibley (2018) to measure bullying perpetration using the FFCWS dataset. I assessed bullying perpetration using three items from the Social Skills Rating System (SSRS; Gresham & Elliott, 2007) reported by the children's schoolteachers when the children were age nine. Teachers' assessments of bullying perpetration were based on responses to the following three statements in the Year 9 wave: "Child fights with others," "Child threatens or bullies others," and "Child argues with others." The teachers were asked how often in the past month the focal children displayed these behaviors with the possible responses being "*Never*" (0), "*Sometimes*" (1), "*Often*" (2), or "*Very Often*" (3). These questions measured the focal children's behaviors with other peers. The Cronbach's alpha for the bullying perpetration assessment was 0.887. I scored this variable by first summing up all the items without missing data and then taking the mean of the three items (M=0.63; SD=0.70; Range=0-3; n=1,630). Table 3.3 shows the frequency of bullying perpetration.

Table 3.3

Frequency of Bullying Perpetration

The child's behavior in the classroom in the past month (score)	Never (0)	Sometimes (1)	Often (2)	Very Often (3)
Fights with others	873 (53.56)	604 (37.06)	117 (7.18)	36 (2.21)
Threatens or bullies others	1,114 (68.83)	354 (21.72)	111 (6.81)	51 (3.13)
Argues with others	631 (38.71)	708 (43.44)	193 (11.84)	98 (6.01)

Note. n(%)

Peer Victimization

I used four items drawn from the children's self-reports of being victimized at nine years old to measure the outcome variable, *Peer Victimization*. Modified from the peer bullying

assessment in The Panel Study of Income Dynamics Child Development Supplement III (PSID-CDS-III; 2010), these four items were confirmed through a PSID confirmatory factor analysis. Children were asked, "in the past month, how often have kids in your school or neighborhood: (a) Picked on you or said mean things to you? (b) Hit you? (c) Taken your things, like your money or lunch, without asking? (d) Purposely left you out of activities?" Possible responses included: "*Not once in the past month*" (0), "*1-2 times in the past month*" (1), "*Once a week*" (2), "*Several times per week*" (3), and "*Every day*" (4). The Cronbach's alpha for the peer victimization assessment was 0.685. In this study, I followed the FFCWS user guide's suggestion to sum up all four items without missing data and then calculate the mean (M=0.63; SD=0.77; Range=0-4; n=1,630). Table 3.4 shows the frequency of peer victimization.

Table 3.4

Frequency of Peer Victimization

In the past month, how often have kids in your school or neighborhood: (score)	Not once in the past month (0)	1-2 times in the past month (1)	Once a week (2)	Several times per week (3)	Every day (4)
Picked on you or said mean things to you?	735 (45.09)	352 (21.60)	166 (10.18)	173 (10.61)	204 (12.52)
Hit you?	1,257 (77.12)	190 (11.66)	76 (4.66)	52 (3.19)	55 (3.37)
Taken your things, like your money or lunch, without asking?	1,413 (86.69)	117 7.18)	35 (2.15)	35 (2.15)	30 (1.84)
Purposely left you out of activities?	1,109 (68.04)	282 (17.30)	104 (6.38)	70 (4.29)	65 (3.99)

Note. n(%).

Family Violence

The main predictor in this study was family violence, a measure of whether the focal children were exposed to domestic violence or experienced maltreatment when they were three years old. I measured four types of family violence in this study: physical and emotional forms of domestic violence, and physical and psychological forms of maltreatment. The scores for this variable ranged from 0-4—quantifying how many types of aggression the focal children were exposed to at age three.

Physical abuse of domestic violence. Mothers' self-reports of being physically abused by their children's fathers (currently or in the preceding month of the relationship) or by their current partners were measured when the children were three years old. Items measuring physical abuse included "He slapped or kicked you," and "He hit you with a fist or an object that could hurt you." For each item, the mothers responded: "*Never"* (0), "*Sometimes"* (1), and "*Often"* (2). The dichotomous physical domestic violence variable was coded as a "1" if the mothers experienced any form of physical violence at the hands of the children's fathers or their current partners (Huang, Vikse, Lu, & Yi, 2015; Lucero, Lim, & Santiago, 2016).

Psychological abuse of domestic violence. Mothers' self-reports of being psychologically abused by the focal children's fathers (currently or in the preceding month of the relationship) or by their current partners were measured when the children were three years old. Items measuring psychological abuse included "He tried to keep you from seeing family/friends," "He tried to prevent you from going to work/school," and "He withheld money, made you ask for money, or took your money." For each item, the mothers responded: "*Never"* (0), "*Sometimes"* (1), and "*Often"* (2). The dichotomous psychological abuse variable was coded as

a "1" if the mothers selected "*Sometimes*" or "*Often*" for any of the items regarding the children's fathers or their current partners (Huang et al., 2015; Lucero et al., 2016).

Physical aggression of child maltreatment. The FFCWS used Parent-Child Conflict Tactics Scales (CTSPC; Straus, Hamby, Finkelhor, Moore, & Runyan, 1998) to measure different forms of primary caregiver maltreatment. Primary caregivers were asked how many times they did the following behaviors toward the focal children in the preceding year. Items measuring physical aggression included "Spanked him/her on the bottom with their bare hand," "Hit him/her on the bottom with something like a belt, hairbrush, a stick or some other hard object," "Slapped him/her on the hand, arm, or leg," "Pinched him/her," and "Shook him/her." The participants responded to each item: "*never happened,*" "*once,*" "*twice,*" "*3-5 times,*" "*6-10 times,*" "*11-20 times,*" "*more than 20 times,*" and "*yes, but not in past year.*" The FFCWS user guide suggests scoring this variable by summing up the response midpoints for each item. Many previous studies considered that the children were experiencing severe child maltreatment if the children scored above 90th percentile (Huang et al., 2015). In this current study, I aimed to evaluate children who have experienced moderate aggression; therefore, I considered children who scored above the 50th percentile for the sample size to have experienced physical aggression and coded them as a "1."

Psychological aggression of child maltreatment. The FFCWS also adapted items measuring primary caregiver psychological aggression from the Parent-Child Conflict Tactics Scales (CTSPC; Straus et al., 1998). Items regarding psychological aggression included "Shouted, yelled, or screamed at the child," "Threatened to spank or hit the child but didn't actually do it," "Swore or cursed at the child," "Called the child dumb or lazy or some other name like that," and "Said they would send the child away or would kick the child out of the

house." As with the physical aggression measure, primary caregivers responded to each item: "*never happened,*" "*once,*" "*twice,*" "*3-5 times,*" "*6-10 times,*" "*11-20 times,*" "*more than 20 times,*" and "*yes, but not in past year.*" I also scored the psychological aggression variable by summing up the response midpoints for each item. With the similar rationale mentioned in the previous paragraph, I considered children who scored above the 50th percentile of the sample size to have experienced psychological aggression and coded them as a "1."

Family violence. The FFCWS study measured different types of family violence from various measurements. In order to capture the violence that the focal children were exposed to, I decided to combine these four types of familial aggressions. Therefore, I scored the study's predictor, family violence, by summing up the four dichotomous variables: physical abuse of domestic violence (Yes=1, No=0), psychological abuse of domestic violence (Yes=1, No=0), physical aggression of child maltreatment (Yes=1, No=0), and psychological aggression of child maltreatment (Yes=1, No=0). The family violence variable indicates how many forms of aggression that the children were exposed to when they were three years old (M=1.44; SD=1.06; Range: 0-4; n=1,630). Table 3.5 shows the frequency of each type of familial aggression and Table 3.6 presents the frequency of family violence.

Table 3.5

Frequency of Different Aggression that Children were Exposed to

Types of Aggression	Yes	No
Domestic Violence: Physical Abuse	132 (8.30)	1,459 (91.70)
Domestic Violence: Psychological Abuse	439 (27.63)	1,150 (72.37)
Child Maltreatment: Physical Aggression	955 (59.21)	658 (40.79)
Child Maltreatment: Psychological Aggression	835 (51.73)	779 (48.27)

Note. n(%). There are missing data in each form of aggression.

Table 3.6

Frequency of Family Violence

Types of Family Violence	n	Percentage
0	375	23.01
1	444	27.24
2	571	35.03
3	185	11.35
4	55	3.37

Note. Total sample size=1,630.

School Connectedness

I measured the moderator, school connectedness*,* using items modified from The Panel Study of Income Dynamics Child Development Supplement III (PSID-CDS-III; 2010) when the children were nine years old. This subscale consists of four items that assess how connected the children feel at school. Children gave rated responses to the following statements about their feelings at school in the preceding month: “feel like you were part of your school,” “feel close to people at your school,” “feel happy to be at your school,” and “feel safe at your school.” Possible responses included: “*Not once in past month”* (0), “*1-2 Times in past month”* (1), “*Once a week”* (2), “*Several times per week”* (3), and “*Every day”* (4). I followed the suggestion in the FFCWS user guide (Bendheim-Thoman Center for Research on Child Wellbeing, 2013), calculating the means of the four items without missing data (M=3.08; SD=0.95; Range=0-4; n=1,630). The Cronbach’s alpha for the school connectedness assessment was 0.691. Table 3.7 displays the frequency of school connectedness.

Table 3.7

Frequency of School Connectedness

In the last month, how often did you… (score)	Not once in the past month (0)	1-2 times in the past month (1)	Once a week (2)	Several times per week (3)	Every day (4)
Feel like you were part of your school?	154 (9.45)	144 (8.83)	145 (8.90)	255 (15.64)	932 (57.18)
Feel close to people at your school?	188 (11.53)	163 (10.00)	170 (10.43)	303 (18.59)	806 (49.45)
Feel happy to be at your school?	152 (9.33)	122 (7.48)	147 (9.02)	257 (15.77)	952 (58.40)
Feel safe at your school?	102 (6.26)	71 (4.36)	84 (5.15)	177 (10.86)	1,196 (73.37)

Note. n (%)

Demographic Variables

The co-variates examined in this study included the demographic characteristics of the mothers and the children: *child's gender*, *mother's race/ethnicity*, *mother's age*, and *household income*. The focal children's genders corresponded to a specific variable in the FFCWS that identified the children's genders. In this study, I created a dichotomous variable to indicate each child's gender, where "1" indicated the child was a boy (n=852; 52.27%) and "0" indicated the child was a girl (n=778; 47.73%). The FFCWS did not inquire about focal children's races/ethnicities; most researchers have used mothers' races/ethnicities as proxies. I coded mothers' self-reported race/ethnicity identifications as a dichotomous variable to indicate whether mothers were White (n=402; 24.66%) or minority (n=1,228; 75.34%). The FFCWS also inquired regarding the mothers' ages when the focal children were born (n=1630, Range=15-43, Mean= 25.21, SD=6.08). In this study, I used household income when the focal children were three years old as the indicator of family socioeconomic status (n=1,630, Range=0-$133,750, Mean= 33,609, SD=32,315.38). Mother's education level was initially included as a control

variable in both models but subsequently removed because it had a non-significant association with both bully perpetration and peer victimization.

Data Analysis

In this study, I utilized hierarchical multiple regression to examine the relationship between early exposure to family violence and later involvement in bullying-related issues as well as the moderating effect of school connectedness, while controlling for demographic variables. I implemented two models to examine bullying perpetration and peer victimization outcomes separately because these two outcomes were derived from different sources—teacher reports and children's self-reports, respectively. In each model, I put demographic variables in Block 1 to examine their associations with the outcome variables (bullying perpetration or peer victimization), and then added family violence in Block 2 to examine how it predicted bullying perpetration and peer victimization while controlling for demographic variables. Similarly, for the research question examining school connectedness as the moderator, I examined demographic variables in Block 1, added family violence and school connectedness in Block 2, and then added the interaction variable in Block 3. I analyzed the data using the Statistical Package for the Social Sciences (SPSS) software, considering both descriptive and inferential statistics, which are reported in chapter 4.

Missing Data

I utilized data that were collected in the FFCWS's Baseline, Year 3, and Year 9 waves, keeping all cases in which participants were interviewed at these waves. Participants who were not interviewed in each wave were coded as "not in the wave" and those cases were deleted. Participants in a total of 1,770 cases provided all the information for the outcome variables examined in this study, including bullying perpetration and peer victimization. I then conducted

a missing data analysis to examine the missing data for different variables among these 1,770 cases. The results of the missing data analysis indicated that the data were missing completely at random (Little's MCAR test: Chi-Square = 75.544, DF = 68, Sig. = .248). Because of the large sample size of this study and the nature of randomly missing data, I decided to use listwise deletion to drop the cases that had missing data, which brought the final total of cases with complete information for each variable to 1,630.

Assumption of Data Analysis

Before implementing additional analytical procedures, I also conducted an analysis to examine whether the multiple regression assumptions were met. Assumptions of multiple linear regression include linear relationship, no multicollinearity, homoscedasticity, and multivariate normality (Strand, Cadwallader, & Firth, 2011). First, I created scatterplots to examine whether a linear relationship existed between the outcome variables (bullying perpetration and peer victimization) and the independent variables. Multicollinearity occurs when one of the independent variables is a perfect linear combination of the other independent variables (Menard, 1995). The criteria for an indication of serious multicollinearity issues include VIF> 10, tolerance<.01, and condition number >30. The results of the assumption analysis showed no multicollinearity among the variables in this study. I also created plots of standardized residuals versus predicted values to examine homoscedasticity. The residual scatterplot showed some degree of deviation from normality in both the bullying perpetration and peer victimization models, indicating some violation of this regression assumption. However, the ANOVA table indicated that both models were significant and, given their robustness, I continued to use these two models in this study. Chapter 5 includes a discussion of the study’s limitations.

Complex Sample Design

FFCWS researchers selected their sample using a complex sample design, which meant that each member in the population did not have the same probability of being selected. For example, FFCWS researchers oversampled nonmarital births so that they could examine the relationships and resources in unwed families (Reichman et al., 2001). Therefore, to generate unbiased statistical estimates, weights need to be considered. However, I used data from the Baseline, Year 3, and Year 9 waves, and the FFCWS user guide indicated that longitudinal weights were not available. Therefore, I did not use weights in my data analysis, which limited the potential for generating national estimates from this study's findings. Chapter 5 includes further discussion of the study's limitations.

Chapter 4

RESULTS

In this study, I used The Fragile Family and Child Wellbeing Study (FFCWS) to examine the relationship between early exposure to family violence (when the focal children were three years old) and later involvement in bullying-related behaviors (when the focal children were nine years old) as well as the moderating effect of school connectedness, after controlling for demographic variables including the child's gender, mother's age, mother's race/ethnicity, and household socioeconomic statuses. I used two moderation models to separately examine the outcome of bullying perpetration and peer victimization. In this chapter, I describe the results of univariate, bivariate, and multivariate statistical analyses.

Descriptive Statistics

A total of 1,630 cases were examined in this study, where the participants (children, mothers, and school teachers) shared information regarding the variables examined in this study in the Baseline, Year 3, and Year 9 waves. Among the 1,630 children in the sample, 52.27% were boys (n=852) and 47.73% were girls (n=778). Mother's race/ethnicity was used as proxy because FFCWS did not ask the focal children's race/ethnicity. Among the 1,630 mothers in this study, 24.66% (n=402) were White/non-Hispanic and 75.34% (n=1228) were people of color. Mother's age was measured when the focal children were born, and the mothers' ages ranged from 15 to 43 years old (Mean= 25.21, SD=6.08). Annual household income was measured when the focal children were 3 years old; incomes ranged from no income to a maximum income of $133,750 (Mean= 33,609.42, SD=32,315.38).

I used two models to examine the outcome of bullying perpetration and peer victimization respectively. I used three questions from the teacher reports to measure bullying

perpetration, and each item was coded as “0” (Never), “1” (Sometimes), “2” (Often), and “3” (Very Often). Table 4.1 presents the frequency of each bullying perpetration item. I scored the bullying perpetration outcome variable by taking the mean of the three items without missing data (Range=0-3, M=0.63, SD=0.70).

Table 4.1

Frequency of Bullying Perpetration Items

The child’s behavior in the classroom in the past month (score)	Never (0)	Sometimes (1)	Often (2)	Very Often (3)
Fight with others	873 (53.56)	604 (37.06)	117 (7.18)	36 (2.21)
Threatened or bullied others	1,114 (68.83)	354 (21.72)	111 (6.81)	51 (3.13)
Argued with others	631 (38.71)	708 (43.44)	193 (11.84)	98 (6.01)

Note. n(%)

Another outcome variable in this study was peer victimization; I measured it using children’s responses to four questions. Each item was coded as “0” (Not once in the past month), “1” (1-2 times in the past month), “2” (Once a week), “3” (Several times per week), and “4” (Every day). Table 4.2 presents the frequency of the four peer victimization items. I scored this variable by taking the mean of all items without missing data (Range=0-4, M=0.63, SD=0.77).

Table 4.2

Frequency of Peer Victimization Items

In the past month, how often have kids in your school or neighborhood: (score)	Not once in the past month (0)	1-2 times in the past month (1)	Once a week (2)	Several times per week (3)	Every day (4)
Picked on you or said mean things to you?	735 (45.09)	352 (21.60)	166 (10.18)	173 (10.61)	204 (12.52)
Hit you?	1,257 (77.12)	190 (11.66)	76 (4.66)	52 (3.19)	55 (3.37)
Taken your things, like your money or lunch, without asking?	1,413 (86.69)	117 (7.18)	35 (2.15)	35 (2.15)	30 (1.84)
Purposely left you out of activities?	1,109 (68.04)	282 (17.30)	104 (6.38)	70 (4.29)	65 (3.99)

Note. n(%).

School connectedness was the moderator in this study; I measured it using the children's responses to four questions, and scored the variable by taking the mean of all items without missing data (Range=0-4, M=3.08, SD=0.95). Table 4.3 presents the frequency of the four school connectedness items.

Table 4.3

Frequency of School Connectedness Items

In the last month, how often did you… (score)	Not once in the past month (0)	1-2 times in the past month (1)	Once a week (2)	Several times per week (3)	Every day (4)
Feel like you were part of your school?	154 (9.45)	144 (8.83)	145 (8.90)	255 (15.64)	932 (57.18)
Feel close to people at your school?	188 (11.53)	163 (10.00)	170 (10.43)	303 (18.59)	806 (49.45)
Feel happy to be at your school?	152 (9.33)	122 (7.48)	147 (9.02)	257 (15.77)	952 (58.40)
Feel safe at your school?	102 (6.26)	71 (4.36)	84 (5.15)	177 (10.86)	1,196 (73.37)

Note. n (%).

This study's predictor, family violence, measured how many forms of aggression the focal children were exposed to at age three. The forms of violence included physical forms of domestic violence, psychological forms of domestic violence, physical forms of child maltreatment, and psychological forms of child maltreatment. For each type of aggression, I created a dichotomous variable if the child and the mother met the study criteria. I then scored these variables by summing up how many types of aggression the children were exposed to (Range=0-4, M=1.44, SD=1.06). Table 4.4 presents the frequency of the different types of family violence that children were exposed to. Table 4.5 summarizes the characteristics of all variables examined in this study.

Table 4.4

Frequency of Types of Family Violence

Types of Family Violence	n	Percentage
0	375	23.01
1	444	27.24
2	571	35.03
3	185	11.35
4	55	3.37

Note. n=number of children exposed to family violence.

Table 4.5

Display of Psychometric Properties of Variables

Variable	n	M	SD	Range	
				Potential	Actual
Dependent Variables					
Bullying Perpetration	1,630	0.63	0.70	0-3	0-3
Peer Victimization	1,630	0.63	0.78	0-4	0-4
Moderator					
School Connectedness	1,630	3.08	0.96	0-4	0-4
Predictor					
Family Violence	1,630	1.45	1.07	0-4	0-4
Co-variates					
Mother's age	1,630	25.21	6.09	-	15-43
Child's gender	1,630	-	-	0 or 1	0-1 (binary)
Mother's race/ethnicity	1,630	-	-	0 or 1	0-1 (binary)
Household income	1,630	33,609	32,315	-	0-133,750

Research Question 1

The first research question in this study was as follows: To what extent do the children in the FFCWS experienced family violence at age three, perpetrated bullying, and experienced peer victimization at age 9? Based on teacher reports, 35.28% of children (n=575) displayed no bullying perpetration behaviors (reported "Never" to all three items) during the month preceding the survey and 64.72% (n=1055) displayed bullying behaviors at least once in the preceding month. Figure 4.1 displays the frequency of bullying perpetration from the teacher reports.

Bullying Perpetration (Age 9)

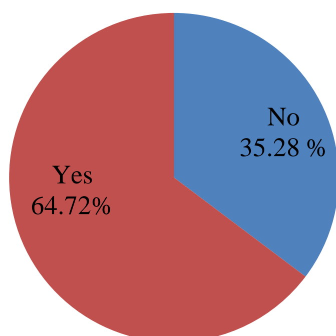

Figure 4.1. Frequency of bullying perpetration

Regarding peer victimization, 34.85% of children (n=568) reported that they had not experienced any acts of peer victimization (reported "Never" to all four items) in the month preceding the survey and 65.15% (n=1062) reported experiencing peer victimization at least once in preceding month. Figure 4.2 presents the frequency of child-reported peer victimization.

Peer Victimization (Age 9)

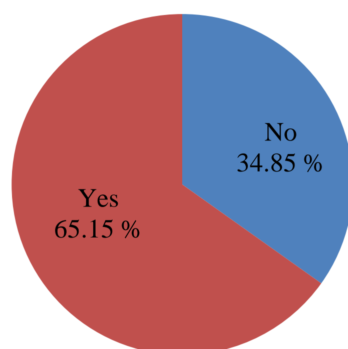

Figure 4.2. Frequency of peer victimization

Regarding family violence, the results indicated that 23.01% of children (n=375) did not experience any form of aggression, 27.24% of children (n=444) experienced one type of

aggression, 35.03% of children (n=571) experienced two types of aggression, 11.35% of children (n=185) experienced three types of aggression, and 3.37% of children (n=55) experienced four types of aggression in their households. Figure 4.3 illustrates the frequency of the various types of family violence.

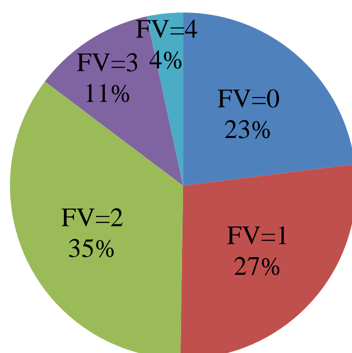

Figure 4.3. Frequency of family violence

Bivariate Analysis

Zero order bivariate correlation was conducted to examine the relationships between different variables. I used SPSS to calculate Pearson's correlation and the one-tail significance value. Table 4.6 presents the correlations between the different variables examined in this study. The two outcome variables in this study (bullying perpetration and peer victimization) were significantly correlated (r=0.17) and the main predictor, family violence, was significantly correlated with bullying perpetration (r=0.11) and peer victimization (r=0.07). As Table 4.6 shows, bullying perpetration was significantly correlated with all other variables examined in this study. The analysis showed significantly positive correlations between bullying perpetration and both child's male gender (r=0.14) and mother being a minority (r=0.14); it also showed

significantly negative correlations between bullying perpetration and school connectedness (r=-0.14), household income (r=-0.18), and mother's age (r=-0.14). In addition, the analysis showed significantly negative correlations between peer victimization and school connectedness (r=-0.24), household income (r=-0.08), and mother's age (r=-0.05). The moderator, school connectedness, was significantly correlated with child's male gender (r=-0.09) and household income (r=0.08). Regarding the demographic variables, child's gender was not significantly correlated with mother's race/ethnicity, income, or mother's age; however, mother's age, household income, and mother's race/ethnicity were significantly correlated with each other.

Table 4.6

Correlation Between Different Variables

Variable	1	2	3	4	5	6	7	8
1. FV	-							
2. Bully	0.11***	-						
3. Victim	0.07**	0.17***	-					
4. Schcon	-0.02	-0.14***	-0.24***	-				
5. Boy	0.06*	0.14***	-0.01	-0.09***	-			
6. Minority	0.02	0.14***	0.04	-0.03	0.01	-		
7. Income	-0.12***	-0.18***	-0.08**	0.08**	-0.03	-0.32***	-	
8. Momage	-0.15***	-0.14***	-0.05*	0.02	-0.02	-0.16***	0.32***	-

Note. FV=Family Violence, Bully=bullying perpetration, Victim=peer victimization, Schcon= school connectedness, boy=the child's gender is male, Minority=mother is minority, Income=household income, Momage=the mother's age. N=1,630 *p<.05, **p<.01, ***p<.001

Multivariate Analysis

The second to the fifth research questions in this study were as follows:

RQ 2: To what extent does exposure to family violence at age three predict bullying perpetration at age nine after controlling for demographic variables (child's gender, mother's race/ethnicity, household income, and mother's age)?

RQ 3: To what extent does school connectedness moderate the impact of early exposure to family violence on later involvement in bullying perpetration?

RQ 4: To what extent does exposure to family violence at age three predict peer victimization at age nine after controlling for demographic variables (child's gender, mother's race/ethnicity, household income, and mother's age)?

RQ 5: To what extent does school connectedness moderate the impact of early exposure to family violence on later involvement in peer victimization?

To address these questions, I used SPSS to conduct hierarchical multiple regression analysis to examine the two models. For the bullying perpetration model (for RQ 2 and RQ 3), I investigated demographic variables (child's gender, mother's race/ethnicity, mother's age, and household income) in Block 1 and then added the predictor (family violence) in Block 2. To examine the moderating effect of school connectedness on family violence and bullying perpetration, I used mean centering to create the centered variables for family violence (predictor) and school connectedness (moderator), and then created an interaction term for family violence and school connectedness. I then used the hierarchical multiple regression analysis to examine the demographic variables in Block1, the predictor and moderator in Block 2, and the interaction term in Block 3.

I used the same hierarchical multiple regression analysis to examine peer victimization (for RQ 3 and RQ 4), where I examined demographic variables (child's gender, mother's race/ethnicity, mother's age, and household income) in Block 1 and then added the predictor (family violence) in Block 2. I also examined the moderating effect of school connectedness on family violence and peer victimization through analyses of the demographic variables in the Block 1, the main predictor and moderator in Block 2, and the interaction variable in Block 3.

Research Question 2

Research Question 2 was as follows: To what extent does exposure to family violence at age three predict bullying perpetration at age nine after controlling for demographic variables (child's gender, mother's race/ethnicity, household income, and mother's age)? Table 4.7 shows the Research Question 2 results. Demographic variables were examined in Block 1. I calculated a multiple linear regression to predict bullying perpetration based on mother's age, income, minority status, and child's gender. The calculation generated a significant regression equation (F(4,1625)=26.77, p=.000), with an R^2 of 0.062, indicating that these demographic variables accounted for 6.2% of the variation in the bullying perpetration variable. All four demographic variables—mother's age (β=-0.08, p=.001), household income (β =-0.12, p=.000), mother being a minority (β =0.08, p=.001), and child's male gender (β =0.13, p=.000)—were statistically significant.

I added the main predictor, family violence, in Block 2. As Table 4.7 shows, it accounted for 0.006 change in variance (ΔR^2), indicating that it was statistically significant (F(1,1624)=10.01, p=.002). Table 4.7 reports the unstandardized regression coefficients (B) and the standardized regression coefficients (β) for the full model (Model 2). The results indicated that early exposure to family violence significantly predicted later involvement in bullying perpetration (β=0.08, p=.002). When family violence was added, all demographic variables remained statistically significant, including mother's age (β=-0.08, p=.003), household income (β=-0.11, p=.000), mother being a minority (β=0.09, p=.001), and child's male gender (β=0.13, p=.000). After controlling for the demographic variables, the results indicated that early exposure to family violence significantly predicted later involvement in bullying perpetration.

Table 4.7

Family Violence and Bullying Perpetration

Variable	Model 1			Model 2		
	B	SE	β	B	SE	β
Momage	-0.01	0.003	-0.08**	-0.01	0.003	-0.08**
StdIncome	-0.08	0.019	-0.12***	-0.08	0.019	-0.11***
Minority	0.14	0.041	0.08**	0.14	0.041	0.09**
Boy	0.19	0.034	0.13***	0.18	0.034	0.13***
FV				0.05	0.016	0.08**
Model Summary						
R^2		0.062			0.068	
R^2 change		0.062			0.006	
Adjusted R^2		0.060			0.065	
F change		26.775***			10.01**	
df		4/1625			1/1624	

Note. N=1,630 *p<.05, **p<.01, ***p<.001

Research Question 3

Research Question 3 was as follows: To what extent does school connectedness moderate the impact of early exposure to family violence on later involvement in bulling perpetration? Table 4.8 displays the Research Question 3 results. In Block 1, I calculated a multiple linear regression to predict bullying perpetration based on demographic variables (child's gender, mother's race/ethnicity, household income, and mother's age); the calculation generated a significant regression equation (F(4,1625)=26.78, p=.000), with an R^2 of 0.062, indicating that these variables accounted for 6.2% of the variation in bullying perpetration.

I added the main predictor (family violence) and moderator (school connectedness) in Block 2. As Table 4.8 shows, the main predictor and moderator accounted for 0.018 change in variance (ΔR^2), which was statistically significant (F(2,1623)=16.22, p=.000). Table 4.8 reports the unstandardized regression coefficients (B) and the standardized regression coefficients (β) for Model 2. Both family violence (β=0.08, p=.002) and school connectedness (β=-0.11, p=.000)

contributed to bullying perpetration significantly. The analysis also indicated that all demographic variables remained statistically significant in Model 2, including mother's age (β=-0.08, p=.003), household income (β=-0.10, p=.000), mothers being a minority (β=0.09, p=.001), and child's male gender (β=0.12, p=.000). I added the interaction term of family violence and school connectedness in Block 3, and it accounted for a 0.001 change in variance (ΔR^2), indicating that it was not statistically significant (F(1,1622)=1.24, p=.265). In Model 3, other independent variables remained statistically significant in relation to bullying perpetration outcomes. The analysis indicated that school connectedness did not moderate the impact of early exposure to family violence (when the child was age 3) on later involvement in bullying perpetration (when the child was age 9).

Table 4.8

Bullying: Moderating Effect of School Connectedness

Variable	Model 1			Model 2			Model 3		
	B	SE	β	B	SE	β	B	SE	β
Momage	-0.01	0.003	-0.08**	-0.01	0.003	-0.08**	-0.01	0.003	-0.08**
StdIncome	-0.08	0.019	-0.12***	-0.08	0.019	-0.10***	-0.07	0.019	-0.10***
Minority	0.14	0.041	0.08**	0.14	0.041	0.09**	0.14	0.041	0.09**
Boy	0.19	0.034	0.13***	0.17	0.034	0.12***	0.17	0.034	0.12***
FV				0.05	0.016	0.08**	0.05	0.016	0.08**
Schcon				-0.08	0.018	-0.11***	-0.08	0.018	-0.11***
FVxSch							-0.02	0.016	-0.03
Model Summary									
R^2		0.062			0.080			0.081	
R^2 change		0.062			0.018			0.001	
Adjusted R^2		0.060			0.077			0.077	
F change		26.78***			16.22***			1.24	
df		4/1625			2/1623			1/1622	

Note. N=1,630 *p<.05, **p<.01, ***p<.001

Research Question 4

Research Question 4 was as follows: To what extent does exposure to family violence at age three predict peer victimization at age nine after controlling for demographic variables? Table 4.9 reports the Research Question 4 results. In Block 1, I calculated a multiple linear regression to predict peer victimization based on demographic variables, including mother's age, household income, mother's being a minority, and child's male gender. The calculation generated a significant regression equation ($F(4,1625)=2.94$, $p=.019$), with an R^2 of 0.007, indicating that these demographic variables accounted for 0.7% of the variation in the peer victimization. Among the four demographic variables, only household income contributed significantly to peer victimization ($\beta=-0.06$, $p=.027$).

I added family violence in Block 2. As Table 4.9 shows, it accounted for 0.004 change in variance (ΔR^2), significantly more than zero ($F(1,1624)=3.48$, $p=.018$). Table 4.9 reports the unstandardized regression coefficients (B) and the standardized regression coefficients (β) for the full model (Model 2). The results indicated that early exposure to family violence significantly predicted later involvement in peer victimization ($\beta=0.06$, $p=.018$). When I added family violence, the effect of household income remained statistically significant ($\beta=-0.06$, $p=.045$). The analysis showed that early exposure to family violence (when the child was age 3) significantly predicted later involvement in peer victimization (when the child was age 9).

Table 4.9

Family Violence and Peer Victimization

Variable	Model 1 B	Model 1 SE	Model 1 β	Model 2 B	Model 2 SE	Model 2 β
Momage	-0.004	0.003	-0.03	-0.00	0.003	-0.02
StdIncome	-0.04	0.021	-0.06*	-0.04	0.021	-0.06*
Minority	0.03	0.047	0.02	0.04	0.047	0.02
Boy	-0.02	0.038	-0.01	-0.02	0.038	-0.02
FV				0.04	0.018	0.06*
Model Summary						
R^2		0.007			0.011	
R^2 change		0.007			0.003	
Adjusted R^2		0.005			0.008	
F change		2.94*			3.48*	
df		4/1625			1/1624	

Note. N=1,630 *p<.05, **p<.01, ***p<.001

Research Question 5

Research Question 5 was as follows: To what extent does school connectedness moderate the impact of early exposure to family violence on later involvement in peer victimization? Table 4.10 reports the Research Question 5 results. In Block 1, I calculated a multiple linear regression to predict peer victimization based on demographic variables (child's gender, mother's race/ethnicity, household income, and mother's age); the calculation produced a significant regression equation (F(4,1625)=2.94, p.019), with an R^2 of 0.007, indicating that these variables accounted for 0.7% of the variation in peer victimization. Among the demographic variables, only household income was statistically significant (β=-0.06, p=.027).

I added the main predictor (family violence) and moderator (school connectedness) in Block 2. As Table 4.10 shows, the main predictor and moderator accounted for 0.061 change in variance (ΔR^2), which was statistically significant (F(2,1623)=52.95, p=.000). Table 4.10 reports the unstandardized regression coefficients (B) and the standardized regression coefficients (β) for

Model 2. Both family violence (β=0.06, p=.018) and school connectedness (β=-0.24, p=.000) contributed significantly to peer victimization. The effect of household income became non-significant (β=-0.04, p=.164).

I added the interaction term of family violence and school connectedness in Block 3, and it accounted for 0.001 change in variance (ΔR^2), which was not statistically significant (F(1,1622)=2.43, p=.119). In Block 3, the effects of family violence (β=0.06, p=.020) and school connectedness (β=-0.24, p=.000) remained statistically significant in relation to peer victimization outcomes. The results indicated that school connectedness did not moderate the impact of early exposure to family violence on later involvement in peer victimization.

Table 4.10

Victimization: Moderating Effect of School Connectedness

Variable	Model 1			Model 2			Model 3		
	B	SE	β	B	SE	β	B	SE	β
Momage	-0.004	0.003	-0.03	-0.003	0.003	-0.03	-0.003	0.003	-0.03
StdIncome	-0.05	0.021	-0.06*	-0.03	0.021	-0.04	-0.03	0.021	-0.04
Minority	0.03	0.047	0.02	0.04	0.046	0.02	0.04	0.046	0.02
Boy	-0.02	0.038	-0.01	-0.06	0.037	-0.06	-0.05	0.037	-0.03
FV				0.04	0.018	0.06*	0.04	0.018	0.06*
Schcon				-0.19	0.020	-0.24***	-0.19	0.020	-0.24***
FVxSch							-0.03	0.018	-0.04
Model Summary									
R^2		0.007			0.068			0.069	
R^2 change		0.007			0.061			0.001	
Adjusted R^2		0.005			0.065			0.065	
F change		2.94*			52.95***			2.43	
df		4/1625			2/1623			1/1622	

Note. N=1,630 *p<.05, **p<.01, ***p<.001

Chapter 5

DISCUSSION

School bullying is a significant issue in the United States and around the world (Hong & Espelage, 2012; Kim, Boyce, Koh, & Leventhal, 2009; UNESCO, 2017; Nansel et al., 2001). Research has shown the negative academic, emotional, and behavioral impacts of bullying on children and adolescents (Espelage et al., 2013). Previous studies have examined the association between bullying-related behaviors and family violence, including being exposed to child maltreatment and domestic violence (Bald, 2003; Chapple et al., 2005; Dussich & Maekoya, 2007; Espelage et al., 2012; Hong et al., 2012). These studies have shown that family violence is a strong predictor of school bullying and peer victimization. I designed the current study to examine the relationship between early exposure to family violence and later involvement in bullying-related behaviors. Because most previous studies used cross-sectional data to examine the association between family violence and bullying-related behaviors (Baldry, 2003; Cluver et al, 2010; Espelage et al., 2012; Holt et al., 2009), I investigated how early exposure to family violence predicted later involvement in bullying perpetration and peer victimization using longitudinal data from the Fragile Family and Child Well-Being Study (FFCWS).

Because research has indicated that children often experience multiple forms of familial aggression simultaneously (Finkelhor et al., 2007), different types of familial victimization need to be examined together (Hamby, 2010; Herrenkohl et al., 2008). Thus, in this study, I investigated four types of familial victimization together—exposure to domestic violence-related physical abuse, domestic violence-related psychological abuse, child maltreatment-related physical aggression, and child maltreatment-related psychological aggression. I also examined the moderating effect of school connectedness. Previous studies have identified school

connectedness as a protecting factor for youth who experienced family violence (Saewyc et al., 2006); however, research has not yet explored how school connectedness moderates the impact of family violence on bullying perpetration and peer victimization. This chapter discusses the study's results and their clinical implications for schools and counselor education; it also explains the study's limitations and makes recommendations for future research.

Discussion of Findings

Prevalence of Family Violence and School Bullying

In this section, I discuss results related to RQ1: To what extent do the children in the FFCWS who experienced family violence at age three perpetrate bullying and experience peer victimization at age 9? My analysis showed that, during the month preceding the survey, 64.72% of students displayed bullying behaviors at least once (according to the teacher reports) and 65.15% of children reported experiencing peer victimization at least once. Bullying perpetration and peer victimization prevalence rates have varied greatly across different studies; Hymel and Swearer (2015) reported that bullying perpetration rates ranged from 5% to 13%, and peer victimization rates varied from 10% to 33%. A United Nations Educational, Scientific and Cultural Organization report (UNESCO, 2017) indicated that bullying and victimization rates varied from less than 10% to up to 85% across the different age groups and populations that have been measured in the studies globally, indicating that bullying is a worldwide issue. A recent report from The United Nations Children's Fund (UNICEF, 2016) also found that 67% of participants from around the world had been bullied. The bullying perpetration rate was higher in the current study due to the lack of accurate bullying measures in the FFCWS study, which necessitated using three externalizing behaviors to measure bullying.

Because most previous research examined separate categories of victimization (Finkelhor et al., 2007; Turner et al., 2010), I examined multiple forms of familial victimization together. Turner and colleagues (2010) reported that poly-victimization was common for children who were exposed to violence. My analysis showed that 23.01% of children did not experience any form of familial victimization, 27.24 % of children experienced one form of familial victimization, and 49.75% of children experienced at least two forms of familial victimization. These results align with the findings of previous studies that exposure to multiple forms of victimization was common (Turner et al., 2010). A study that examined a sample of around 4,000 children aged 2-17 in the United States revealed that 66% of the sample was exposed to at least one type of victimization (Turner et al., 2010). Previous studies have also found that domestic violence coexisted with child maltreatment (Casanueva, Kotch, & Zolotor, 2007; Herrenkohl et al., 2008). My findings in this study indicated that at age three, 8.3% of children were exposed to domestic violence-related physical assault and 27.63% of children were exposed to domestic violence-related psychological abuse. Regarding child maltreatment, children who scored above the 50th percentile in the Parent-Child Conflict Tactics Scales were considered as experiencing familial victimization; based on this criteria, 59.21% of children were exposed to physical maltreatment and 51.73% of children were exposed to psychological maltreatment. The results also indicated that domestic violence and child maltreatment co-existed in households.

Relationship between Family Violence and Bullying Perpetration

In this section, I discuss findings related to RQ2: To what extent does exposure to family violence at age three predict bullying perpetration at age nine after controlling for demographic variables?

I hypothesized that early exposure to family violence (including domestic violence and child maltreatment) would predict later involvement in bullying perpetration. My analysis confirmed this hypothesis: controlling for demographic variables including mother's age, race/ethnicity, child's gender, and household income, the analysis showed that children's exposure to family violence at age three served as a statistically significant predictor of their bullying perpetration at age nine. These findings align with previous research showing that children who were exposed to domestic violence and child maltreatment were at increased risk for bullying perpetration.

Past studies investigating family violence and bullying have examined domestic violence and child maltreatment separately. Regarding the relationship between intimate partner violence and bullying perpetration, several studies using cross-sectional data to examine children of different age and races/ethnicities have reported significant associations between exposure to domestic violence and bullying perpetration (Baldry, 2003; Cluver et al., 2010; Holt et al., 2009; Moretti, Obsuth, Odgers, & Reebye, 2006; Mustanoja et al., 2011). By contrast, Bauer et al. (2006)'s longitudinal study reported no significant association between exposure to IPV and child-reported relational bullying perpetration. Previous research has also found a significant association between child maltreatment and bullying (Chapple et al., 2005). Dussich and Maekoya (2007) conducted a study of 852 college students in Japan, South Africa, and the United States and found a significant association between physical child harm and bullying perpetration. It is noted that the effect size of this study was small and was lower than other studies examining the relationship between family violence and bullying perpetration. This study did not use accurate measurement to evaluate bulling due to the measurement limitations from the FFCWS study. In contrast to previous studies that examined domestic violence and child

maltreatment separately, in this study, I examined domestic violence and child maltreatment together as family violence.

The longitudinal outcome indicated that early exposure to family violence predicted later involvement in bullying perpetration. Bullying issues need to be examined through a social-ecological framework, which views the child as an inseparable part of the social network. I applied the comprehensive version of Bronfenbrenner's theory, which encompasses Process-Person-Context-Time (PPCT), to examine bullying behaviors. *Proximal processes* are ongoing reciprocal social interactions that occur repeatedly, and this study's findings indicated that family violence (a proximal process) impacted children's developmental outcomes such that the children were more likely to display bullying behaviors. Other major PPCT concepts include *person characteristics* and *context*; the demographic variables examined in this study included child's gender, mother's race/ethnicity, mother's age, and household income. My analysis showed that children with older mothers and higher household incomes had lower bullying perpetration rates, while male and racial/ethnic minority children had higher bullying perpetration rates. Although some previous research has found that males are more likely to become bullies than females (Seals & Young, 2003), other research has shown no significant difference between genders in bullying perpetration (Barboza et al., 2009). Meanwhile, studies of race/ethnicity-based differences in bullying behaviors have found no differences or mixed outcomes (Hanish & Guerra, 2000; Nansel et al., 2001; Seals & Young, 2003).

Relationship between Family Violence and Peer Victimization

In this section, I discuss findings related to RQ4: To what extent does exposure to family violence at age three predict peer victimization at age nine after controlling for demographic variables? I hypothesized that early exposure to family violence would predict later peer

victimization. After controlling for demographic variables, my analysis showed that exposure to family violence at age three was a statistically significant predictor of peer victimization at age nine. The outcomes of this study align with previous studies that have found associations between family violence and peer victimization. Cluver and colleagues (2010) examined one thousand children aged 10-19 and found that being a victim of child maltreatment and domestic violence was a strong risk factor for bullying victimization. Mohr (2006) also found an association between negative family experience and peer victimization. Another study found an association between victims' home environments and increased child maltreatment (Holt et al., 2009). Espelage and colleagues (2012) examined subtypes of peer victimization and found that children who were victims of relational aggression or who experienced polyvictimization were more likely to experience family violence, including domestic violence as well as physical and sexual abuse at home.

To date, most studies examining the relationship between family violence and peer victimization have used cross-sectional data. This study contributes to the literature by using longitudinal data to explain the linkage between early exposure to family violence and later involvement in peer victimization. Another study that used longitudinal data found an association between family violence and bullying perpetration, but no such association between family violence and peer victimization (Bowes et al., 2009). However, Bowes et al. (2009) relied on mothers' reports to measure peer victimization, which might be a limitation because parents may not be aware of their children's experiences of victimization at school. As with bullying perpetration, most research investigating peer victimization has focused on students in middle school or high school (Cluver et al., 2010; Holt et al., 2009; Mohr, 2006). This study contributes to current literature by examining peer victimization among elementary school-aged students. In

addition, most studies of peer victimization have focused on whether children became the repeated targets of their peers' aggressive behaviors (Mohr, 2006). Similar to previous research, I measured a broader concept of peer victimization in this current study that did not encompass the definition of bullying.

My analysis indicated that children from higher income families were less likely to experience peer victimization. However, it did not reveal any association between gender and peer victimization. Past studies have produced mixed findings regarding the association between gender and victimization. In addition, my analysis showed no relationship between race/ethnicity and peer victimization. Past studies have generated mixed results regarding the association between race/ethnicity and victimization (Hanish & Guerra, 2000; Nansel et al., 2001). Seals and Young (2003) reported minor racial/ethnic-based differences in victimization.

The Moderating Effect of School Connectedness

In this section, I discuss results related to RQ3 and RQ5, which examined how school connectedness would moderate the association between early exposure to family violence and later involvement in bulling perpetration/peer victimization. I hypothesized that school connectedness would moderate the impact of family violence on both bullying perpetration and peer victimization. However, my analysis showed that school connectedness did not moderate the relationship between early exposure to family violence and later involvement in bullying perpetration and peer victimization. To date, no research has examined whether school connectedness can mitigate the risk that early exposure to family violence will lead to later engagement in bullying-related behaviors and only a few studies have examined how school connectedness moderates the impact of family violence. Saewyc and colleagues (2006) reported that school connectedness was the strongest protective factor for youth who had experienced

family violence. Another study examining the association between histories of childhood maltreatment and violence behaviors in adolescence showed that students who attended schools that they perceived as safe were less likely to engage in violent delinquency (Crooks et al., 2007). In a similar vein, O'Donnell, Roberts, and Schwab-Stone (2011) found that school connectedness moderated the relationship between exposure to community violence and experience of posttraumatic stress symptoms. Carney, Kim, Hazler, and Guo (2017) also found that school connectedness moderated the impact of social skills on emotional/behavioral difficulties among disadvantaged youths between 6th to 8th grade in urban schools. This study contributes to the literature by deepening scholarly understanding of the role school connectedness plays in the relationship between early childhood maltreatment and school bullying in middle childhood.

Although the current study did not find that school connectedness moderated the effect of family violence on bullying-related behaviors, my analysis showed a significant association between school connectedness and bullying-related behaviors, where children with higher levels of school connectedness were less likely to engage in both bullying perpetration and peer victimization. These results align with the findings of previous studies of the relationship between school connectedness and school bullying. Gendron, Williams, and Guerra (2011) conducted a study of students in elementary, middle, and high school and found that students were more likely to engage in bullying perpetration when the school climate was unhealthy. Other studies have indicated that students who were bullies or victims had lower levels of school connectedness and reported feeling unsafe and disconnected from school (O'Brennan et al., 2009; Skues, Cunningham, & Pokharel, 2005).

To date, most research examining the moderation effect of school connectedness has focused on middle and high school students. Hymel & Swearer (2015) showed that bullying peaked in middle school and declined by the end of high school. Therefore, I regarded it as imperative to examine school bullying in elementary school-aged children to aid in the development of early interventions and preventions that could address bullying issues before they get worse. This study contributes to the literature by expanding scholarly understanding of bullying perpetration and peer victimization among elementary school-aged students. Eccles and colleagues (1993) reported that most elementary school students felt connected to their schools and school connectedness started to decline in middle school. The results of this study likewise indicated that most children felt connected to schools when they were surveyed at age nine, where the mean score of school connectedness was 3.08 (SD=0.96, range=0-4).

Past studies have extensively documented the positive effects of school connectedness among secondary school students. Loukas and colleagues (2009) examined 500 middle school students and found that students with higher levels of school connectedness displayed fewer conduct problems one year later. Another study indicated that school connectedness moderated the effects of negative family relations on early adolescent conduct problems among middle school students (Loukas, Roalson, & Herrera, 2010). Loukas and Pasch (2013) likewise reported that school connectedness moderated subsequent conduct problems for girls who experienced overt peer victimization. Other studies also indicated that secondary school students with higher level of school connectedness were less likely to experience symptoms of depression (Shochet, Homel, Cockshaw, & Montgomery, 2008; Shochet, Smith, Furlong, & Homel, 2011). The concept of school connectedness examined in the above-mentioned studies focused on students' experiences of belonging and closeness with others at school, measuring school connectedness

with items including “I feel safe at school” or “I feel close to people at this school.” Clearly defining school connectedness is important because this term has been examined in different fields under different definitions. For example, Klika, Herrenkohl, and Lee (2012) reported that school commitment did not moderate the effect of physical child abuse on antisocial behaviors; however, for Klika et al. (2012), the concept of school commitment referred to students’ commitment to and perceived importance of education—different from conceptualizations of school connectedness that focus on affective and interpersonal considerations.

The results of this study indicated that even after controlling for demographic variables, school connectedness contributed significantly to decreases bullying perpetration and peer victimization. These findings support the outcomes of previous studies showing that schools should emphasize the importance of establishing caring and supportive relationship between students and teachers because caring relationships are imperative for the well-being of students with histories of trauma (Dods, 2013; Klem & Connell, 2004).

Implications for Schools

As bullying has received increasing attention as a major issue in the United States and around the world, schools have begun implementing school-based anti-bullying programs (Ferguson, Miguel, Kilburn, & Sanchez, 2007; Lee et al., 2015; Merrell, Gueldner, Ross, & Isava, 2008). However, given that conditions at home might strongly impact bullying-related behaviors, school personnel should not be solely responsible for solving bullying-related issues (Espelage et al., 2012). Many studies have drawn connections between bullying perpetration/peer victimization and childhood traumas such as being exposed to domestic violence and child maltreatment (e.g., Hong et al., 2012). Based on analyses of longitudinal data from FFCWS, the results of this study indicated that early exposure to family violence predicted later involvement

in both bullying perpetration and peer victimization. Grounded in Bronfenbrenner's theory, I examined children's development through the major concepts of Process-Person-Context-Time, and found that family violence—the proximal process—impacted children's developmental outcomes such that children were more likely to engage in bullying perpetration and victimization. These findings imply that school personnel need to examine students' bullying-related behaviors through a trauma-informed lens; in other words, they need to understand that childhood traumas, such as domestic violence and child maltreatment, might fuel the development of bullying-related issues. In this section, I discuss the need to promote trauma-informed schools and trauma-informed anti-bullying programs, and the importance of preventing secondary traumatic stress among teachers and other school professionals.

Promoting Trauma-Informed Schools

This study's finding that students commonly experienced traumatic events at home and at school highlights the need to ensure that schools are trauma-informed. The Adverse Childhood Experiences (ACEs) study revealed an association between childhood adversities and both physical and mental health in adulthood (Felitti et al., 1998). Other studies have also found that children with higher ACEs were more likely to experience academic failure, attendance issues, and severe school behavioral problems (Blodgett & Lanigan, 2018; Freeman, 2014). I examined domestic violence and child maltreatment—both considered ACEs in the original ACEs study—together in this study as family violence. I focused on family violence in early childhood because young children are more likely to be at home with their parents and thus are more likely to be exposed to family violence (Finkelhor, Turner, Shattuck, & Hamby, 2015). To date, most studies examining family violence and school bullying have used cross-sectional data and investigated domestic violence and child maltreatment separately. This study's finding that early exposure to

family violence predicted later involvement in bullying-related behaviors adds to the current literature, providing support for previous studies that have linked family violence and school bullying.

My analysis showed that family violence was common among children, and that family violence significantly predicted both bullying perpetration and peer victimization; therefore, school personnel need to become trauma-informed and address school bullying from a trauma-informed perspective. In addition to family violence, research has shown that children commonly experience other types of traumatic events and childhood adversities (Finkelhor et al., 2015; Freeman, 2014; Perfect, Turley, Carlson, Yohanna, & Saint Gilles, 2016). Recognizing that children experience trauma and violence more frequently than generally acknowledged, more and more schools have started implementing trauma-informed care to become trauma-informed schools—also called trauma-sensitive schools (Chafouleas, Johnson, Overstreet, & Santos, 2015). This study's findings reinforce the importance of such efforts in the battle to more effectively address bullying-related issues.

According to the Substance Abuse and Mental Health Service Administration (SAMHSA, 2014), trauma-informed care consists of the following four key elements: *realizing* the prevalence and impact of trauma, *recognizing* trauma symptoms, *responding* with trauma knowledge, and *resisting re-traumatization*. Becoming trauma-informed requires that organizations undertake comprehensive cultural shifts (SAMHSA, 2014).

In trauma-informed schools, all school personnel *realize* the prevalence and impacts of childhood trauma (including family violence and other types of traumatic events). Professional development needs to be provided for school teachers, administrators, and other school staff and professionals so that all school personnel can learn how trauma (including family violence and

other types of adversities) impacts the social-emotional, behavioral, academic, and neurological dimensions of children's development.

In addition, trauma-informed school personnel *recognize* that children's bullying-related behaviors might stem from how they adapted to survive childhood adversities such as living in households with family violence. Normal stress responses activate a cascade of events, preparing the body for the "fight-flight-freeze" response. When children live in households where family violence occurs, the toxic stress they experience changes their bodies' stress responses and autonomic nervous systems because their "fight-flight-freeze" responses are constantly activated (Center on the Developing Child, 2019). The constant activation of the amygdala makes children hypervigilant in perceiving threat cues and can lead them to misinterpret innocuous stimuli as threatening (Creeden, 2009), which might lead to emotional and behavioral issues. Seeing students' problematic behaviors as adaptation rather than pathology can help school professionals use strength-based approaches to address students' issues. For example, school personnel can ask "what has happened to you?" as opposed to "what is wrong with you?" (McInerney & McKlindon, 2014).

Trauma-informed school personnel also *respond* to bullying-related behaviors with trauma knowledge; they understand that when students' "fight-flight-freeze" responses are activated, using punitive approaches will only re-traumatize them and potentially cause them to escalate their behaviors. Schools also need to provide mental health services to help students deal with childhood trauma. Finally, trauma-informed personnel *resist re-traumatization*; schools need to identify triggers and make changes to school environments, classroom management, and school policies to avoid re-traumatization.

Trauma-Informed Anti-Bullying Programs

To address school bullying, many schools have implemented school-based anti-bullying programs; however, previous studies have produced mixed results regarding the effectiveness of school-based anti-bullying programs (Ferguson et al., 2007; Lee at al., 2015; Merrell et al., 2008; Sherer & Nickerson, 2010). My analysis showed that early exposure to family violence significantly predicted bullying perpetration and peer victimization. Schools, therefore, need to take a trauma-informed approach when implementing school-based anti-bullying programs, because addressing school bullying effectively will require that they address trauma-related issues.

Merrell and colleagues (2008) conducted a meta-analysis of school-based anti-bullying programs and reported that the majority of anti-bullying programs appear to produce modest positive knowledge and attitude outcomes without actually changing bullying-related behaviors. Common anti-bullying preventions and interventions include developing school-wide anti-bullying policies, establishing tracking and reporting procedures, increasing school staff's awareness and adult supervision, providing educational approaches such as teaching conflict resolution and emotion management, establishing classroom rules and consequences for violations, incorporating peer-support or peer mediation systems, and providing interventions for bullies and victims such as meeting with bullies right after incidents to communicate that their actions were not okay (Meraviglia, Becker, Rosenbluth, Sanchez, & Robertson, 2003; Sherer & Nickerson, 2010; Suckling & Temple, 2002). A study that surveyed 213 school psychologists to examine schools' anti-bullying practices reported that strategies such as avoiding contact between bullies and victims, zero-tolerance policies, and written anti-bullying policies were least effective. Lee and colleagues (2015) also conducted a meta-analysis to evaluate the effectiveness

of school-based anti-bullying programs and reported that programs involving training in emotional control, peer counseling, and the establishment of school bullying policies had more significant effects on victimization.

School-based anti-bullying programs focus on introducing related curricula, skills training, and developing school policies based on Olweus's anti-bullying program (Meland, Rydning, Lobben, Breidablik, & Ekeland, 2010; Olweus, 1994). The results of this study imply that, addition to these strategies, anti-bullying programs also need to implement trauma-informed care because addressing trauma-related issues could be critical to effectively dealing with school bullying. School-based anti-bullying programs should also consider addressing trauma issues and promoting trauma-sensitive school environments in which all students feel physically and psychologically safe.

Even though my analysis did not show that school connectedness moderated the relationship between family violence and bullying perpetration/peer victimization, the results indicated that higher levels of school connectedness contributed to decreased bullying perpetration and peer victimization. The concept of school connectedness has been interpreted differently in different disciplines; however, the school connectedness measure in this study focused on whether children felt safe and that they belonged at school. My findings in this regard further reinforce the importance of creating trauma-informed school environments—that is, learning environments in which students feel physically and psychologically safe. When students feel safe, their nervous systems can get out of the "fight-flight-freeze" mode, enabling them to fully engage in learning. The results of my analysis suggest that school-based anti-bullying programs need to take trauma-informed approaches and incorporate initiatives to address trauma-related issues.

Prevent Secondary Traumatic Stress among Teachers

The findings of this study also imply that school teachers need to be aware of Secondary Traumatic Stress (STS) because they are working with students who likely have experienced trauma at home or at school. My analysis showed that more than half of the sampled students had experienced some bullying perpetration and peer victimization behaviors, and research has shown that being exposed to bullying is also traumatic for students (Carney, 2008). In addition to the high rates of bullying perpetration and victimization, the analysis showed that the sampled children commonly experienced family violence. These results make clear that school teachers are likely to work with children with histories of trauma, including family violence and school bullying. Research has shown that educators working with children with histories of trauma can experience in STS (Hydon, Wong, Langley, Stein, & Kataoka, 2015). Thus, becoming trauma-informed applies not only to students but also to school teachers; teachers need to be mindful of their own histories with trauma and remain attentive to how working with children with histories of trauma in school impacts their well-being.

Secondary traumatic stress refers to stress resulting from knowing or helping someone who has experienced traumatic events. Most previous research about STS has focused on mental health professionals; however, researchers have started to examine how teachers experience STS when working with students with histories of trauma (Hydon et al., 2015). Research has suggested that when teachers experience STS, they might experience symptoms including physical complaints, feeling numb or detached from students, becoming withdrawn and isolated, using self-destructive coping strategies, as well as exhibiting poor work performance (Hydon et al., 2015). My analysis showed that the sampled students commonly experienced family violence and school bullying, and that early exposure to family violence was a predictor of bullying

perpetration and peer victimization; therefore, teachers need to be educated about STS and implement self-care strategies to maintain their own well-being.

Teachers are the greatest assets for children at school, and teachers are at risk of experiencing STS and burnout when working with students with histories of trauma. Therefore, trauma-informed schools also need to implement strategies to help teachers cope with stress and STS. The Healthy Environments and Response to Trauma in Schools (HEARTS) program uses a multi-tiered framework to implement trauma-informed care in schools; addressing burn-out and STS is one of its key principles (Dorado, Martinez, McArthur, & Leibovitz, 2016). For example, the HEARTS program provides workshops designed to teach teachers the skills they need to cope with stress and it also provides wellness groups for teachers to support each other (Dorado et al., 2016). To foster safe environments for children at school and better address bullying-related issues, schools need to promote self-care among teachers to prevent burnout and STS.

Implication for Counselors and Counselor Education

This study showed that it was common for children to be exposed to family violence as well as bullying and victimization, and that early exposure to family violence significantly predicted children's later involvement in bullying perpetration and peer victimization at school. These results imply that counselor education programs need to prepare counselors to become competent in working with clients with histories of trauma because counselors are likely to work with children and adolescents who have experienced violence at home or at school, or to work with adults who have experienced childhood traumas and adversities. My findings suggest that counselors working in different settings—especially school counselors and clinical mental health counselors who work with children and adolescents—need to be trauma-informed and well-equipped to deal with trauma-related issues.

Counselors Need to Be Trauma-Informed

School counselors are key players in school settings because they work with students, parents, teachers, school administrators, and communities to develop comprehensive school counseling programs that seek to facilitate the academic, social-emotional, and career successes of all students (American School Counselor Association, 2012). With more and more research emphasizing the prevalence and impact of trauma, the need to creating trauma-informed school environments has received increasing attention (Overstreet & Chafouleas, 2016). The American School Counselor Association (ASCA, 2016) also emphasized that school counselors should play important roles in promoting trauma-sensitive school environments, seeking to ensure that all students feel physically and psychologically safe. This study's finding that histories of family violence predicted bullying perpetration and victimization suggests that schools need to actually address trauma-related issues to effectively address school bullying. Working as both mental health professionals and educators, school counselors should identify students with histories of family violence and provide individual or small group counseling, or classroom guidance services for the students who need them. In addition, more mental health services need to be implemented in school settings. School counselors can promote school-family-community partnerships and collaborate with different professionals to integrate mental health services from communities to assist students with histories of family violence and other types of trauma.

Clinical mental health counselors who work with children and adolescents also need to be well-prepared to work with trauma-related issues because they are likely to work with children and adolescents with histories of family violence or school bullying. Trauma-informed counselors understand that children's presenting issues might be manifestations of adaptations to past traumas and are equipped with the necessary knowledge and skills to work with trauma-

related issues. This study's finding that children were likely to experience trauma at home and at school indicates that counselors need to be mindful of vicarious trauma when working with clients with histories of trauma. Vicarious trauma has been described as a phenomenon that can occur to mental health professionals working with trauma survivors, where witnessing survivors' pain and working with trauma-related issues can distort counselors' cognitive schemas regarding the self and others (Jenkins & Baird, 2002). This implies that counselors need to receive education regarding vicarious trauma and establish self-care practices to avoid experiencing vicarious trauma (Sommer, 2008).

Integrate Trauma Education in Counselor Education Programs

Given the high prevalence of family violence and school bullying as well as the association between early exposure to family violence and later involvement in bullying, counselors with different emphases are all likely to work with clients with histories of trauma. Indeed, the findings of this study suggest that counselor education programs need to integrate trauma education to prepare counselors to work with trauma survivors. Unfortunately, studies have indicated that counselors frequently do not feel competent in providing crisis or trauma counseling (Bride, Hatcher, & Humble, 2009; Kenny & Abreu, 2015). Research has also revealed that, in the past at least, most counseling graduate programs did not provide specific courses in trauma or crisis counseling (Black, 2006). The findings of this study suggest that counselor education programs need to integrate trauma education into graduate trainings to prepare counselors to work competently with clients with histories of trauma and violence.

Strengths and Limitations

The current study had several strengths. First, I used data from the Fragile Family and Child Wellbeing Study (FFCWS), which is a longitudinal dataset that followed a cohort of

families through different developmental stages. Several studies examining the relationship between bullying and family violence have used cross-sectional data, which limited the degree to which they could elucidate this relationship. Using longitudinal data to examine early exposure to family violence and later involvement in bullying enabled me to provide a deeper understanding of this connection. FFCWS's status as a national dataset also increased the available sample size; a total sample of 1,630 cases were included in this study and the children, mothers, and teachers provided complete information about the targeted variables. Espelage (2015) highlighted the need for research using longitudinal, multisite, and multi-informant data to address bullying-related issues and develop early preventions and interventions. In addition, most of the studies examined domestic violence and child maltreatment separately. However, it was shown that children usually experienced multiple forms of victimization and therefore different types of aggressions should be examined together (Espelage et al., 2012; Finkelhor et al., 2005). The FFCWS study measured different familial victimizations in different measurements. In this study, I conceptualize family violence through combining four types of aggressions and was able to examine child maltreatment and domestic violence together.

Notwithstanding its strengths, this study also had many limitations. First, the bullying perpetration and victimization measures in this study did not fully account for the criteria included in Olweus' definition of bullying—intentionality, repetitiveness, and an imbalance of power (Olweus, 1994). A lack of fully accurate bullying perpetration and victimization measures is a common issue in national datasets (Espelage, 2015; Hymel & Swearer, 2015). Espelage (2015) reported that several studies using the National Center for Education Statistics (NCES) dataset to examine school bullying only used a single item to measure bullying perpetration or victimization, identifying this as a major limitation. Hymel and Swearer (2015) also argued that

many bullying assessments have not distinguished between the characteristics of bullying and other types of aggression. In addition, the fact that I used teacher reports to measure students' bullying perpetration and children's self-reports to measure peer victimization is another limitation; using two different measures for bullying perpetration and victimization made it impossible to combine them. Therefore, identifying the best methods and informants for measuring bullying and victimization will require further investigation.

Even though combining child maltreatment and domestic violence was considered as strength in this current study, there are still some limitations of measurements from the FFCWS study. The FFCWS did not have well-established assessments for measuring family violence; most studies that have used the FFCWS to examine domestic violence have selected a few items from the survey to determine whether mothers experienced domestic violence (Huang et al., 2015; Lucero et al., 2016; Vikse, Chen, & Huang, 2018). Similarly, I selected a few items from the mother's survey to assess physical and psychological forms of domestic violence, which introduces a possible limitation since these few items may not have comprehensively captured the concept of domestic violence. In addition, only the mothers' experiences of domestic violence were measured because mothers were the primary caregivers in the FFCWS study. However, research has indicated that men are also victims of domestic violence and thus this study was unable to measure mothers' potential domestic violence perpetration. Another concept of family violence in this study was child maltreatment. The FFCWS study used Parent-Child Conflict Tactics Scales (CTSPC; Straus et al., 1998) to measure child maltreatment; however, different methods have been discussed regarding how to calculate child maltreatment through CTSPC (Berger, 2007; Berger, McDaniel, & Paxson, 2005). Therefore, more future research is

needed to examine how to measure and evaluate child maltreatment in order to have a better understanding of the impact of child maltreatment.

The significant amount of missing data through the different waves of the FFCWS was also a limitation for this study. The FFCWS started with 4,898 families when the focal children were born; however, by the Year 9 wave, only 3,515 mothers were being interviewed and only 2,254 teachers filled out the surveys for the children. Cases that were considered "not in wave" in the Year 3 and Year 9 waves were deleted, indicating that participants were not being interviewed in that wave. The missing data analysis of the raw data indicated that the missing data was significant when comparing participants that were involved in Year 3 and Year 9 waves and participates that were not in these two waves. However, in this current study, I only kept participants who were being interviewed at Year 3 and Year 9 waves, which introduced a limitation of losing information from participants that did not involve in these two waves. Young and colleagues (2006) suggested that attrition is a challenge when conducting longitudinal studies and attrition can occur through death, withdrawal of participants, and failures to re-contact participants in follow-up waves. The FFCWS user guide only contains a brief discussion of attrition issues that indicates that attrition probably resulted from interview fatigue, financial constraints, and other reasons. This study was also limited in generating national estimates. The FFCWS study was originally designed to examine children who were born in unwed families; therefore, the FFCWS oversampled nonmarital births (Reichman et al., 2001). Due to the lack of weights in the FFCWS's longitudinal data, I could not use weights to create national estimates.

Future Research

My findings in this study highlight several important areas that require further investigation. First, my analysis confirmed the association between early exposure to family

violence and later involvement in bullying perpetration and peer victimization. It is important to understand that children who experience family violence rarely become aggressive individuals immediately (Grogan-Kaylor & Otis 2003). Therefore, more studies need to be conducted to better understand the pathway between family violence and school bullying and to aid in the implementation of more effective preventive interventions to address school bullying issues. Hong and colleagues (2012) emphasized the importance of identifying potential mediators and moderators of the relationship between child maltreatment and school bullying. Voisin and Hong (2012) also posited a mediation and moderation model for the association between witnessing domestic violence and bullying perpetration and victimization. My analysis did not find that school connectedness had a moderating effect. Future studies should test different models and explore alternate mediators and moderators.

This study's findings also indicated that schools need to address underlying trauma issues to effectively address bullying. Currently, anti-bullying programs focus on raising awareness, building skills, and establishing school-wide policies and procedures (Merrell et al., 2008). More studies need to be conducted to examine how to develop trauma-informed anti-bullying programs and to evaluate the effectiveness of the trauma-informed approach in addressing school bullying. Research has indicated that children tend to experience multiple forms of victimization at the same time (Turner et al., 2010); in this study, I only examined family violence, which included domestic violence and child maltreatment. Therefore, more studies need to examine how exposure to different types of violence, such as family violence and community violence, impacts bullying-related behaviors. Future research should also explore the association between histories of Adverse Childhood Experiences (ACEs) and school bullying—more and more research has indicated that children with higher ACEs are more likely to experience problematic

behaviors. A better understanding of the relationship between ACEs and bullying would help schools and mental health services implement preventions and interventions that more effectively address bullying and trauma-related issues.

Although the findings of this study indicated that school connectedness did not moderate the impact of family violence on bullying perpetration and peer victimization, my analysis showed that children who had higher levels of school connectedness were less likely to display bullying perpetration or experience peer victimization. Therefore, future studies should further examine the role of school connectedness because feeling safe and having a sense of belonging at school are key elements in trauma-informed schools. In addition, further research is also needed to examine how to measure school connectedness among children and adolescents because children may have different concepts of school connectedness across different developmental stages. Given the high prevalence of traumatic experiences among children, my findings suggest that schools need to become trauma-informed and address bullying perpetration and victimization from trauma-informed perspectives. Therefore, future studies should examine how promoting trauma-informed school environments can reduce the incidence of school bullying.

Summary

Using the Fragile Family and Child Wellbeing Study (FFCWS), I conducted a secondary data analysis to examine the association between early exposure to family violence and later involvement in bullying perpetration and peer victimization. Based on the Bioecological Theory of Human Development (Bronfenbrenner, 1994; Bronfenbrenner, 2001), I applied the Process-Person-Context-Time (PPCT) model to examine school bullying in relation to children's environmental contexts—encompassing family violence, school connectedness, personal

characteristics, and socio-economic status—using a longitudinal dataset. Examining school bullying issues from a social-ecological perspective is crucial because child development occurs in relation to and through interactions with different context systems (Espelage et al., 2013).

Controlling for demographic factors such as gender, race/ethnicity, mother's age, and household income, my analysis showed that exposure to family violence—including domestic violence and child maltreatment—at age three significantly predicted bullying perpetration and peer victimization at age nine. Because most previous studies examining the relationship between family violence and school bullying utilized cross-sectional data, the findings from this study contribute to the literature by deepening scholarly understanding of this relationship with longitudinal data. My analysis did not show that school connectedness had a moderating effect on family violence and bullying; however, I did find that children who had higher levels of school connectedness were less likely to become bully perpetrators or victims.

This study's finding that early exposure to family violence significantly predicted later involvement in bullying-related behaviors implies that effectively addressing bullying issues might require actually addressing trauma-related issues. Given that my analysis indicated that children commonly experience traumatic events, this study highlights the importance of creating trauma-informed school environments. The study's findings also suggest that school-based anti-bullying programs need to incorporate trauma-informed approaches to address school bullying issues. More studies are needed to examine the moderators and mediators of the association between family violence and school bullying; such research will deepen our understanding of this relationship and facilitate the development of more effective early interventions. Determining the effectiveness of incorporating trauma-informed approaches in school-based anti-bullying programs to better address school bullying issues will also require further research.

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APPENDIX A
Bullying Perpetration Measurement

The Fragile Families and Child Wellbeing Study Nine-Year Follow-Up Teacher Survey: Three items were used for bullying perpetration (Turns & Sibley, 2018):

a. Fights with others

b. Threatens or bullies others

c. Argues with others

B3. Please read each statement thinking about this child's *CLASSROOM BEHAVIOR* during the past month and how often the child demonstrated the behavior listed below. Decide whether the child behaved this way "Never," "Sometimes," "Often," or "Very Often."

CIRCLE ONE RESPONSE FOR EACH ITEM.

	NEVER	SOMETIMES	OFTEN	VERY OFTEN
a. Fights with others	1	2	3	4
b. Has low self-esteem	1	2	3	4
c. Threatens or bullies others	1	2	3	4
d. Appears lonely	1	2	3	4
e. Shows anxiety about being with a group of children	1	2	3	4
f. Is easily embarrassed	1	2	3	4
g. Argues with others	1	2	3	4
h. Talks back to adults when corrected	1	2	3	4
i. Gets angry easily	1	2	3	4
j. Has temper tantrums	1	2	3	4
k. Likes to be alone	1	2	3	4
l. Acts sad or depressed	1	2	3	4

APPENDIX B
Peer Victimization Measurement

The Fragile Families and Child Wellbeing Study Nine-Year Follow-Up Child Interview:

E2. Next, I'm going to ask some questions about your experiences with kids at school and in your neighborhood.

In the last month, how often have kids in your school or neighborhood….

Probe: Would you say that this happened – Not once in the past month, 1 to 2 times in the past month, about once a week, several times a week, every day?

		NOT ONCE IN PAST MONTH	1-2 TIMES IN PAST MONTH	ONCE A WEEK	SEVERAL TIMES PER WEEK	EVERY DAY	REF	DK
E2A.	Picked on you or said mean things to you? Would you say that this happened – Not once in the past month, 1 to 2 times in the past month, about once a week, several times a week, or every day?................................	0	1	2	3	4	-1	-2
E2B.	Hit you?	0	1	2	3	4	-1	-2
E2C.	Taken your things, like your money or lunch, without asking?	0	1	2	3	4	-1	-2
E2D.	Purposely left you out of activities?.....................................	0	1	2	3	4	-1	-2

APPENDIX C
School Connectedness Measurement

The Fragile Families and Child Wellbeing Study Nine-Year Follow-Up Child Interview:

SECTION E: SCHOOL

E1. Now I am going to ask you some questions about your experiences at school. Please tell me how often you felt this way in the past month.

In the last month, how often did you…

Probe: Please tell me if you felt this way not once in the past month, 1 to 2 times in the past month, about once a week, several times a week, or every day?

	NOT ONCE IN PAST MONTH	1-2 TIMES IN PAST MONTH	ONCE A WEEK	SEVERAL TIMES PER WEEK	EVERY DAY	REF	DK
E1A. Feel like you were part of your school? Would you say that you felt this way not once in the past month, 1 to 2 times in the past month, about once a week, several times a week, or every day?	0	1	2	3	4	-1	-2
E1B. Feel close to people at your school?	0	1	2	3	4	-1	-2
E1C. Feel happy to be at your school?	0	1	2	3	4	-1	-2
E1D. Feel safe at your school?	0	1	2	3	4	-1	-2

APPENDIX D
Family Violence Measurement

In this current study, domestic violence and child maltreatment were combined as family violence. Items measured domestic violence were selected from Mothers' Three-Year Follow-Up Survey, and items measured child maltreatment were selected from Three-Year Follow-Up Primary Care Givers Survey.

Domestic Violence:
Now, think about how (FATHER/CURRENT PARTNER) behaves towards you. For each statement I read, please tell me how often he behaves this way:
Physical Aggression:

- He slapped or kicked you.
- He hit you with a fist or an object that could hurt you.

Psychological Aggression:

- He tried to keep you from seeing family/friends.
- He tried to prevent you from going to work/school.
- He withheld money, made you ask for money, or took your money.

		OFTEN	SOMETIMES	NEVER
A.	He is fair and willing to compromise when you have a disagreement................................	1	2	3
B.	He expresses affection or love for you	1	2	3
C.	He insults or criticizes you or your ideas	1	2	3
D.	He encourages or helps you to do things that are important to you	1	2	3
E.	He tries to keep you from seeing or talking with your friends or family	1	2	3
F.	He tries to prevent you from going to work or school..	1	2	3
G.	He withholds money, makes you ask for money, or takes your money..........................	1	2	3
H.	He slaps or kicks you	1	2	3
I.	He hits you with a fist or an object that could hurt you	1	2	3
J.	He tries to make you have sex or do sexual things you don't want to do	1	2	3
K.	He listens to you when you need someone to talk to...	1	2	3
L.	He really understands your hurts and joys	1	2	3

Child Maltreatment:

Physical Aggression:

- Spanked him/her on the bottom with their bare hand.
- Hit him/her on the bottom with something like a belt, hairbrush, a stick or some other hard object.
- Slapped him/her on the hand, arm, or leg.
- Pinched him/her.
- Shook him/her.

Psychological Aggression:

- Shouted, yelled, or screamed at the child.
- Threatened to spank or hit the child but didn't actually do it.
- Swore or cursed at the child.
- Called the child dumb or lazy or some other name like that.
- Said they would send the child away or would kick the child out of the house.

J. DISCIPLINE

SHOW CARD 5

Children often do things that are wrong, disobey, or make their parents angry. We would like to know what you have done when (CHILD) did something wrong or made you upset or angry.

I am going to read a list of things you might have done in the past year and I would like you to tell me how often you have done each thing in the past year. If you haven't done it in the past year but have done it before this, I would like to know this, too.

(First), how many times in the past year did you (READ ITEM)? Was it once in the past year, twice, 3-5 times, 6-10 times, 11-20 times, more than 20 times in the past year, it happened but not in the past year, or this never happened?

		ONCE	TWICE	3-5 TIMES	6-10 TIMES	11-20 TIMES	MORE THAN 20 TIMES	YES BUT NOT IN THE PAST YEAR	THIS HAS NEVER HAPPENED
J1.	Explain to (CHILD) why something (he/she) did was wrong	01	02	03	04	05	06	07	00
J2.	Put (CHILD) in "time out" (or sent to (CHILD) to (his/her) room)	01	02	03	04	05	06	07	00
J3.	Shook (CHILD)	01	02	03	04	05	06	07	00
J4.	Hit (him/her) on the bottom with something like a belt, hairbrush, a stick or some other hard object	01	02	03	04	05	06	07	00
J5.	Gave (him/her) something else to do instead of what (he/she) was doing	01	02	03	04	05	06	07	00
J6.	Shouted, yelled, or screamed at (CHILD)	01	02	03	04	05	06	07	00
J7.	Spanked (him/her) on the bottom with your bare hand	01	02	03	04	05	06	07	00
J8.	Swore or cursed at (him/her)	01	02	03	04	05	06	07	00
J9.	Said you would send (him/her) away or would kick (him/her) out of the house	01	02	03	04	05	06	07	00
J10.	Threatened to spank or hit (him/her) but did not actually do it	01	02	03	04	05	06	07	00
J11.	Slapped (him/her) on the hand, arm, or leg	01	02	03	04	05	06	07	00
J12.	Took away privileges from (him/her)	01	02	03	04	05	06	07	00
J13.	Pinched (him/her)	01	02	03	04	05	06	07	00
J14.	Called (him/her) dumb or lazy or some other name like that	01	02	03	04	05	06	07	00

APPENDIX E
Institutional Review Board (IRB) Documentation

Office for Research Protections
Vice President for Research
The Pennsylvania State University
205 The 330 Building
University Park, PA 16802

814-865-1775
Fax: 814-865-8699
orp@psu.edu
research.psu.edu/orp

NOT HUMAN RESEARCH

Date: March 28, 2019

From: Philip Frum, IRB Analyst

To: Pei-Hsuan Liu

Type of Submission:	Initial Study
Title of Study:	Understand the link between early exposure to family violence and later involvement in school bullying: How can school connectedness help?
Principal Investigator:	Pei-Hsuan Liu
Study ID:	STUDY00012054
Submission ID:	STUDY00012054
Funding:	Not Applicable

The Office for Research Protections determined that the proposed activity, as described in the above-referenced submission, does not meet the definition of human subject research as defined in 45 CFR 46.102(d) and/or (f). Institutional Review Board (IRB) review and approval is not required.

The IRB requires notification and review if there are any proposed changes to the activities described in the IRB submission that may affect this determination. If changes are being considered and there are questions about whether IRB review is needed, please contact the Office for Research Protections.

This correspondence should be maintained with your records.

Peihsuan (Patty) Liu, PhD, LPC, NCC

Email: PEIHSUAN611@gmail.com

EDUCATION

Ph.D. in Counselor Education, The Pennsylvania State University 2019
M.Ed. in Counselor Education, The Pennsylvania State University 2014
B.S. in Biochemical Science and Technology, National Taiwan University 2010

LICENSURE/CERTIFICATION

Licensed Professional Counselor (PA)	July 2018—Present
Licensed Mental Health Counselor (WA)	(Pending-submitted application)
Board Certified TeleMental Health Provider	May 2019—Present
EMDR Formally-Trained Therapist	Anticipate certification in 2020
Certified Clinical Trauma Professional	June 2016—Present
National Certified Counselor	July 2014—Present

UNIVERSITY TEACHING EXPERIENCE

The Pennsylvania State University, University Park, PA Spring 2016—Present

CNED 504 Foundations and Practices of School Counseling
CNED 506 Individual Counseling Procedures
CNED 510 Foundations of Clinical Mental Health Counseling
CNED 532 Diagnosis Counseling
CNED 595G Counseling Internship and Integrative Seminar
CNED 524 Adolescent Counseling
CNED 523 Child Counseling

PROFESSIONAL COUNSELING EXPERENCE

Outpatient Therapist, Individual and Family CHOICES Program, State College, PA
August 2016—Present
Clinical Supervisor, CEDAR Clinic, Penn State University, University Park, PA
August 2016—Present
Mental Health Counselor, CEDAR Clinic, Penn State University, University Park, PA
August 2015—Present
Mobile Therapist/ Behavioral Therapist, NHS Human Service, State College, PA
August 2014—July 2015

PUBLICATIONS & PRESENTATIONS (Selected)

Chatters, S. & **Liu, P.** (in press). Are Counselors Prepared? : Integrating Trauma Education into Counselor Education Programs. *Journal of Counselor Preparation and Supervision*.
Liu, P. & Joo, H. (Under Review). School Counselor's Role in Creating Trauma-Informed Schools. *Professional School Counselors Journal.*
Yang, Y. & **Liu, P.** (November, 2018). Explore the Impact of Reentry on Asian International Counseling Students' Acculturation Process. Will present in roundtable session at WACES 2018 Conference.

UNIVERSITY SERVICE AND PROFESSIONAL AFFILIATIONS

- Diversity and Community Enhancement Committee, College of Education, Penn State Committee member (August 2018—Present)
- American Counseling Association (current membership)
- Association for Counselor Education and Supervision (current membership)