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Bullying among U.S. school children: An examination of race/ethnicity and school-level variables on bullying

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BULLYING AMONG U.S. SCHOOL CHILDREN: AN EXAMINATION OF
RACE/ETHNICITY AND SCHOOL-LEVEL VARIABLES ON BULLYING

A Dissertation
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy
International Family and Community Studies

by
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August 2013

Accepted by:
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ABSTRACT

Bullying is unwanted aggressive behavior and a damaging experience that can violate a bullied child's civil and human rights. To understand and reduce bullying in U.S. schools, it is important to recognize students' self-reported experiences with and perceptions of bullying. This study responded to limited research on races/ethnicities and bullying among children and youth in U.S. schools, and to a relatively small focus on specific school-level variables (such as the densities of races/ethnicities in school, the school's ethnic diversity, the overall poverty level of the school, student/teacher ratio, and school locations) and several other variables of interest (such as the likelihood of joining in bullying, students' general satisfaction or dissatisfaction with school, and the size of a child's social networks, school safety) by bullying researchers.

This study utilized a combined data of the Olweus Bullying Questionnaire (OBQ) and the National Center for Education Statistics (NCES) to examine the influence of races/ethnicities on bullying and generate multivariate regression models predicting bullying among 473,918 students attending 1,524 schools located in various communities in 45 states and the US Virgin Islands. Results revealed that students' races/ethnicities were significantly associated with peer victimization (being bullied) and bullying perpetration (bullying others) and on students' self-reported perceptions of how they liked school (i.e., general satisfaction or dissatisfaction with school), the likelihood of joining in bullying a student whom they did not like, how many friends they had in their class(es) (i.e., the size of a child's social networks in school), and how often they were afraid of being bullied by other students in their school (i.e., school safety).

In this study, multiracial students (i.e., those students who were identified as belonging to more than one racial/ethnic group) reported the highest rates of bullying involvement (30.6%), followed by those students who did not know their races/ethnicities (26.9%), African American (23.2%), White (20.6%), and Asian American students (18.5%). Hispanic students (17.9%) reported the lowest rates of involvement in bullying. Asian American students were more likely to be racially or ethnically bullied (e.g., were bullied with mean names or comments about their race or color) than their peers of other races/ethnicities in U.S. schools.

In terms of the relationship between several key school-level variables (such as the densities of racial/ethnic groups, the ethnic diversity, the overall poverty level, student/teacher ratio, and school locale) and bullying, results showed that the ethnic densities of African American and multiracial students were associated with a greater likelihood of being bullied, and the ethnic densities of Asian American and Hispanic students were associated with a less likelihood of being bullied. Students were less likely to be bullied within a school context with a moderately high rate of school ethnic diversity, but the likelihood of being bullied appeared to increase if the ethnic diversity was too high. Students in schools located in town and rural communities were more likely to be bullied than students in urban and suburban areas. The school's overall poverty level moderated the relationship between races/ethnicities and bullying.

This study generated two multivariate regression models predicting bullying among children and youth. In the model predicting being bullied, the overall model was significant and explained 21.9% of the variance. The strongest predictor of being bullied

in the model was school safety. The likelihood of joining in bullying, being in elementary school and high school, the size of a child's social networks in school, general satisfaction or dissatisfaction with school, the school's overall poverty level, being multiracial students, the ethnic density of Hispanic students, attending a school located in towns, and being a girl were also significant predictors. Student/teacher ratio did not predict being bullied.

In the model predicting bullying others, the overall model was significant and explained 14.1% of the variance. The strongest predictor of bullying others in the model was the likelihood of joining in bullying. School safety, general satisfaction or dissatisfaction with school, the school's overall poverty level, being in elementary school and high school, being African American and multiracial students, the density of Asian American students, attending a school located in towns, and the school's ethnic diversity were also significant predictors. Gender and student/teacher ratio were not associated with the likelihood of bullying others. Research and practical implications of these findings are discussed.

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CHAPTER ONE

INTRODUCTION

Although bullying is an age-old phenomenon, attention to this issue among researchers, educators, and policymakers has increased dramatically in recent years (Jimerson, Swearer, & Espelage, 2010; Kowalski, Limber, Agatston, & Wang, 2012). Remarkable advances in research have occurred, promising and effective comprehensive bullying prevention programs and efforts have been tested and honed (Kowalski et al., 2012; Ttofi, & Farrington, 2009), international bullying prevention conferences have been held, state and local laws and policies drafted (Alley & Limber, 2009; Cornell & Limber, under review; Kowalski et al., 2012), and federal initiatives have been launched to address the issue (e.g., Cornell & Limber, under review; www.stopbullying.gov, n.d.). Bullying is unwanted aggressive behavior among children and youth that involves an imbalance of power, intentionality, and repetitiveness (Nansel, Overpeck, Pilla, Ruan, Simmons-Morton, & Schmidt, 2001; Olweus, 1993, 2010, 2013). Bullying is a violation of a child's well-being.

National estimates of the rates of bullying vary considerably depending on the definitions of bullying that are used, measurement strategies, and the ages of participants. However, studies consistently show that bullying is a relatively common experience for children and youth. According to the School Crime Supplement to the National Crime Victimization Survey, 28% of students aged 12–18 had been bullied at school during the 2011 school year and 9% reported having been cyber bullied anywhere (Robers, Kemp, & Truman, 2013). Another national survey, the 2011 Youth Risk Behavior Survey

published by the Centers for Disease Control and Prevention, reported that 20% of high school students were bullied on school property at least once in the previous 12 months and 16% had been electronically bullied (Eaton, Kann, Kinchen, Shanklin, Flint, Hawkins, et al., 2012). The most common forms of bullying that children and youth experience are verbal (18%) (e.g., being made fun of, called names, insulted) and having rumors spread (18%) (e.g., being the subject of rumors) (Robers et al., 2013).

Not only are students involved in bullying as victims, but they also may bully others, or they may bully others and also be bullied themselves. This latter group is often referred to as “bully victims”. In a recent study of more than 457,776 3rd–12th grade students in the U.S., researchers found that 20% of girls and 22% of boys had been involved in bullying on a regular basis (2–3 times/month or more often) as a “victim only” (14% of girls and 13% of boys), a “bully only” (4% of girls and 6% of boys), or a “bully-victim” (2% of girls and 4% of boys) (Limber, Olweus, & Wang, 2012). A very small percent of students in this study were considered to be “bully victims” (i.e., were bullied and also bullied others), but considering that there are 50 million public school students in grades K-12 in U.S. schools, these percentages translate to roughly 2 million girls and boys.

The frequency and forms of bullying that children experience and engage in vary depending upon their age and gender. Children are most likely to be bullied during elementary school grades (Finkelhor, Ormrod, Turner, & Hamby, 2005; Limber et al., 2012; Olweus & Limber, 2010), and their likelihood of being bullied decreases throughout middle and high school years (Nansel et al., 2001; Robers et al., 2013). On the

other hand, children and youth are most likely to bully others during early to middle adolescence (Espelage & Swearer, 2010; Limber et al., 2012). Children tend to be involved in different forms of bullying at different ages, depending on their verbal, cognitive, and social development (Rubin, Ceah, & Menzer, 2010). For example, while physical bullying is more common among elementary school children, it is less frequent among middle or high school students. Electronic bullying, on the other hand, typically emerges in the middle school years (Kowlaski, Limber, & Agatston, 2012).

Although both boys and girls are involved in bullying, most studies have found that boys are somewhat more likely than girls to bully or to be characterized as “bully victims” (Cook, Williams, Guerra, Kim, & Sadek, 2010; Craig, Harel-Fisch, Fogel-Grinvald, Dastaler, Hetland, Simons-Morten, et al., 2009). Most studies show small differences between boys and girls in their likelihood of being bullied (Cook et al., 2010; Robers et al., 2013), but there are fairly consistent gender differences in the forms of bullying that boys and girls experience. For example, boys are more likely than girls to be physically bullied by peers, while girls are more likely to be bullied through rumor-spreading, verbal, and social exclusion (Robers et al., 2013). Although boys are usually bullied by other boys, girls are bullied by boys and girls (Finkelhor et al., 2005; Nansel et al., 2001).

There is no single cause of bullying. Rather, individual, peer, family, school, and community factors may make it more or less likely that a child will be involved in bullying (e.g., Swearer, Espelage, Koenig, Berry, Collins, & Lembeck, 2012). For example, an individual’s temperament may play a role. Children and youth who are

bullied are more likely to have quiet, passive personalities, lack social skills, and have internalizing problems (such as depression). Those who bully are more likely to have impulsive temperaments, have negative attitudes about themselves and others, and have problems resolving problems with others (Cook et al., 2010; Olweus, 1993).

Peer factors also play a role. Children and youth are more likely to bully if they have friends who bully or who have positive attitudes toward violence (Cook et al., 2010; Olweus, 1993). Bullied children tend to be socially isolated and report having few friends (Cook et al., 2010; Swearer et al., 2012).

Family factors are also related to a child's likelihood of being involved in bullying. Children are more likely to bully if there is a lack of parental warmth and engagement, a lack of parental supervision, inconsistent discipline, and harsh physical punishment within their families (Cook et al., 2010; Olweus, 1993). Exposure to parental conflict and domestic violence and the experience of child abuse have been found to be related to greater likelihood of bullying others and being bullied (Baldry, 2003; Bowes, Arseneault, Maughan, Taylor, Caspi, & Moffitt, 2009; Shields & Cicchetti, 2001).

Aspects of the school and broader environment may also affect children's likelihood of involvement in bullying. For example, students who have a sense of belonging to the school and perceive they are treated with respect and fair treatment are less likely to be involved in bullying (Cook et al., 2010). Bullying is also particularly prevalent where there are indifferent or accepting attitudes about bullying by school staff and students and where there is poor adult supervision (Olweus, 1993; Pellegrini & Barini, 2000).

Neighborhood and community factors may also be related to a child's likelihood of being involved in bullying. For example, Youngblade, Theokas, Schulenberg, Curry, Huang, and Novak (2007) found that neighborhood safety was associated with fewer externalizing behaviors, including bullying, for adolescents 11-17 years of age. Perceptions of negative neighborhood influences were associated with higher rates of externalizing behaviors. Espelage, Bosworth, and Simon (2000) also found that middle school students who perceived their neighborhood as being less safe were more likely to bully their peers than students who perceived their neighborhood as being safer.

Although any child may be bullied, some groups of children and youth are at higher risk for being bullied than others, including children with learning disabilities (Mepham, 2010; Mishna, 2003), children with attention-deficit hyperactivity disorder (ADHD; Twyman, Saylor, Saia, Macias, Taylor, & Spratt, 2010; Wiener & Mak, 2009), children and youth with autism spectrum disorder (ASD; Twyman et al., 2010), those with special health-care needs or chronic diseases (Dawkins, 1996; Magin, Adams, Heading, Pond, & Smith, 2008; Storch, Lewin, Silverstein, Heidgerken, Strawser, Baumeister, & Geffken, 2004; Hamiwka, Yu, Hamiwka, Sherman, Anderson, Wirrell, 2009), those who are obese (Fox & Farrow, 2009; Gray, Kahhan, & Janicke, 2009), and those who are underweight (Wang, Iannotti, & Luk, 2010). Adolescents who identify themselves as lesbian, gay, bisexual, or transgender (LGBT); those who are questioning their sexual identity; and those who are perceived to be gay or lesbian also are at greater risk of being bullied (Eisenberg, Neumark-Sztainer, Story, & Perry, 2005; Harris Interactive & GLSEN, 2005).

The experience of bullying may have negative effects on the health, mental health, and academic work of children and youth who are involved in bullying (e.g., Arseneault, Walsh, Trzesniewski, Newcombe, Caspi, & Moffitt, 2006; Buhs, Ladd, & Herald, 2006; Craig, 1998; Fekkes, Pijpers, & Verloove-Vanhorick, 2004; Kochenderfer & Ladd, 1996; Knack, Tsar, Vaillancourt, Hymel, & McDougall, 2012; Nakamoto & Schwartz, 2010; Olweus, 1993; Roth, Coles, & Heimberg, 2002). For example, bullied children are more likely than non-bullied children to experience psychosomatic problems such as headaches, stomach aches, sleep problems, poor appetite, and bed wetting (Fekkes et al., 2004; Gini & Pozzoli, 2009). They are more likely than peers to want to avoid school (Kochenderfer & Ladd, 1996) and to have lower academic achievement (Arseneault et al., 2006; Buhs et al., 2006; Nakamoto & Schwartz, 2010). For example, according to the 2009 School Crime Supplement to the National Crime Victimization Survey, 5% of students reported that they avoided at least one location in school or school activity during the school year because of fears for their personal safety (Robers, Zhang, Truman, & Snyder, 2012). Consequences of bullying may last years after the bullying has ended. In adulthood, individuals who were bullied as children have higher rates of depression and anxiety and lower self-esteem than peers who were not bullied as children (Olweus, 1993; Roth et al., 2002).

There is also reason to be concerned about children who bully others. They are more likely than their peers to be involved in other antisocial, violent, or troubling behavior, including fighting, vandalism, stealing, weapon-carrying, school dropout, poor school achievement, drinking alcohol, and smoking, and thinking about and attempting

suicide (Byrne, 1994; Cook et al., 2010; Gini & Pozzoli, 2009; Haynie, Nansel, Eitel, Crump, Saylor, Yu, & Simons-Morton, 2001; Nansel et al., 2001).

Although adults often view bullying as a problem between two children, it is more accurate to understand it as a group phenomenon, in which children may play a variety of roles, including active or passive supporters of the bullying, disengaged onlookers, and defenders (Olweus, 1993). These roles may change from one situation to the next. Large percentages of children indicate that they have witnessed bullying (Trach, Hymel, Waterhouse, & Neale, 2010). Most have negative reactions to bullying and feel sympathetic for bullied children (Baldry, 2004; Limber et al., 2012; Olweus & Limber, 2010).

Although a large body of knowledge about bullying has been produced in recent years, there has been relatively little focus by bullying researchers on the roles that race/ethnicity may play in bullying (Kowalski et al., 2012; Larochette, Murphy, & Craig, 2010; Olweus, 2010; Peskin, Tortolero, & Markham, 2006; Spriggs, Iannotti, Nansel, & Haynie, 2007). Some key school-level factors (such as the school's ethnic diversity, the densities of racial/ethnic groups, the school's overall poverty level, student/teacher ratio, and school locale) that may affect children's likelihood of involvement in bullying also have received relatively little attention in the bullying field. This study explored the relationship between race/ethnicity and bullying and tested the predictive values of school-level factors and several other variables (e.g., children's perceptions of school safety, the size of a child's social networks, the likelihood of joining in bullying, and the

general satisfaction or dissatisfaction with school) on bullying among children and youth in U.S. schools.

Significance of the Study

Bullying research has taken special care to understand children's self-reported experiences with and perceptions of bullying (e.g., the Olweus Bullying Prevention Program, OBPP; www.stopbullying.gov, n.d.). To add to the literature, this study analyzes data from a very large national database of the Olweus Bullying Questionnaire (OBQ) (Limber et al., 2012) and links it with key variables from the U.S. National Center for Education Statistics (NCES). This study focuses on bullying and children's races/ethnicities, their perceptions of school and bullying (e.g., school safety, satisfaction or dissatisfaction with school, the size of a child's social networks in school, and the likelihood of joining in bullying), and several school-level factors (e.g., the school's ethnicity diversity, the densities of racial/ethnic groups, the school's overall poverty level, student/teacher ratio, and school locale). These variables have emerged as important components of measuring and preventing bullying among children and youth.

Although gender and grade/age patterns in children's experiences with bullying have been well studied, race/ethnicity has not been as well researched (Kowalski et al., 2012; Limber & Olweus, 2010; Limber et al., 2012). This study examines differences in bullying attitudes and experiences among different racial/ethnic groups (Asian American, African American, Hispanic, White, and multiracial students). This study predicts group differences in bullying experiences and attitudes by comparing Asian American students

with their peers of other racial/ethnic backgrounds. It also brings light to the experience of bullying of multiracial children.

This study also expands the current body of knowledge of gender and grade differences/trends by exploring how boys and girls of different ages are involved in bullying in relation to children's racial/ethnic backgrounds. Understanding the nature of bullying and children's racial or ethnic characteristics will contribute to the field of child and youth studies, school climate, the school violence and bullying prevention efforts, and the growth of children's human rights, especially in school.

In addition, this study expands the current body of knowledge of bullying within different school locales. Understanding bullying within different communities where schools are located (i.e., urban, suburban, town, and rural settings) will bring light to current comprehensive bullying prevention efforts. For example, an innovative approach for accomplishing bullying prevention efforts in urban settings may not work well in a town setting due to some factors that may be unique to urban settings (e.g., poverty, ethnic diversity, ethnic language, and community violence).

This study provides researchers, educators, policymakers, and community leaders a valuable understanding of the school's ethnic diversity and density and bullying among children and youth.

Research Questions

This study aims to help fill the gap in knowledge about:

(1) What is the prevalence and nature of bullying among Asian American students, and how does it differ from African American students, Hispanic students, White students, and multiracial students?

(2) How do children's perceptions of school safety, the size of a child's social networks in school, the likelihood of joining in bullying, and general satisfaction or dissatisfaction with school vary as a function of race/ethnicity?

(3) How is bullying among students of different ethnic groups related to school-level variables such as the school's ethnic diversity and ethnic densities, the overall poverty level of the school, school locale, and student/teacher ratio?

With these research questions in mind, this study attempts to fill a gap in the literature by exploring students' self-reported experiences of bullying, their perceptions of bullying and school, their racial/ethnic backgrounds, and school-level factors and how these experiences contribute to bullying among children and youth.

This paper begins with a detailed review of the literature, highlighting key findings related to racial/ethnic issues and bullying and school contexts and bullying, presenting a theoretical framework for this work, and proposing the research hypotheses. In Chapter 3, the research methodology is described, focusing on the sample, measures, and the approach to analysis. The research findings are presented in Chapter 4 and a discussion, implications for practice, and directions for future research are presented in Chapter 5.

CHAPTER TWO

LITERATURE REVIEW

Bullying is unwanted aggressive behavior that is intentional and that involves an imbalance of power between two or more individuals (Nansel et al., 2001; Olweus, 1993, 2010). Sometimes this imbalance of power involves differences in physical size or strength between children or differences in social power or status. Because of this imbalance of power or strength, a child who is being bullied has a difficult time defending himself or herself. Bullying does not occur just once or twice, but typically is repeated over time. Bullying may include direct actions (such as hitting, taking or damaging possessions, taunting, or name-calling) or indirect actions (such as social exclusion, rumor-spreading or manipulation of friendships). Bullying researchers often use relational or social bullying to describe behaviors that are meant to damage a child's social standing or reputation with peers or manipulate others by threatening to lose a relationship. Bullying also may involve the use of electronic or cyber communications to bully, which is often referred to as cyber bullying (Kowalski et al., 2012).

Bullying Based on Racial or Ethnic Differences

Racial or ethnic bullying is a term used to describe bullying behaviors that target an individual's racial or ethnic background or cultural identity (e.g., immigrant status or family history of immigration) (McKenney, Pepler, Craig, & Connolly, 2006). Sometimes scholars use *ethnoracial* bullying to describe bullying based on racial or ethnic differences (e.g., Scherr & Larson, 2010). Because bullying involves an imbalance

of power between two or more individuals (due to differences in physical size or strength or differences in social power or status between children), a child may be bullied because he or she is from an ethnic, racial, or immigrant group from which he or she has developed belonging, identity, customs, and beliefs (Scherr & Larson, 2010). This power imbalance among children of different races/ethnicities or immigrant status may exist at both schoolwide and classroom levels and may affect the overall peer relations and culture in some schools.

In order to better understand racial or ethnic bullying, the concepts of racial and ethnic identity are briefly discussed. Williams, Tolan, Durkee, Francois, and Anderson (2012) suggest that substantial variation exists in what terms are used and how to understand racial and ethnic identity. Although the terms racial identity and ethnic identity are used, often interchangeably, it seems that there is not always consensus about the concepts (Cokley, 2007; Cross & Cross, 2008). According to Markus (2008), an individual's racial category is defined primarily by others (i.e., out-group members) and reflects issues of power, privilege, and racism. Ethnicity, on the other hand, is defined from within by group members and shows "meaning, value[s], and ways of living" (p. 654). Cokley (2007) suggests that racial identity might be best understood in relation to societal oppression, privilege, and racism, while one's ethnic identity is linked to ethnocultural group norms, behaviors, and values. To the point of this study, children and youth might not have a clear awareness of their races and/or ethnicity, but they may know and report that they are bullied and/or bully their peers because of their differences in color, values, social status, among others.

Racial or Ethnic Differences in Involvement in Bullying

A significant percentage of children and youth are bullied by their peers at schools about their race, ethnicity, or immigration status (Scherr & Larson, 2010). Nansel and her colleagues (2001) found that, among 6th through 10th graders who had been bullied, one-quarter said that they had been belittled about their race or religion at least once during the current school semester, and 8% had experienced such bullying once a week or more often. Limber, Olweus, and Wang (2012) found, using a large database (2007-2012) of 1,048,537 students in grades 3-12 from 3,308 schools, that 9% of boys and 7% of girls reported having been bullied 2 or 3 times a month or more often with mean names or comments about their race or color. There was a slight increase for racial or ethnic bullying (12%) between 2007 and 2012 (from 7.3% to 8.2%).

Children of different races or ethnic groups may experience different amounts of bullying in U.S. schools. For example, Spriggs and colleagues (2007) found that, in a nationally-representative sample of 11,033 adolescents in grades 6 to 10 in the 2001 Health Behaviors in School-Aged Children (HBSC) survey, African American adolescents (6%) were less likely to be bullied than white (9%) and Hispanic students (9%). White adolescents (9%) were less likely to bully their peers than Hispanic students (11%) and African American students (10%). There were no differences in terms of “bully victims” (3%) across race/ethnicity. However, Spriggs and colleagues (2007) used only two items to assess students’ involvement in bullying problem by asking the frequency with which the respondent was bullied or bullied others in school in the past couple of months. In a more recent analysis of the HBSC data involving 7,182 U.S.

students in grades 6-10, Wang, Iannotti, and Nansel (2009) found that African American adolescents were more involved in bullying perpetration (physical, verbal, and cyber), but less involved in victimization (verbal and relational) than White, Hispanic, and adolescents of other races/ethnicities. Hispanic American adolescents were more likely to be physical bullies or cyber “bully victims” than white adolescents.

Asian American students account for a tiny, but increasing minority of the total student population in U.S. schools (U.S. National Center for Education Statistics, 2012; U.S. Census Bureau, 2011)¹. Due to the small sample sizes in the existing literature, most studies of peer victimization and bullying have not performed separate analyses on either Asian students or other minority ethnic groups. Existing literature shows inconsistent findings regarding Asian American students in terms of bullying problem. For example, within an ethnically diverse adolescent sample (N = 1,368), Mouttapa, Valente, Gallaher, Rohrbach, and Unger (2004) found that Asian American students were more frequently bullied than their peers in White, Hispanic, and African American ethnic groups. Studies investigating Korean American adolescents have found that those who maintained strong adherence to Asian cultural values were more susceptible to lower self-esteem, anxiety and depression (Hovey, Kim, & Seligman, 2006; Kim & Cain, 2008). The authors suggested that the stress of balancing traditional Asian values with more individualistic Western values creates emotional distress. However, according to the School Crime Supplement to the National Crime Victimization Survey, the percentage of students who

¹ In the 2010 Census (U.S. Census Bureau, 2011), the Asian population accounted for 4.8% (14,674,252) of the total U.S. population. In the U.S., the Asian population experienced the fastest rate of growth between 2000 and 2010. More specifically, the Asian population increased by 43% between 2000 and 2010, more than any other major race group.

reported being bullied at school was highest for White students and lowest for Asian students in 2011 (Robers et al., 2013). Specifically, 15% of Asian students ages 12–18 reported being bullied at school during the school year, compared with 31% of White students, 27% of African American students, and 22% of Hispanic students. Nine percent of Asian students reported being made fun of, called names, or insulted, compared with 21% of White students and 16% of African American students. Similarly, 8% of Asian students reported that they had been the subject of rumors, compared with 20% of White students, 19% of African American students, and 15% of Hispanic students (Robers et al., 2013).

The extent of racial or ethnic bullying has also been documented by a number of researchers in other countries. For example, in Norway, Fandrem, Strohmeier, and Roland (2009) found that immigrant adolescents (especially boys) were at higher risk of bullying others compared to native Norwegians, using a sample of 2,938 native Norwegians and 189 immigrant adolescents (13-15 years old).

On the other hand, Vervoort and Scholte (2010) found that, among 2,386 adolescents in the Netherlands, ethnic minority adolescents were *less* likely to be bullied than the ethnic majority group members. There was no difference between the groups in rates of bullying others. They also found that victimization was more prevalent in ethnically diverse classes in the Netherlands.

In Canada, Larochette and colleagues (2010) found, using the 2001/2002 Health Behaviors in School-Aged Children Survey (HBSC) (involving 3,684 students from 116 schools across Canada), that being African-Canadians and being boys were associated

with increased racial bullying of others. In an earlier study involving five ethnically diverse urban Canadian schools (198 students in three elementary schools and 308 students in two high schools), McKenney and her colleagues (2006) found that 14% of students reported having been bullied on the basis of their ethnic background at least once in the past two months. They also found that first generation Canadian students (those who were born in Canada but their parents were born elsewhere) were more likely to be bullied based on their ethnicity. In an even earlier study conducted in Canada, Pepler, Connolly, and Craig (1999) found, among 1,093 students from 7th through 11th grade, that 17% of students had been bullied by a student from another ethnic group because of their ethnicity on a regular basis in the current school year. Approximately, 10% of students acknowledged that they had perpetrated ethnic bullying. Boys were more likely than girls to report that they had experienced ethnic victimization and had bullied others because of their ethnicity.

Racial Prejudice and Racial or Ethnic Bullying

Researchers have used various theoretical frameworks in their attempts to understand patterns in racial or ethnic bullying. For example, Scherr and Larson (2010) suggested that a child's normative process of racial attitude and preferences development and group identification may explain bullying behavior that is directed against children because of their race, ethnicity, or immigrant status. According to Aboud (2003), young children in general have more positive attitudes toward, and a greater preference for, members of their own racial group and tend to categorize others on the basis of race. Aboud claimed that ethnic or racial prejudice in children and youth may be a

predisposition to react unfavorably to members of another group because of their group affiliation.

Nesdale and colleagues (2002, 2005) proposed that the development of ethnic prejudice in children passes through four developmental phases: undifferentiated, ethnic awareness, ethnic preference, and ethnic prejudice. Nesdale (2002) suggested that in the *undifferentiated* phase, racial cues are not salient with a child younger than 2-3 years, and a child responds to environmental objects (including unfamiliar people) on a largely random basis in terms of what catches his or her attention. A child younger than 2-3 years old acquires color differentiation and learns to discriminate the colors of environmental objects.

Ethnic awareness, according to Nesdale (2002), emerges earlier among children in multiethnic/racial communities. An adult's identification and labeling of an outgroup member (e.g., "That child has black hair and brown skin. He is an Asian.") often aids that awareness. A child develops the sense of belonging to a particular group (i.e., ethnic self-identification) after he or she becomes aware of ethnic or racial categories as young as 3 years of age, and this is solidified in multiethnic/racial communities by ages of 6 or 7. Most notably, a child is often raised in an environment in which the key categories (e.g., gender, race) are already specified and the nature of intergroup relations is established (Nesdale, 2002; Nesdale et al., 2005).

The *ethnic preference* phase, according to Nesdale (2002), often starts in multiethnic/racial communities by 4 or 5 years. Ethnic preference involves a focus on, and concern for, a child's continuing membership of his or her in-group, as well as the

positive distinctiveness of the in-group, in comparison with other groups. This focus on the in-group is revealed in in-group members' tendencies to like, and see themselves as similar to, in-group compared with out-group members, to endorse and be influenced by the in-group's norms relating to intra and inter-group attitudes and behaviors, and to favor in-group members over other individuals. In the ethnic preference phase, a child shows social preference for members of his or her own group, but this preference does not mean that he or she will show hostility toward their peers of other groups.

According to Nesdale (2002), the transition to the *ethnic prejudice* phase in multiethnic/racial communities implies a new focus on an ethnic or racial out-group(s) in addition to the child's ongoing concern for the in-group. Ethnic prejudice does not merely mean that an out-group member is less liked than an in-group member, but it also means that the out-group members are disliked or hated. Ethnic prejudice may emerge and grow in children depending on the extent to which (a) a child identifies with his or her social group, (b) prejudice is a norm held by the members of the child's social group, and/or (c) the in-group members believe that their group is threatened in some way by members of the out-group. The threats from the out-group might include realistic (i.e., threats against the status, power, or physical or material well-being of the in-group), symbolic (i.e., threats against the values, beliefs, or standards of the in-group), or stereotype threats (i.e., threats arising from the in-group's view of the nature of the out-group) (Stephan, Ybarra, Martinez, Schwarzwald, & Tur-Kaspa, 1998).

However, few studies have examined the likely transition of ethnic preference to ethnic prejudice in children and youth. Although children in the ethnic preference phase

may prefer their own group over other group(s), they may view other groups positively and may never display ethnic or racial prejudice. Some children may choose not to go along with negative beliefs and behavior toward ethnic minority groups as a moral judgment. It is also quite likely that many children who hold prejudicial views do not engage in ethnic bullying behaviors and, conversely, that children who do not racially prejudice may bully members of other ethnic groups (Scherr & Larson, 2010).

Students may experience bullying based on their ethnicity from both same and different ethnicity peers. If children mainly associate with same ethnicity peers, they may experience as much or more general victimization by same-ethnicity peers than by different ethnicity peers. Although research has suggested there may be an “in-group” bias, where young children prefer and have a more positive view of children of their own ethnic group compared with those of other groups, this tends to dissipate over time as children become better able to separate the individual from their group identification (Aboud, 2003). Greater intergroup contact, such as having cross-ethnic friendships, can help reduce prejudice (Pettigrew, 1998), and this is more likely at schools with greater diversity (Pettigrew & Tropp, 2006). For example, McGlothlin & Killen (2006) found that when presented with ambiguous pictures of social situations with minority peers, White children attending ethnically homogenous schools were more likely to hold negative opinions of the minority peer and rate friendship as less likely than in a similar study with White students attending an ethnically diverse school. Thus, the relation between ethnicity and victimization can be informed by the school context in which the child develops and socializes.

Social-Ecological Perspectives on Bullying

Researchers have used Urie Bronfenbrenner's social ecological model of human development (1979, 2005) to understand bullying (e.g., Swearer & Espelage, 2004; Swearer et al., 2012). Social-ecological perspectives recognize that all individuals are part of interrelated systems that locate the individual (e.g., a developing child) at the center and move out from the center to include all systems that affect the individual (Bronfenbrenner, 2005). An individual child is not only influenced by his or her socio-demographic characteristics such as gender and race/ethnicity, but also his or her immediate settings or interactions and by interrelations among the various settings and interactions of his or her immediate environment. Each of these settings and interactions is either closer to, or more distant from the individual child. Bronfenbrenner's five systems (microsystem, mesosystem, exosystem, macrosystem, and chronosystem,) provide different specific contexts in which children are living, learning, and developing (see Bronfenbrenner, 2005).

The individual child themselves as a system have their own characteristics, such as their gender, age, race, health, appearance, cognitive abilities, personality traits, etc. The individual children are seen as dynamic and evolving beings that interact with (and restructure) the many environments with which it comes into contact. These interactions between individual and the environment are viewed as two-directional and characterized by reciprocity across the lifespan of the individual.

The microsystem consists of family, peers, siblings, and a child's classroom elements with which the child has immediate contact. The mesosystem recognizes that

individual microsystems in which a child functions are not independent but are closely interrelated or connected and influence each other. The mesosystem consists of two or more microsystems (e.g., family, peer group, school, and community) and links or ties together information, knowledge, and attitudes from one setting that help to shape behavior or development in another setting. The exosystem includes the extended family, neighborhoods, social services, the media, and the work environment of the child's parents, all of which includes the microsystem. The macrosystem is the culture (e.g., bias-based violence, Pritchard, 2013), the laws, history, religion, and social conditions (e.g., immigration and poverty) in which the other systems are situated. The macrosystem of Bronfenbrenner's ecological framework, the outer layer of an individual child's environment consistently shape the immediate influences, such as the child's characteristics, family environment, peers, and school context. The chronosystem refers to the timing of events and transitions that occur within an individual's environment over the course of their life. These events or transitions may be personal (e.g., the death of a parent or child being adopted by a new culturally-different family in combination with the age of the developing child) or socio-historical circumstances (e.g., human rights are accepted as an etic norm by young people). Each of these five systems has been described as either closer to, or more distant from the developing child, along with how personal the context of the interaction may be.

Bronfenbrenner's ecological framework (2005) suggests that each system may afford factors that contribute to children's behaviors related to bullying. Thus, bullying (including racial or ethnic bullying) has to be understood across individual, family, peer,

school, and community contexts (Swearer & Espelage, 2004; Swearer et al., 2012). For example, Swearer and Espelage (2004) point out that the individual child who is involved in bullying may be involved as a bully, bully victim, victim, or bystander, and individual factors (e.g., gender, age, personality traits) may influence his or her participation in bullying. Family factors (e.g., modeling of bullying between siblings or caregivers), school environment (e.g., peer group), and community components may also influence bullying. If the individual attends a school where a pro-bullying climate exists, then children and adolescents may be more likely to be involved in bullying. If the individual's peer group supports bullying, then the individual may be more likely to engage in these behaviors. A community may encompass the school, peer group, family, churches, neighborhood playgrounds, health services, and the individual. The prevalence of bullying may be decreased if the community inhibits bullying behavior. In addition, if cultural norms, values, and beliefs afford opportunities for children and adolescents to practice bullying behavior, children may be more likely to be involved in bullying issues.

Swearer and colleagues (2012) provided an overview of social-ecological variables (such as individual, peer, school, family, and community variables) associated with bullying and being bullied, and examined the multiple influences of 18 variables² on bullying, using a sample of 5,470 middle school students (7th-8th grades) and 11,447 high school students (9th-12th grades). They found that delinquency, depression/suicidality, living in a safe/connected neighborhood, and having a sense of school belonging were

² These variables included: gender, school type (middle vs. high school), free/reduced lunch, number of alternative home placement, sexual orientation (gay, lesbian, bisexual, transgender, and questioning), depression/suicidality, alcohol/drug abuse, delinquency, positive peers – drinking & smoking, risky family – fighting & alcohol/drug use, history of sexual & physical abuse, positive parental behavior, school sense of belonging, and neighborhood safe/connection.

associated with less victimization. Being in a family where parents fight and use drugs or alcohol, and reporting a history of physical or sexual abuse were associated with greater victimization. Students identified as lesbian reported less victimization, but students identified as questioning reported higher victimization. Those students who reported greatest number of alternative home placements, like foster care or juvenile detention reported more victimization.

In terms of bullying perpetration, the authors found that delinquency, alcohol/drug use, having friends that do not smoke or drink, and having a sense of school belonging were associated with less bullying perpetration. Depression/suicidality, being in a family where parents fight and use drugs or alcohol, or reporting a history of physical or sexual abuse were associated with greater bullying perpetration. Students identified as lesbian and bi-sexual bullied less, but students identified as questioning reported higher bullying perpetration. Unfortunately, race/ethnicity was not included in the study of Swearer and colleagues (2012).

Bullying as a Civil and Human Rights Issue

Researchers have also attempted understand bullying from a rights perspective. Bullying is not only a human rights issue, but also a civil rights issue in the U.S. (Alley & Limber, 2009; Cornell & Limber, under review; Kowalski et al., 2012).

Racial or ethnic bullying might involve discrimination by peers because of race, color, immigration status, home language, religion, cultural norms, and ethnic or social origin, among other characteristics. Like any types of bullying, racial or ethnic bullying is a violation of a child's human rights, especially a child's basic rights to education and

personal security that is spelled out in the Convention on the Rights of the Child (CRC) (e.g., articles 19, 28, 29 and 40) and the Convention on the Elimination of All Forms of Racial Discrimination (e.g., articles 5 and 7). The articles of CRC provide a powerful summary of the key human rights pertaining to children and youth at school. These rights at school include: the right to have their best interests considered when decisions are made (article 3); the right to be protected from physical, emotional and sexual harassment or abuse from peers or others while in the school environment (article 19); the right to be treated with respect and dignity by other people (preamble, articles 2, 29 and 40); the right to be disciplined in ways which are positive (articles 3, 28, 37 and 40); the right to express their views, have a say in matters which affect them, present their side of a story and be treated fairly (articles 2, 12, 13, 14 and 40); the right to have matters of privacy protected (article 16); the right to be free from discrimination of any sort (article 2); the right to learn and interact in a safe environment (article 3); the right retain their own property and have it treated with respect (derived from article 17 of the Universal Declaration of Human Rights); the right to have their family informed and involved in matters that affect them (article 5); and be the right to be taught, and have demonstrated to them, respect for the rights of others, and their responsibilities in relation to this (article 29).

A child's rights to education and personal security require that schools provide a safe physical, emotional, and social environment, which will help meet their basic needs and expand their opportunities to reach their full potential. The UN Committee on the Rights of the Child has stated that "a school which allows bullying or other violent and

exclusionary practices to occur is not one which meets the requirements of article 29(1)” of CRC (United Nations Committee on the Rights of the Child, 2001, p. 7).

The right to education is compromised if a child or young person does not feel safe at school or is absent from school for any significant period of time. Research has consistently indicated that a significant number of children and youth are fearful of bullying in schools. For example, Limber, Olweus, and Wang (2012) found, using a sample of more than one million students from 3rd through 12th grades from 3,308 American schools, that 35% of girls and 22% of boys indicated they were afraid of being bullied “sometimes or more often” in their school. Nearly half of elementary school girls reported being afraid of being bullied in their school. Although fear of bullying was often related to a child’s actual experiences with being bullied, Limber and colleagues (2012) found that one in five of those students who were not involved in bullying self-reported that they were fearful of being bullied. If students are afraid of being bullied, even if they are not currently targeted, it is likely that their ability to concentrate on learning will be affected.

It is a fundamental human right for students to feel safe at schools and to be spared the oppression and repeated, intentional humiliation implied in peer victimization or bullying Olweus (2001). As mentioned above, bullying has been the subject of intense research focus and has drawn global attention in the past three decades, especially in the North America. This may have stemmed in part from a growing consciousness of children’s rights and a recognition of bullying as a human rights issue (e.g., Smith & Shu, 2000).

In the U.S., attention to bullying among students exploded in the American media in the wake of the tragic shootings at Columbia High School. After 1999, there was a flurry of state legislation related to bullying, as 30 states passed laws addressing bullying within a span of less than 8 years (Alley & Limber, 2009). At the time of this writing (August 2, 2013), 49 states had laws related to bullying. Although these laws vary quite a bit in their definitions of bullying and in their requirements, almost all require state or local offices (typically school districts) to establish policies against bullying among students in public schools (see Alley & Limber, 2009; Cornell & Limber, under review). Although definitions of bullying vary from state to state, almost all laws recognized that bullying can be acted or motivated by any actual or perceived differentiating characteristic, such as race, color, religion, ancestry, and national origin (e.g., North Carolina: N.C. Gen. Stat. § 115C-407.15(a), 2010); Key Components in State Anti-Bullying Laws, www.stopbullying.gov, n.d.).

School personnel have a duty to protect students in their care and to ensure that there is no substantial interference with their rights to receive an education (Cornell & Limber, under review; Willard, 2006). School districts may be held liable for failing to stop bullying if personnel are found to have acted negligently or if they violate provisions of relevant federal or state statutes (Cornell & Limber, under review; Kowalski et al., 2012). Although there is no federal law that specifically applies to bullying, bullying may in some circumstances violate a child's federal civil rights (e.g., Cornell & Limber, under review; Kowalski et al., 2012; Marcus, 2011; U.S. Department of Education Office for

Civil Rights, 2010). In some cases, bullying overlaps with discriminatory harassment when it is based on race, national origin, color, sex, age, disability, or religion.

In 2010, the Office for Civil Rights (OCR) in the U.S. Department of Education (2010) sent a “Dear Colleague” letter to schools across the nation to provide guidance on dealing with bullying that rises to the level of a civil rights violation. In this letter, the U.S. Department of Education (2010) reminded school authorities of their obligations to address civil rights violations that can be reflected in bullying incidents. The OCR emphasized that school administrators should not fail to recognize that some forms of bullying (based on race, color, national origin, sex, or disability) constitute discriminatory harassment under federal law. As the Dear Colleague letter advised, bullying of an individual based on his or her membership in a protected class can be a civil rights violation if it is sufficiently severe, pervasive, or persistent that it interferes with a student’s ability to benefit from the school’s services, activities, or opportunities (Cornell & Limber, under review; OCR, 2010). When a student who is being bullied is also identified as a victim of a federal civil rights violation, the school has more than an obligation to stop the violation. The OCR indicated that schools must “eliminate any hostile environment and its effects” as well as take steps to “prevent the harassment from recurring” (OCR, 2010, pp. 2-3). These obligations imply a broader and sustained effort to influence student behavior and improve the school climate beyond simply disciplining the culpable student (see Cornell & Limber, under review).

School Context and Bullying

As discussed earlier, school climate and other aspects of the school context, as part of the macrosystem in Bronfenbrenner's ecological framework, may influence children's involvement in bullying (Limber, Bryn, & Wang, in press; Swearer et al., 2012). Several studies have examined the ethnic context of schools (often referring to the ethnic composition of a school and/or a classroom) and bullying involvement for students of ethnic groups (Bellmore, Witkow, Graham, & Juvonen, 2004; Graham & Juvonen, 2002; Hanish & Guerra, 2000; Juvonen, Nishina, & Graham, 2006; Stefanek, Strohmeier, van de Schoot, & Spiel, 2011). The existing literature (although very little) seems to indicate that having more students of the same ethnicity in a diverse school classroom may protect against victimization risk in middle school (e.g., Graham & Juvonen, 2002). This seems to mean that within a classroom, there is less victimization if there are many ethnicities, and a child is less likely to be bullied if he or she is a member of an ethnicity that is well-represented. Greater ethnic diversity in the classroom may be associated with lower levels of perceived victimization, less loneliness, and greater perceptions of school safety (Juvonen et al., 2006). Some studies, however, showed that classes with a high proportion of ethnic minority students can have higher rates of bullying and victimization (e.g., Vervoort & Scholte, 2010).

Ethnic diversity at school level has not been a research focus in the field of bullying. One of the existing studies used data from the 2004–2005 academic year California Healthy Kids Survey (CHKS) (N = 161,838; Grades 9 and 11 students from 528 schools) and found that when more peers shared their ethnicity in the school,

students were less victimized (Felix & You, 2011). However, Felix and You's study (2011) surveyed only 9th and 11th grade students. Research has indicated that students from primary and middle schools show different bullying patterns from high school students (Limber et al., 2012; Kowalski et al., 2012). The trends can be informed and elucidated by nationally representative studies with larger sample sizes and a wider range of grades and schools (Felix & You, 2011).

Risk for bullying victimization may vary by ethnicity and school context such as the ethnic composition of a school in relation to a child's own ethnicity and the overall poverty level of the school. Using a sample of 1,956 students (40% African American, 42% Hispanic, and 18% White) from 14 public elementary schools in two Midwestern cities in the U.S., Hanish and Guerra (2000) found that the ethnic composition of a school in relation to a student's own ethnicity (operationalized as the percentage of students in a child's school who were members of his or her ethnic group) and the degree to which the school served families whose children received free or reduced-price lunch (operationalized as the percentage of students in a child's school who received either free or reduced-price lunch) moderated the relation between ethnicity and bullying victimization. Hanish and Guerra (2000) found that White children who attended ethnically integrated schools were more likely than African American children and especially Hispanic children to be bullied. Peskin et al. (2006) found that African American students of low socioeconomic status were at a higher risk of involvement in bullying and victimization than were Hispanic American students. Thus, the importance

of considering ethnicity and school poverty in explaining peer bullying victimization must be addressed.

School climate may predict bullying among children and youth. School climate generally refers to the quality and character of school life (Cohen, 2009; Cohen, McCabe, Michelli, & Pickeral, 2009) and involves the social, emotional, and academic experiences of students, their family members, and school personnel. One of the essential dimensions of school climate is the relationships between and among students, educators, and parents, including respect for diversity, a sense of connectedness among members of the school community, and a pattern of positive relationships (Cohen et al., 2009). For example, students who are bullied by peers (physically, verbally, or relationally) report lower school connectedness than non-bullied students (O'Brennan & Furlong, 2010). Bullied students (particularly those who are bullied and also bully others) are also significantly more likely to indicate that they dislike school (Limber et al., 2012). Students' perceptions of school climate are related to their emotional well-being, engagement in risky and violent behavior, their likelihood of being bullied by peers, and academic outcomes. Students' perceptions of school climate are also related to the likelihood of being bullied and students' propensities to seek help for bullying. Students who are bullied by their peers report feeling more disconnected from their school (O'Brennan & Furlong, 2010; You, Furlong, Felix, Sharkey, Tanigawa, & Green, 2008). On the other hand, positive school climate may increase the likelihood that students report bullying that they may experience. Research indicates that students who perceive that their teachers and other school staff are supportive are more likely to indicate they

would seek help for bullying and threats of violence (Eliot, Cornell, Gregory, & Fan, 2010).

Student race and ethnicity are associated with student perceptions of school climate (Fan, Williams, & Corkin, 2011; Koth, Bradshaw, & Leaf, 2008). For example, Fan and colleagues (2011) found that Hispanic and Asian students reported less favorable perceptions of school order, safety, and discipline, and students who were Native American, Hawaiian, multiracial, or of other races reported less favorable perceptions of the teacher–student relationship. But the perceptions of African American students were more favorable toward the fairness and clarity of school rules. In schools with more perceived support, there was less of a discrepancy in help-seeking attitudes between girls and boys. Some studies seem to show that students of minority racial groups are less likely to seek help for a variety of behavior problems (Sen, 2004). Minority students are less likely to regard school adults as supportive sources of help for a problem (Marsh & Cornell, 2001). Thus, it is important to consider school climate in studies of bullying behavior and races/ethnicities (Gendron, Williams, & Guerra, 2011).

Bullying has often been seen as a problem primarily for urban schools, but there appears to be no support for this view. In one of the few studies to examine urban, suburban, and rural differences in rates of bullying, Nansel and her colleagues (2001) found that students in grades 6 through 10 were just as likely to be bullied in urban, suburban, town, and rural areas. They found only very small differences in students' reports of bullying others, with suburban youth being slightly less likely than others to say that they bullied their peers "sometimes" or more often and rural youth being slightly

more likely than others to have ever bullied their peers. According to the School Crime Supplement to the National Crime Victimization Survey (Robers et al., 2013), there were differences in bullying in urban, rural, suburban communities: a lower percentage of students in urban areas (25%) reported being bullied at school than students in suburban and rural areas in 2011 (29% and 30%, respectively). Also, the percentage of students in urban areas reporting cyber-bullying overall was lower than students in suburban areas (7% and 10%, respectively).

Student/teacher ratios or class sizes might also play a role in bullying among children and youth. Student/teacher ratio is often used interchangeably with class size, which refers to the number of students who regularly appear in a teacher's classroom and for whom the teacher is primarily responsible and accountable. Class size is related directly to the amount of time that teachers spend on instruction and to students' engagement in learning (Deutsch, 2003; Zahorik, 1999). Research has indicated a positive correlation between student achievement and teacher behavior. Teachers with smaller classes are more likely to have positive interactions with their students than teachers who have larger classes. Teachers of the smaller class sizes reported lighter workloads and encountered fewer behavior difficulties among their students, maintained stronger, more well-developed relationships with parents and students, and were better able to meet the individual needs of each student during daily instructional time (Finn, 2002).

Little literature has explored the relation between student/teacher ratios or class sizes and bullying. Bullying researchers have indicated that students are bullied and bully

others in class with their teacher in the room. For example, Limber et al. (2012) showed that 33% of the bullied students had been bullied “2 or 3 times a month or more” in class when the teacher was in the room. Although many factors may contribute to this situation, teachers may have difficulty in supervising their students’ behavior with a higher student/teacher ratio.

In summary, it is not possible to draw conclusions about ethnic and racial bullying given the limited studies. The existing national and smaller scale studies in the literature have typically focused on the prevalence and the nature of bullying, the impact of bullying on children and youth, and bullying prevention efforts. The importance of races/ethnicities and/or cultural differences and school-level factors that might be connected with bullying among children and youth has not been adequately addressed (Scherr & Larson, 2010). Racial/ethnic issues related to bullying represent an important research focus to fill in a gap in bullying knowledge and have implications for bullying prevention efforts.

Research Questions and Hypotheses

The review of the relevant literature suggested the following research questions and hypotheses:

Research Question 1: What is the prevalence and nature of bullying among Asian American students, and how does it differ from African American students, Hispanic students, White students, and multiracial students?

H1. Asian students will report significantly higher rates of being bullied and bullying others than will students of other races/ethnicities, controlling for gender, grade

level, students' general satisfaction or dissatisfaction with school, the school's overall poverty level, student/teacher ratio, school locale, the size of students' social networks in school, the likelihood of joining in bullying, and students' perceptions of school safety.

H1(a) Among Asian students, boys will demonstrate significantly higher rates of being bullied and bullying others than girls. Asian students will report significantly higher rates of being bullied and bullying others in elementary school than in middle school and high school. Boys will be more likely than girls to be bullied and bullying others in all grade levels.

H1(b) Comparing Asian students and their peers of other ethnic groups, Asian boys will report higher rates of being bullied. Asian girls will be less likely to be bullied than African American girls and White girls, but will be more likely to be bullied than Hispanic girls. Asian students (both boys and girls) will report higher rates of bullying others than Hispanic students and White students, but lower than those of African American and multiracial students.

H1(c) Asian students will be more likely to be identified as "victims only" students (i.e., students who are bullied but do not bully others) than their peers of African American and Hispanic groups, but will be less likely than White and multiracial students. Higher rates of Asian students will be "bully victims" students (i.e., students who are bullied but also bully others) than their peers of other groups. African American and Hispanic students will be more likely to be "bullies only" (i.e., students who are not bullied but bully others) than Asian, White, and multiracial students.

H1(d) Asian students (both boys and girls) will be more likely to be bullied due to their race or color and socially excluded by their peers than students of other racial/ethnic groups. Asian boys and African American students will be more likely to be bullied with mean names, comments, or gestures with a sexual meaning than their peers. Asian students (especially boys) and White girls will be more likely to be cyber bullied than their peers. More specifically, Asian boys will be more likely to be verbally and physically bullied, socially excluded, have their money or other things taken or damaged, sexually bullied, bullied about their race or color, threatened or forced to do things, have rumors spread, and cyber bullied.

Research Question 2: How do children's perceptions of school safety, the size of their social networks in school, the likelihood of joining in bullying, and their general satisfaction or dissatisfaction with school vary as a function of race or ethnicity?

H2. Asian American students will report significantly lower perceptions of school safety, smaller social networks in school, a lower likelihood of joining in bullying, and higher satisfaction with school than will students of other races/ethnicities, taking gender and grade level into account.

Research Question 3: How is bullying among students of different ethnic groups related to school-level variables such as the school's ethnic diversity and ethnic densities, the overall poverty level of the school, school locale, and student/teacher ratio?

H3. School-level factors including the ethnic density for Asian American, African American, Hispanic, White, and multiracial students, the school's ethnic diversity, the

overall poverty level of the school, student/teacher ratio, and school locale will significantly predict being bullied and bullying others.

H3(a) Lower densities of Asian student population in schools will be related to higher rates of being bullied for Asian American students (meaning that having more same ethnicity peers will reduce student victimization risk). There will be non-significant relations for students of other racial/ethnic groups.

H3(b) Greater school-level ethnic diversity will be related to lower levels of being bullied.

H3(c) There will be no significant urban, suburban, town, and rural differences in the rates of being bullied among all students and among ethnic groups, but there will be significant differences in their reports of how they are bullied according to the school locales. For example, students in town and rural schools will be more likely than their peers in urban and suburban schools to be racially or ethnically bullied, and cyber bullied.

H3(d) The overall poverty level of the school and student/teacher ratio will moderate the relationship between race/ethnicity and being bullied and bullying others.

CHAPTER THREE

METHODOLOGY

Participants

The data used in this study were drawn from a national database of the Olweus Bullying Questionnaire (OBQ) of the Olweus Bullying Prevention Program (OBPP; Limber et al., 2012; Olweus & Limber, 2010a). The study sample consisted of 473,918 participants (from 1,524 schools) who completed baseline assessments in 2010 and 2011, prior to implementation of the OBPP.

The sample included 232,860 girls (49.1%) and 238,677 boys (50.4%) and 2,381 (0.5%) students who did not indicate their gender. The sample included students in grades 3-12, as shown in Table 3.1.

Table 3.1

Grade Level of the Sample

Grade	Student	
	n	Percentage (%)
3rd	52,880	11.2
4th	58,129	12.3
5th	58,936	12.4
6th	70,009	14.8
7th	73,549	15.5
8th	70,490	14.9
9th	27,116	5.7
10th	23,995	5.1
11th	18,907	4.0
12th	13,926	2.9
Missing	5,981	1.3

When grouped by grade, 35.9% were students in traditional elementary school grades (3rd-5th), 45.2% were in middle school grades (6th-8th), and 17.1% were in high school grades (9th-12th), as shown in Table 3.2.

Table 3.2

Gender, Grade, Race/Ethnicity, and School Locations of the Sample

Characteristic	Response Category	n	Percentage (%)
Gender	Girls	232,860	49.1
	Boys	238,677	50.4
	Missing	2,381	0.5
Grade	Elementary	169,945	35.9
	Middle	214,048	45.2
	High school	83,944	17.7
	Missing	5,981	1.3
Race/Ethnicity	White	186,532	39.4
	African American	34,397	7.3
	Hispanic	51,263	10.8
	Asian	9,606	2.0
	Multiracial	38,514	8.1
	I Do not Know	41,153	8.7
	Other	29,219	6.2
	Missing	83,234	17.6
Location	City	93,655	19.8
	Suburb	183,956	38.8
	Town	68,622	14.5
	Rural	127,685	26.9

The data included the race or ethnicity of the sample³, including White, African American, Hispanic, Asian American, multiracial (i.e., student who identified themselves as belonging to more than one racial/ethnic group), Other, and “I do not know.” As shown in Table 3.2, White students were the largest ethnic group in the sample (39.4%),

³ These data may not reflect the U.S. population characteristics. For example, out of the total U.S. population (308.7 million) in the 2010 U.S. Census (2011), 72% were White, 16.3% Hispanic, 13% African American, 4.8% Asian, 0.9% American Indian and Alaska native, and 0.2% native Hawaiian and other Pacific islander.

and Asian American students were the smallest ethnic group (2.0%); 8.1% of the participants belonged to more than one ethnic group (known as multiracial). In the current study, 26.3% of the sample did not indicate their races/ethnicities or did not know their racial/ethnic backgrounds. It is notable that the race/ethnicity variable in the OBQ was optional, meaning that students did not have to indicate their races/ethnicities if they did not want to.

Table 3.3

Participants' Gender and Race/Ethnicity for School Locations

Community	Gender	Race/Ethnicity							Total
		White	African American	Hispanic	Asian	Multiracial	Other	I do not know	
City	Girl	8,555	5,200	11,035	1,341	4,841	3,414	4,386	38,772
		11.0%	6.7%	14.1%	1.7%	6.2%	4.4%	5.6%	49.7%
	Boy	8,766	5,672	10,571	1,390	4,559	3,910	4,440	39,308
11.2%		7.3%	13.5%	1.8%	5.8%	5.0%	5.7%	50.3%	
Suburb	Girl	17,321	10,872	21,606	2,731	9,400	7,324	8,826	78,080
		22.2%	13.9%	27.7%	3.5%	12.0%	9.4%	11.3%	100.0%
	Boy	37,557	5,559	9,754	2,440	7,404	4,526	7,422	74,662
25.1%		3.7%	6.5%	1.6%	4.9%	3.0%	5.0%	49.9%	
Town	Girl	35,877	6,617	9,038	2,373	7,011	5,788	8,272	74,976
		24.0%	4.4%	6.0%	1.6%	4.7%	3.9%	5.5%	50.1%
	Boy	73,434	12,176	18,792	4,813	14,415	10,314	15,694	149,638
49.1%		8.1%	12.6%	3.2%	9.6%	6.9%	10.5%	100.0%	
Rural	Girl	17,137	2,344	2,083	356	2,767	1,866	2,942	29,495
		28.8%	3.9%	3.5%	.6%	4.7%	3.1%	4.9%	49.6%
	Boy	16,218	2,583	2,071	366	2,923	2,585	3,247	29,993
27.3%		4.3%	3.5%	.6%	4.9%	4.3%	5.5%	50.4%	
Total	Girl	33,355	4,927	4,154	722	5,690	4,451	6,189	59,488
		56.1%	8.3%	7.0%	1.2%	9.6%	7.5%	10.4%	100.0%
	Boy	31,581	2,867	3,272	645	4,147	3,004	4,647	50,163
31.0%		2.8%	3.2%	.6%	4.1%	3.0%	4.6%	49.3%	
Total	Girl	30,198	3,337	3,222	650	4,659	3,935	5,551	51,552
		29.7%	3.3%	3.2%	.6%	4.6%	3.9%	5.5%	50.7%
	Boy	61,779	6,204	6,494	1,295	8,806	6,939	10,198	101,715
60.7%		6.1%	6.4%	1.3%	8.7%	6.8%	10.0%	100.0%	
Total	Girl	94,830	15,970	26,144	4,782	19,159	12,810	19,397	193,092
		24.4%	4.1%	6.7%	1.2%	4.9%	3.3%	5.0%	49.6%
	Boy	91,059	18,209	24,902	4,779	19,152	16,218	21,510	195,829
23.4%		4.7%	6.4%	1.2%	4.9%	4.2%	5.5%	50.4%	
Total	Girl	185,889	34,179	51,046	9,561	38,311	29,028	40,907	388,921
		47.8%	8.8%	13.1%	2.5%	9.9%	7.5%	10.5%	100.0%

The 1,524 schools included in these data were located in 45 states⁴ and the US Virgin Islands, and most of the schools were public (96.8% public versus 3.2% private). Of the total students in the sample, 38.8% attended schools located in suburban community areas, 26.9% in rural areas, 19.8% in urban areas, and 14.5% in towns. Table 3.3 provides a breakdown of gender and race/ethnicity of the sample for school locations.

Procedures

Study data were drawn from the 2010-2011 OBQ baseline assessments data. The OBQ is one of nine program components of the Olweus Bullying Prevention Program (OBPP) that is implemented school-wide. Classroom teachers distributed the anonymous OBQ in a pencil/paper scannable format to students approximately two months into the fall or spring semester. Prior to implement any other program components or officially launching the OBPP, school personnel receive a school-level report of findings from the questionnaire to assist in their planning to implement the OBPP.

The National Center for Education Statistics' (NCES) database provided school-level information for the 2010-2011 school year. NCES is the primary federal entity for collecting and analyzing data related to education in the U.S. (and other nations).

Research Measures

This study drew on the Olweus Bullying Questionnaire (OBQ) and the National Center for Education Statistics' (NCES) database to examine the race/ethnicity and school-level variables on children's experiences of bullying in U.S. schools.

⁴ The five states that were not included in the sample were: Alabama, Delaware, Hawaii, Mississippi, Nebraska.

The Olweus Bullying Questionnaire (OBQ)

Study data were drawn from the 2010-2011 baseline assessments of the Olweus Bullying Questionnaire (OBQ) (Olweus, 1996; 2007; 2010; 2013). The OBQ is a widely used bullying survey to collect data on bullying (Cornell & Bandyopadhyay, 2010). The anonymous OBQ is a 40-item instrument assessing students' experience of bullying and being bullied and perceptions of the extent to which teachers and other school personnel, peers, and adult family members are aware of and have taken action on bullying.

The OBQ includes a definition of bullying (Olweus, 2007; 2010) which states:

We say a student is being bullied when another student, or several other students

- *say mean and hurtful things, or make fun of him or her, or call him or her mean and hurtful names*
- *completely ignore or exclude him or her from their group of friends or leave him or her out of things on purpose*
- *hit, kick, push, shove around, or lock him or her inside a room*
- *tell lies or spread false rumors about him or her or send mean notes and try to make other students dislike him or her*
- *and do other hurtful things like that*

When we talk about bullying, these things happen more than just once, and it is difficult for the student being bullied to defend himself or herself. We also call it bullying when a student is teased more than just once in a mean and hurtful way. But we do not call it bullying when the teasing is done in a friendly and playful way. Also, it is not bullying when two students of about equal strength or power argue or fight.

The OBQ includes individual items and scaled measures of bullying and being bullied and individual items assessing where bullying occurred, whether students reported bullying, actions students may have taken when a witness to bullying, attitudes about bullying, and perceptions of actions others may have taken in response to bullying.

Data are collected in pencil and paper format or online format and are self-report in nature. The major OBQ measures of interest to the study are discussed below.

The experience of having been bullied is assessed through a scale and also an individual item. The scale consists of 10 items assessing varying ways of bullying including a) verbal bullying (“I was called mean names, was made fun of, or teased in a hurtful way.”); b) social exclusion (“Other students left me out of things on purpose, excluded me from their group of friends, or completely ignored me.”); c) physical bullying (“I was hit, kicked, pushed, shoved around, or locked indoors.”); d) rumor-spreading (“Other students told lies or spread false rumors about me and tried to make others dislike me.”); e) theft or damage of possessions (“I had money or other things taken away from me or damaged.”); f) threats (“I was threatened or forced to do things I did not want to do.”); g) bullied about race or color (“I was bullied with mean names or comments about my race or color”); h) bullied with names, comments, or gestures with a sexual meaning (“I was bullied with names, comments, or gestures with a sexual meaning.”); i) electronic bullying (“I was bullied with mean or hurtful messages, calls or pictures, or in other ways on my cell phone or over the Internet.”); or j) other forms of bullying. Responses are on a 5-point scale from “It has not happened to me in the past couple of months” to “Several times a week.” The psychometric properties of the scale are discussed below. The being bullied scale is calculated by averaging the nine specific forms of being bullied.

The experience of having bullied others likewise is measured through a scale and an individual item. The 10-item scaled measure consists of items that parallel the

experience of having been bullied items in content. Responses are on a 5-point scale from “It has not happened to me in the past couple of months” to “Several times a week.” The bullying others scale can be calculated by averaging the nine specific forms of bullying others. The reliability and validity of the scale is discussed below.

The OBQ also includes single items measuring being bullied, bullying others, the context of bullying, emotional and physical responses to bullying, and actions taken by others in response to bullying. These items and their measurement are:

- Frequency of having been bullied (global question), which measures how often students had been bullied at school in the past couple of months. Responses are on a 5-point scale from “I have not been bullied at school in the past couple of months” to “Several times a week.”
- Frequency of having bullied others (global question), which measures how often students had taken part in bullying at school in the past couple of months. Responses are on a 5-point scale from “I have not bullied another student(s) at school in the past couple of months” to “Several times a week.”
- The likelihood of joining in bullying, which measures a student’s own belief in the possibility of joining in bullying their peers (“Do you think you could join in bullying a student whom you do not like?”). Responses are on a 6-point scale from “Yes” to “Definitely no.”
- School safety related to bullying, which measures fear of being bullied (“How often are you afraid of being bullied by other students in your school?”). Responses are on a 6-point scale from “Never” to “Very often.”

- General satisfaction or dissatisfaction with school, which measures how much students like school. Responses are on a 5-point scale from “I dislike school very much” to “I like school very much.”
- The size of a child’s social networks in school, which measures how many good friends a student has in his or her classes. Responses are on a 5-point scale from “None” to “I have 6 or more good friends in my class(es).”

Several empirical studies have reported the internal consistency coefficients (Cronbach’s alpha) in the .80–.90 range for the bullying perpetration and bullying victimization scales of the eight or nine various forms of bullying included in the OBQ (e.g., using sum or means of groups of questions) (Olweus, 2013; Solberg & Olweus, 2003). In assessing the prevalence of bullying perpetration and bullying victimization using single questions, reliabilities have been in the range of .85-.95 (Solberg & Olweus 2003). Regarding the validity of the OBQ, Olweus (1994) reported that scales assessing being bullied or bullying others correlated in the .40-.60 range (Pearson correlations) with reliable peer ratings on related dimensions. Moreover, strong linear relationships have been found between children’s degree of victimization and related variables such as depression, self-esteem, and peer rejection on the one hand, and children’s bullying of others and various dimensions of antisocial behavior on the other hand (Solberg & Olweus, 2003).

In this study, the internal consistency coefficients (Cronbach’s alpha) were .86 and .89 for the bullying victimization and the bullying perpetration scales, respectively.

The National Center for Education Statistics (NCES)

The National Center for Education Statistics' (NCES) database provides school level information for this study (<http://nces.ed.gov/>). NCES is the primary federal entity for collecting and analyzing data related to education in the U.S. (and other nations). All the school variables in this study were calculated based on this public federal database. NCES is located within the U.S. Department of Education and the Institute of Education Sciences. School level information for the 2010-2011 school year was drawn from the NCES. The schools provided NCES School ID with their OBQ data and this was how these data were linked.

The current study focused on the information about schools that can be used to identify the school ethnic diversity, the densities of racial/ethnic groups of interest (i.e., Asian, African American, Hispanic, White, and multiracial), school locale, student/teacher ratio, and school poverty. To the point of this study, the school information of interest on the NCES included: school directory information (school name, NCES School ID, state, zip code), school details (county, grade span, school locale, total student number, student/teacher ratio), and enrollment characteristics (race/ethnicity, free lunch eligible, reduced-price lunch eligible).

This study computed the schools' ethnic diversities, overall poverty levels, student/teacher ratios, and the densities of Asian students, African American students, Hispanic students, White, and multiracial students in the U.S. schools that study participants attended. Table 3.4 shows the demographic characteristics of the schools in

the sample, including means (M) and standard deviations (SD), before the outlying values were detected.

Table 3.4

Mean and Standard Deviation Values of School Variables in the Sample before Detecting Outlying Values

Community	City	Suburb	Town	Rural	Total
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
School Ethnic Diversity ^a	.42 (.21)	.32 (.20)	.26 (.17)	.25 (.19)	.31 (.20)
Ethnic density of Asian American ^a	.05 (.07)	.04 (.05)	.01 (.04)	.01 (.02)	.03 (.05)
Ethnic Density of African American ^a	.18 (.24)	.11 (.17)	.10 (.20)	.08 (.14)	.11 (.18)
Ethnic Density of Hispanic American ^a	.41 (.34)	.19 (.30)	.11 (.19)	.10 (.20)	.20 (.30)
Ethnic Density of White ^b	.33 (.30)	.65 (.31)	.76 (.25)	.79 (.23)	.64 (.32)
Ethnic Density of Multiracial ^a	.02 (.04)	.02 (.02)	.02 (.04)	.02 (.030)	.02 (.03)
Student/Teacher Ratio ^c	15.61 (3.00)	15.21 (.30)	14.91 (3.30)	15.53 (2.92)	15.34 (3.02)
School Poverty Level ^d	.68 (.24)	.36 (.26)	.46 (.21)	.43 (.20)	.46 (.26)
Total Students at School ^a	837 (544)	849 (518)	585 (298)	663 (460)	758 (494)

Note. a. Included participants, N = 473,918; b. Included participants, N = 466,609; c. Included participants, N = 417,078; and d. Included participants, N = 428,402

The School's Ethnic Diversity. The school's ethnic diversity was computed using Simpson's Index Diversity (SID) (Simpson, 1949; cited in Juvonen et al., 2006).

The formula is:

$$SID = 1 - \sum_{i=1}^g p_i^2$$

In the formula, *SID* is the ethnic diversity of a given school and *p* is the proportion of students in the school who are in ethnic group *i*. Then, *p*² is summed across *g* groups in a school. Referred to as Simpson's index of diversity, this index measures the probability that any two students randomly selected in a school are from different ethnic

groups. *SID* ranges from 0 to 1, with values closer to 1 indicating greater ethnic diversity. In this study, six groups are used – American Indian/Alaskan, Asian, Black, Hispanic, White, and Two or More Races. As noted previously, NCES provides student enrollment information (by race/ethnicity) for each school. Access to student enrollment information is available to the public, but a limitation is that the NCES data record the Asian students and native Hawaiian and other Pacific islanders as one category in public schools (but in private schools, they are counted separately).

The average school ethnic diversity in the sample was 0.31. Schools that were located in urban areas had higher ethnic diversity ($M = 0.42$) than those schools in communities in suburbs ($M = 0.32$), towns ($M = 0.26$), and rural areas ($M = 0.25$), as shown in Table 3.4.

The Ethnic Density. The ethnic density was operationalized as the percentage of students in a child's school who are members of his or her ethnic group (or the same ethnicity) in the school. To calculate the number of Asian students attending public schools, this study draws upon the 2010 Census (U.S. Census Bureau, 2011). In the 2010 Census, the Asian population accounted for 4.8% (14,674,252) of the total U.S. population, and the native Hawaiian and other Pacific islanders accounted for 0.2% (540,013) of the total population. So, if the Asian population and native Hawaiian and other Pacific islanders had been counted as one category in the 2010 Census, the Asian population would account for 96.5% of the category. This percentage will be borrowed to calculate the Asian student numbers in each public school using the NCES data. For example, if there were 69 Asian/Pacific Islanders enrolled in an elementary school in the

2010-2011 year, the Asian student number would be $69 \times .9645 = 66.55$, which is recorded to 67.

The ethnic density of Hispanic or Latino students was much higher in city schools ($M = 0.41$) than that in suburbs and other community areas, which means that most of the Hispanic or Latino students in the sample attended urban schools. Schools in cities had a higher ethnic density of Asian students and African Americans, as shown in Table 3.4.

Student/Teacher Ratio. Student/teacher ratio is the number of students in a school compared to the number of teaching professionals. Some schools may include all educators such as counselors, special education service providers, and school psychologists (in this case, the student/teacher ratio may be lower than that which only includes the number of teaching professionals). Student/teacher ratio is often used interchangeably with class size, which refers to the number of students who regularly appear in a teacher's classroom and for whom the teacher is primarily responsible and accountable.

The overall student/teacher ratio in the sample was 15.34. There were not clear differences in student/teacher ratios among cities and other community areas, although there was a slightly lower mean score of the ratios in towns ($M = 14.91$), as shown in Table 3.4.

The School's Overall Poverty Level. The school's overall poverty level is operationalized as the percentage of students receiving either free or reduced-price lunch at school. There was a higher school poverty level mean score in urban schools ($M =$

0.68) than those in towns and rural community areas, and schools in suburbs had the lowest school poverty level mean score in the sample⁵, as shown in Table 3.4.

The School Locale. The school locale refers to whether a school was in an urban, suburban, town, or rural area. The average number of students per school in the sample was 758, with schools in suburbs having highest student enrolment ($M = 849$) and schools in towns having lowest student enrolment ($M = 585$), as shown in Table 3.4.

Approach to Analysis

The data were analyzed using the software package of IBM Statistical Product and Service Solutions (IBM SPSS Statistics) 20.0.0. The first stage of data analysis was data preparation.

Data Preparation

Before analyses were conducted, the data were cleaned and prepared. This involved examining response distributions to assess outliers, missing values, and skewness. A series of boxplots and univariate outlier analyses were conducted to detect outlying values.

Table 3.5 shows the results of the outlier analysis for the school-level variables that exceeded an a priori criterion of ± 2.5 z-score units or greater were removed from the data set (Osborne & Overbay, 2004; Thompson, 2006; Van Selst & Jolicoeur, 1994; Zijlstra, Ark, & Sijtsma, 2011).

⁵ The National Center for Education Statistics' (NCES) Database does not include the school poverty conditions for private schools. Therefore, this study only reported the school poverty levels of public schools.

Two bullying scale scores (the being bullied scale and the bullying others scale) were calculated by averaging the nine specific forms of being bullied and bullying others.

Table 3.5

Univariate Outlier Analyses and Descriptive Statistics of School Variables and Two Bullying Scales

School Variables	Schools Included	Min	Max	Mean	SD	Skewness	
						Statistic	Std. Error
School ethnic diversity ^a	1,524 (n=473,918)	.0000	.762	.314	.0003	.259	.004
Ethnic density of Asian ^b	1,169 (n=401,221)	.0004	.144	.028	.029	1.747	.004
Ethnic density of African American ^b	1,294 (n=423,825)	.0009	.584	.091	.120	1.985	.004
Ethnic density of Hispanic ^b	1,353 (n=434,964)	.0007	.946	.160	.240	1.920	.004
Ethnic density of multiracial ^b	1,084 (n=365,557)	.0003	.107	.022	.021	1.352	.004
Ethnic density of White ^a	1,488 (n=465,913)	.0005	.997	.639	.324	-.810	.004
School poverty ^a	1,411 (n=452,775)	.0044	.996	.448	.263	.206	.004
Student/teacher ratio ^b	1,314 (n=411,883)	7.90	22.85	15.25	2.83	.262	.004
Being Bullied Scale ^b	(n =455,104)	1.00	3.00	1.382	.460	1.523	.004
Bullying Others Scale ^b	(n=452,449)	1.00	2.33	1.130	.236	2.540	.004

Note. ^a Variables with no outlying values identified. ^b Variables with outlying values identified and removed.

Correcting for univariate skew does not necessarily correct for multivariate skew, which takes into account the inter-relationships among variables. However, multivariate normality is extremely difficult to test for, given large numbers of linear combinations (Tabachnick & Fidell, 2007). Therefore, as suggested by some scholars (e.g., Tabachnick & Fidell, 2007), this study only tested and corrected for univariate skew.

Bivariate Correlations among Major Variables

The bivariate correlations were examined among the major study variables. Being bullied (both global question and scale) and bullying others (both global question and scale) were significantly correlated with all the school variables. Table 3.6 provides bivariate correlations among variables.

In addition, there were significant correlations between and among the major study variables. For example, there was a positive correlation between the school's poverty levels and school ethnic diversity ($r = .22$, $n = 428,402$, $p < .0001$, two-tailed). There was a negative correlation between the school's poverty levels and the ethnic densities of Asian American ($r = -.26$, $n = 382,211$, $p < .0001$, two-tailed) and White students ($r = -.67$, $n = 423,728$, $p < .0001$, two-tailed), but a positive correlation with the ethnic densities of African American ($r = .26$, $n = 408,957$, $p < .0001$, two-tailed) and Hispanic students ($r = .57$, $n = 415,148$, $p < .0001$, two-tailed).

It is important to point out that this study found significance with very small effects, in some cases. For example, there was a significant negative correlation between the school ethnic diversity and being bullied ($r = -.01$, $n = 469,652$, $p < .0001$, two-tailed), but a positive significant correlation with bullying others ($r = .01$, $n = 464,432$, $p < .0001$, two-tailed). A correlation of .01 only may reach significance because of the large sample size in this study.

Analytic Models

Descriptive statistics were used to summarize and display data. A series of univariate analysis of variance were conducted to examine whether being bullied and

bullying others differed across different racial/ethnic groups and other demographic variables (e.g., gender, grade).

Hierarchical multiple regression analyses were carried out to examine the relationship between the school variables and the dependent variables and the moderating roles of the school variables of interest. Simultaneous entry with separate blocks for covariates and main effects variables was used. Data analysis strategies are presented in detail in the Chapter 4.

Table 3.6

Bivariate Correlations among Major Variables

Variables	Being Bullied (global)	Bullying Others (global)	Being Bullied (scale)	Bullying Others (scale)	Ethnic Density (Asian)	Ethnic Density (Hispanic)	Ethnic Density (multiracial)	School Ethnic Diversity	School Poverty Level	Student/Teacher Ratio	School Satisfaction	Size of a Child's Social Networks in School	Likelihood of Joining in Bullying	School Safety
Being Bullied (global)	1													
Bullying Others (global)	.23**	1												
Being Bullied (scale)	.67**	.25**	1											
Bullying Others (scale)	.20**	.59**	.33**	1										
Ethnic Density (Asian)	-.01**	-.04**	-.03**	-.04**	1									
Ethnic Density (Hispanic)	-.04**	ns	-.01**	.02**	.07**	1								
Ethnic Density (multiracial)	.03**	ns	.04**	.01**	.06**	-.14**	1							
School Ethnic Diversity	-.01**	.01**	.01**	.02**	.35**	.29**	.43**	1						
School Poverty Level	.004**	.05**	.06**	.09**	-.26**	.57**	.01**	.22**	1					
Student/Teacher Ratio	-.01**	-.02**	-.01**	-.02**	-.05**	.08**	.02**	.02**	-.07**	1				
School Satisfaction	-.10**	-.15**	-.09**	-.12**	.03**	.04**	.03**	.02**	.02**	.02**	1			
Size of a	-.15**	-.02**	-.12**	-.01**	.01**	.03**	.03**	.01**	.03**	-.004**	.14**	1		

Child's Social Networks in School Likelihood of Joining in Bullying	-.04**	-.35**	-.07**	-.33**	.04**	ns	.05**	.01**	-.01**	.01**	.23**	.05**	1	
School Safety	.44**	.09**	.41**	.08**	.01**	-.003*	.03**	-.01**	.01**	ns	ns	-.13**	.07**	1

** . Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

CHAPTER FOUR

RESULTS

Research Hypotheses Testing

This Chapter reports the results of hypothesis testing. This study focused on three primary research questions:

- (1) What is the prevalence and nature of bullying among Asian American students, and how does it differ from African American students, Hispanic students, White students, and multiracial students?
- (2) How do children's perceptions of school safety, the size of a child's social networks in school, the likelihood of joining in bullying, and the general satisfaction or dissatisfaction with school vary as a function of race or ethnicity?
- (3) How is bullying among students of different ethnic groups related to school-level variables such as the school's ethnic diversity and ethnic densities, the overall poverty level of the school, school locales, and student/teacher ratios?

Hypothesis 1

The first research question examined the prevalence and nature of bullying among Asian American students, and explored group differences in bullying among Asian American students, African American students, Hispanic students, White students, and multiracial students, and the following hypotheses were proposed.

H1. Asian students will report significantly higher rates of being bullied and bullying others (both global questions and scales) than will students of other races/ethnicities, controlling for gender, grade level, students' general satisfaction or dissatisfaction with school, the school's overall poverty level, student/teacher ratio, school locale, the size of students' social networks in school, the likelihood of joining in bullying, and students' perceptions of school safety.

H1(a) Among Asian students, boys will demonstrate significantly higher rates of being bullied and bullying others (global questions). Asian students will report significantly higher rates of being bullied and bullying others (global questions) in elementary school than in middle school and high school. Boys will be more likely to be bullied and bullying others in all grade levels.

H1(b) Comparing Asian students and their peers of other ethnic groups, Asian boys will report higher rates of being bullied (global question). Asian girls will be less likely to be bullied than African American girls and White girls, but will be more likely to be bullied than Hispanic girls. Asian students (both boys and girls) will report higher rates of bullying others (global question) than Hispanic students and White students, but lower than those of African American and multiracial students.

H1(c) Asian students will be more likely to be identified as "victims only" students (i.e., students who are bullied but do not bully others) than their peers of African American and Hispanic groups, but will be less likely than White and multiracial students. Higher rates of Asian students will be "bully victims" students (i.e., students who are bullied but also bully others) than their peers of other groups. African American

and Hispanic students will be more likely to be “bullies only” students (i.e., students who are not bullied but bully others) than Asian, White, and multiracial students.

H1(d) Asian students (both boys and girls) will be more likely to be bullied due to their race or color and socially excluded by their peers than students of other racial or ethnic groups. Asian boys and African American students will be more likely to be bullied with mean names, comments, or gestures with a sexual meaning than their peers. Asian students (especially boys) and White girls will be more likely to be cyber bullied than their peers. More specifically, Asian boys will be more likely to be verbally and physically bullied, socially excluded, have their money or other things taken or damaged, sexually bullied, bullied about their race or color, threatened or forced to do things, have rumors spread, and cyber bullied.

Cross-tabulations were used to look at the frequencies of being bullied and bullying others (global questions) among different racial or ethnic groups by gender and grade levels. In this study, 16.6% of American students (16.5% of girls; 16.8% of boys) had been bullied 2 or 3 times a month or more often in the past couple of months, and 7.8% of American students (6.4% of girls; 9.2% of boys) had bullied others. Table 4.1 provides a breakdown of gender, grade level, and race/ethnicity for the two global questions of being bullied and bullying others.

Asian Students and Bullying

Cross-tabulation tests showed that 14.9% of Asian American students were bullied and 6.7% of Asian American students bullied others. Asian boys were more likely than Asian girls to be bullied and bully others in all grade levels, as shown in Table 1.

Therefore, hypothesis in H1(a), stating that boys will be more likely than Asian girls to be bullied and bullying others in all grade levels was supported.

In order to look at the differences of gender, grade level, and race/ethnicity in students' rates of being bullied and bullying others, this study used multivariate analysis of variance (MANOVA) rather than performing multiple analysis of variance (ANOVA) testing to avoid an increased risk of making a Type I error, that is incorrectly rejecting a null hypothesis (Brace, Kemp, & Snelgar, 2009). MANOVA can check whether the different levels of the factors not only differ from one another on one dependent variable but whether they differ along a combination of several dependent variables. MANOVA will tell if the mean differences among groups on the combined dependent variable are larger than expected by chance. A significant MANOVA often reflects a significant difference for one rather than all dependent variables. Therefore, it is likely best to ensure against a Type I error by applying a Bonferroni correction (Brace, Kemp, & Snelgar, 2009). Normally, a result is regarded as "significant" if the p value is less than .05. If a design involves two dependent variables and a researcher wants to look at the two ANOVAs performed on these, then the correction ($.05 \div 2 = .025$) is applied, and for the result to be significant p now has to be less than .025. If a design involves three dependent variables and a researcher wants to look at the three ANOVAs performed on these, then the correction ($.05 \div 3 = .017$) is applied, and for the result to be significant p now has to be less than .017. So, .05 is divided by the number of dependent variables in the study.

Table 4.1

The Frequencies of Being Bullied and Bullying Others (2 or 3 times a month or more often in the past couple of months), by Gender, Grade Level, and Race/Ethnicity

Variable	Race/Ethnicity	Gender	Grade Level			Total
			Elementary School (3-5Grades)	Middle School (6-8 Grades)	High School (9-12 Grades)	
Being Bullied (global question)	Asian	Girl	18.3%	10.8%	8.9%	13.1%
		Boy	20.6%	15.1%	13.9%	16.7%
		Total	19.4%	12.9%	11.4%	14.9%
	African American	Girl	23.7%	12.8%	8.7%	15.6%
		Boy	20.3%	13.1%	9.7%	14.6%
		Total	22.0%	12.9%	9.2%	15.1%
	Hispanic	Girl	17.9%	10.4%	5.9%	11.6%
		Boy	19.4%	11.3%	7.1%	12.7%
		Total	18.6%	10.8%	6.5%	12.1%
	White	Girl	22.7%	16.3%	10.4%	16.6%
		Boy	20.8%	17.8%	10.2%	17.0%
		Total	21.7%	17.0%	10.3%	16.8%
	Multiracial	Girl	31.5%	21.3%	15.0%	23.7%
		Boy	28.9%	22.0%	17.5%	23.5%
		Total	30.2%	21.6%	16.3%	23.6%
	I Do Not Know	Girl	22.8%	18.7%	21.4%	21.3%
		Boy	22.6%	20.5%	21.6%	21.7%
		Total	22.7%	19.6%	21.5%	21.5%
	Total	Girl	23.0%	15.6%	10.5%	17.0%
		Boy	21.8%	16.8%	11.7%	17.4%
		Total	22.4%	16.2%	11.1%	17.2%
Bullying Others (global question)	Asian	Girl	4.9%	5.1%	6.3%	5.2%
		Boy	7.5%	8.2%	10.2%	8.3%
		Total	6.2%	6.6%	8.2%	6.7%
	African American	Girl	11.2%	12.3%	8.3%	11.2%
		Boy	13.3%	12.5%	12.5%	12.7%
		Total	12.3%	12.4%	10.6%	12.0%
	Hispanic	Girl	5.3%	7.9%	5.6%	6.8%
		Boy	9.2%	9.9%	9.9%	9.7%
		Total	7.2%	8.9%	7.7%	8.2%
	White	Girl	4.0%	5.5%	4.5%	4.8%
		Boy	5.6%	8.1%	8.5%	7.4%
		Total	4.8%	6.8%	6.3%	6.1%
	Multiracial	Girl	8.8%	11.2%	11.1%	10.4%
		Boy	11.2%	13.9%	17.5%	13.6%
		Total	10.0%	12.5%	14.5%	12.0%
	I Do Not Know	Girl	5.7%	8.9%	18.4%	7.8%
		Boy	7.7%	13.5%	25.1%	12.7%
		Total	6.7%	11.3%	23.1%	10.4%
	Total	Girl	5.7%	7.4%	6.1%	6.6%
		Boy	7.8%	10.0%	11.6%	9.6%
		Total	6.7%	8.7%	8.8%	8.1%

A MANOVA was conducted to look at the effects of gender and grade level on Asian American students' rates of being bullied and bullying others (global questions). The results showed that there were significant effects of gender ($F(2, 9279) = 20.87, p < .0005$; Wilk's Lambda = .996; partial $\eta^2 = .004$) and grade levels ($F(2, 18558) = 49.16, p < .0005$; Wilk's Lambda = .979; partial $\eta^2 = .010$) on the combined dependent variable (i.e., being bullied and bullying others). Analysis of each individual dependent variable, using a Bonferroni adjusted alpha level of .025, showed that there was significant contribution of gender and grade level in terms of being bullied and bullying others (global questions):

There were gender differences in terms of being bullied, $F(1, 9280) = 15.92, p < .0005$, partial $\eta^2 = .002$, and in terms of bullying others, $F(1, 9290) = 35.99, p < .0005$, partial $\eta^2 = .004$. Among Asian American students, boys demonstrated significantly higher rates of being bullied (M-difference = .07, $p < .0005$) and bullying others (M-difference = .08, $p < .0005$) than girls. Therefore, hypothesis H1(a) was supported concerning Asian American students' gender differences.

There were grade level differences in terms of being bullied, $F(2, 9280) = 81.25, p < .0005$, partial $\eta^2 = .017$, and in terms of bullying others, $F(2, 9290) = 4.00, p = .018$, partial $\eta^2 = .001$. Asian American students were more likely to be bullied in elementary school than in middle school (M-difference = .15, $p < .0005$) and in high school (M-difference = .28, $p < .0005$) and were more likely to be bullied in middle school than in high school (M-difference = .14, $p < .0005$). In terms of bullying others, Asian American students were more likely to bully others in middle school than in elementary school (M-

difference = .04, $p = .015$). No significant differences were found between high school and elementary school (M-difference = .02, $p = 1.00$) and between high school and middle school (M-difference = -.02, $p = .615$). Therefore, hypothesis H1(a) was partially supported concerning grade level differences.

The Frequencies of Bullying among Racial or Ethnic Groups

A MANOVA was further carried out to look at the effects of gender, grade, and race/ethnicity on students' (in the whole sample) rates of being bullied and bullying others (global questions). Analyses of each individual dependent variable, using a Bonferroni adjusted alpha level of .025, showed that there were significant effects of gender ($F(1, 308567) = 1.42, p < .0005, \text{partial } \eta^2 = .00$), grade ($F(9, 308567) = 294.49, p < .0005, \text{partial } \eta^2 = .01$), and race/ethnicity ($F(4, 308567) = 398.71, p < .0005, \text{partial } \eta^2 = .01$) on being bullied (global question). There also were significant effects of gender ($F(1, 308567) = 361.88, p < .0005, \text{partial } \eta^2 = .001$), grade ($F(9, 308567) = 42.45, p < .0005, \text{partial } \eta^2 = .001$), and race/ethnicity ($F(4, 308567) = 563.11, p < .0005, \text{partial } \eta^2 = .01$) on bullying others (global question).

Cross-tabulation (see Table 4.1) showed that Asian boys (16.7%) reported higher rates of being bullied "2 or 3 times a month or more in the past couple of months" than African American students (both boys and girls), Hispanic students (both boys and girls) and White girls, but lower rates than White boys and multiracial students (both boys and girls) and those students (both boys and girls) who reported they did not know their races/ethnicities. Asian girls (13.1%) were more likely to be bullied than Hispanic students (both boys and girls) but less likely to be bullied than African American, White,

and multiracial students (both boys and girls) and those students (both boys and girls) who reported they did not know their races/ethnicities, as shown in Figure 4.1. Students who reported belonging to more than one racial or ethnic group (23.7% of girls and 23.5% of boys) and those students (both boys and girls) did not know their races/ethnicities (21.3% of girls and 21.7% of boys) were surprisingly more likely to be bullied than their peers of other racial or ethnic groups.

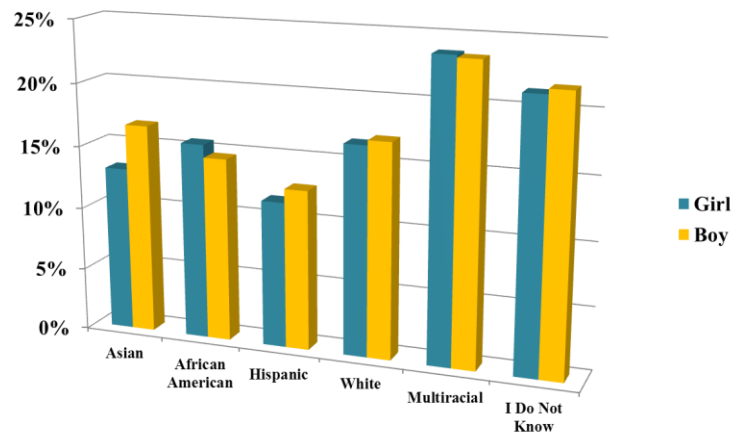


Figure 4.1. Students who were bullied (2 or 3 times a month or more often in the past couple of months), by gender and race/ethnicity.

White students (both girls and boys, 4.8% and 7.4%, respectively) were less likely to bully others in the sample, compared to their peers in Asian (5.2% of girls; 8.3% of boys), Hispanic (6.8% of girls; 9.7% of boys), those who did not know their races/ethnicities (7.8% of girls; 12.7% of boys), African American (11.7% of girls; 12.7% of boys) and multiracial groups (10.4% of girls; 13.6% of boys). Asian students (both boys and girls) were less likely to bully others than Hispanic students, and especially, those who did not know their races/ethnicities, African American and

multiracial students, as illustrated in Figure 4.2. Therefore, hypothesis in H1(b) regarding the interactions between Asian American students and their peers and being bullied and bullying others (global questions) was partially supported.

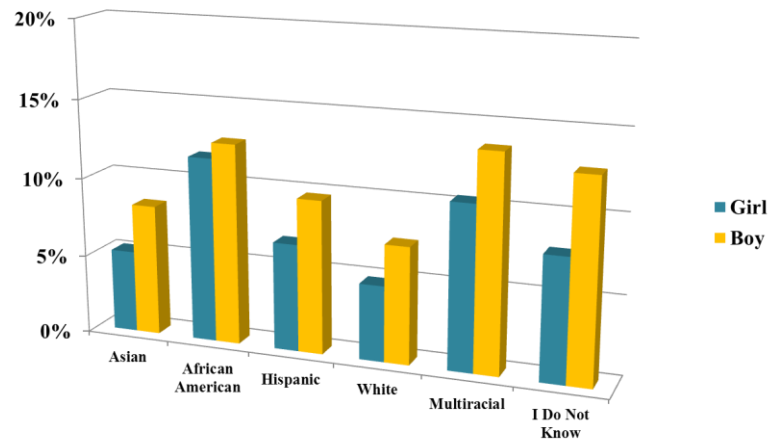


Figure 4.2. Students who bullied others (2 or 3 times a month or more often), by gender and race/ethnicity

Grade Trends in Bullying. When grades were not grouped, this study clearly showed that students (both boys and girls) were less likely to be bullied as they aged. As shown in Figure 4.3, there was a steady decrease from grades 3 through 12 in both boys’ and girls’ self-reports of being bullied. Younger students were more likely than older students to say that they had been bullied. In lower grades, girls appeared to be bullied slightly more than boys. By middle school, this pattern changed, as boys were slightly more likely to be bullied than were girls. Figure 4.3 also illustrates the grade trends in bullying others. For girls, bullying behavior appeared to peak in about 8th grade and then decreased through 12th grade. For boys, bullying appeared to level off in around 8th or 9th

grade and remained fairly high through high school grades. Boys were more likely than girls to bully others in all grades, especially in high schools.

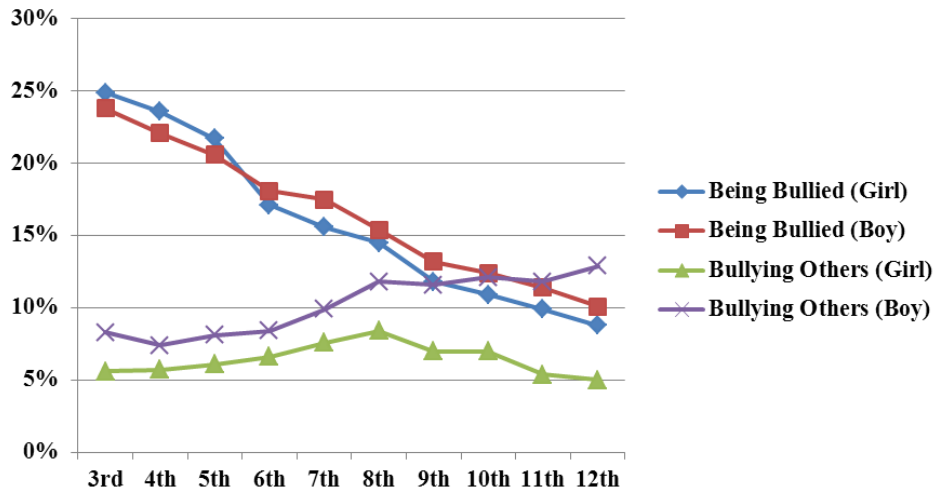


Figure 4.3. Students who were bullied or bullied others (2 or 3 times a month or more), by gender and grade (from 3rd through 12th)

Bullying Involvement/Status

In order to better understand students' involvement in bullying, in addition to looking at the prevalence of bullied students and that of students bullying others, one must examine the percentage of students who are both bullied and who bully other students. These students are often referred to as "bully victims" or "provocative victims."

In this study, if students reported having been bullied two or three times a month or more often in the past couple of months and also having bullied others with the same frequency, they were considered as "bully-victims." If students had been bullied two or three times a month or more often but had not bullied others or bullied others with less frequency, they were categorized to be "victims only." If students had bullied others two

or three times a month or more often but had not been bullied or had been bullied with less frequency, they were identified as “bullies only.” Table 4.2 provides a sense of how students in this study had been involved in bullying, as broken down by gender and race/ethnicity.

Table 4.2

Students’ Bullying Involvement/Status in the Sample (2 or 3 times a month or more often), by Gender and Race/Ethnicity

Race/Ethnicity	Bullying Status	Gender		Total
		Girls	Boys	
Asian	Victims Only	11.1%	13.5%	12.3%
	Bullies Only	3.1%	4.9%	4.0%
	Bully-Victims	2.0%	3.4%	2.7%
	Total	16.3%	21.7%	19.0%
African American	Victims Only	12.0%	10.5%	11.3%
	Bullies Only	7.5%	8.7%	8.1%
	Bully-Victims	3.6%	4.0%	3.8%
	Total	23.2%	23.2%	23.2%
Hispanic	Victims Only	9.4%	9.7%	9.6%
	Bullies Only	4.7%	6.8%	5.8%
	Bully-Victims	2.2%	2.9%	2.6%
	Total	16.3%	19.5%	17.9%
White	Victims Only	14.6%	14.3%	14.5%
	Bullies Only	2.8%	4.7%	3.8%
	Bully-Victims	2.0%	2.7%	2.4%
	Total	19.4%	21.7%	20.6%
Multiracial	Victims Only	19.3%	17.9%	18.6%
	Bullies Only	6.2%	8.1%	7.2%
	Bully-Victims	4.2%	5.5%	4.9%
	Total	29.7%	31.5%	30.6%
I Do Not Know	Victims Only	17.4%	15.9%	16.6%
	Bullies Only	4.0%	7.0%	5.5%
	Bully-Victims	3.9%	5.7%	4.8%
	Total	25.2%	28.6%	26.9%
Total	Victims Only	14.3%	13.8%	14.1%
	Bullies Only	4.0%	6.0%	5.0%
	Bully-Victims	2.6%	3.5%	3.1%
	Total	20.9%	23.4%	22.2%

Cross-tabulation showed that, 2.6% of girls and 3.5% of boys were identified as “bully victims.” Multiracial (4.9%), those who did not know their races/ethnicities

(4.8%), and African American students (3.8%) were more likely to be identified as “bully victims,” compared with Asian (2.7%), Hispanic (2.6%), and White students (2.4%). In the data, 14.3% of girls and 13.8% of boys were identified as “victims only.” Multiracial (18.6%), those who did not know their races/ethnicities (16.6%), White (14.5%) and Asian students (12.3%) were more likely to be involved in bullying problem as “victims only” than African American (11.3%) and Hispanic students (9.6%).

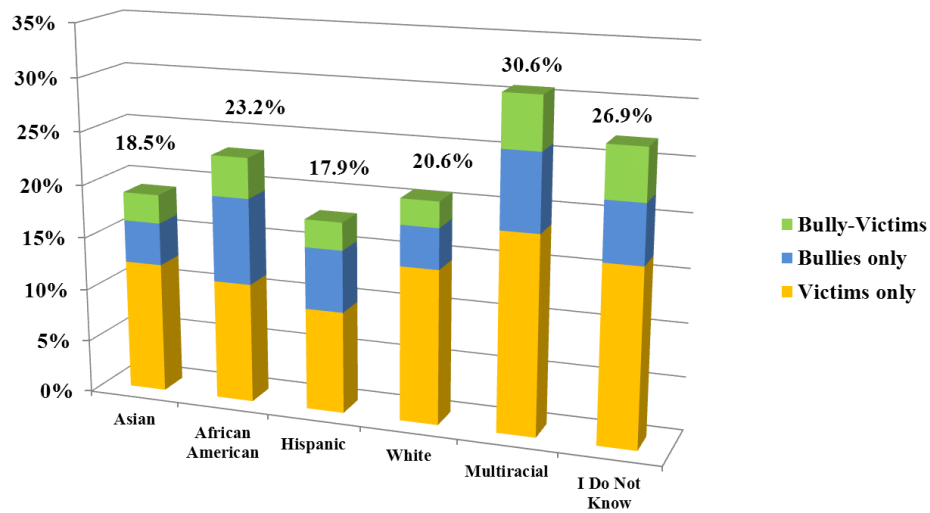


Figure 4.4. Students who were involved in bullying: bullying status (2 or 3 times a month or more often), by race/ethnicity

In the data, 4.0% of girls and 6.0% of boys were categorized as “bullies only.” African American students (8.1%) were more likely to be considered as “bullies only” than multiracial (7.2%), Hispanic (5.8%), those who did not know their races/ethnicities (5.5%), Asian (4.0%), and White (3.8%) students. Thus, hypothesis in H1(c) regarding Asian students and their bullying status was partially supported.

The Nine Specific Forms of Being Bullied

Cross-tabulation tests were conducted to examine the relationships among the nine specific forms of being bullied and gender and race/ethnicity, as presented in Table 4.3. Figure 4.5 was created to specially look at racial or ethnical bullying.

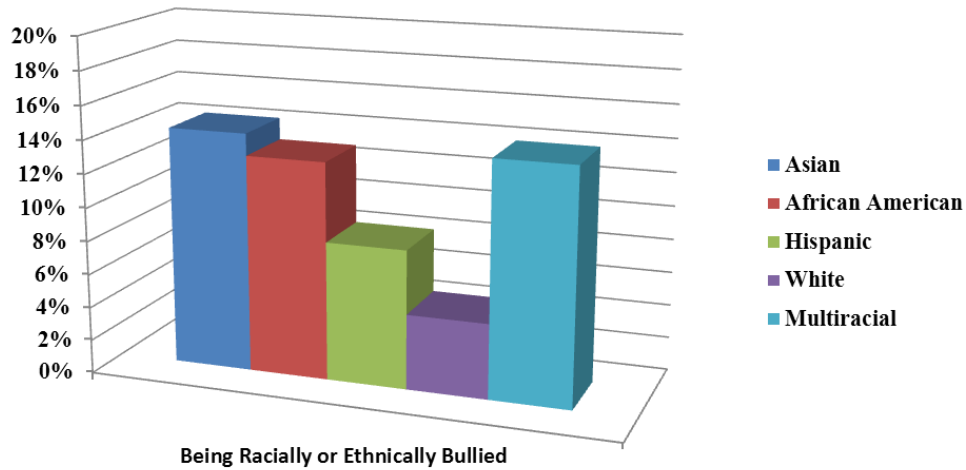


Figure 4.5. Being racially or ethnically bullied (2 or 3 times a month or more often), by race/ethnicity

As Figure 4.5 illustrates, Asian students (14.3%) were more likely to be bullied due to their race or color than their peers of other racial/ethnic groups. This was particularly true for boys. By gender, those girls who said that they belonged to more than one race or ethnic group (12.5%) and White girls (12.1%) were more likely to be racially or ethnically bullied than other girls. Asian boys (17.3%) reported highest rates of being racially or ethnically bullied. Overall, boys were more likely to be bullied about their race or color, compared to girls with the same racial or ethnical status, as shown in Table 4.3.

As Figure 4.6 shows, African American (5.1%) and multiracial students (4.9%) were more likely to bully others about their race or color, compared to Asian students (3.1%), Hispanic students (3.0%) and White students (1.5%). By gender, boys were more likely than girls to racially or ethnically bully others. Among boys, multiracial boys (6.7%) and African American boys (6.2%) reported highest rates of bullying others due to their race or color in the sample. Among girls, African American girls (4.0%) and multiracial girls (3.2%) were more likely to bully others about their race or color.

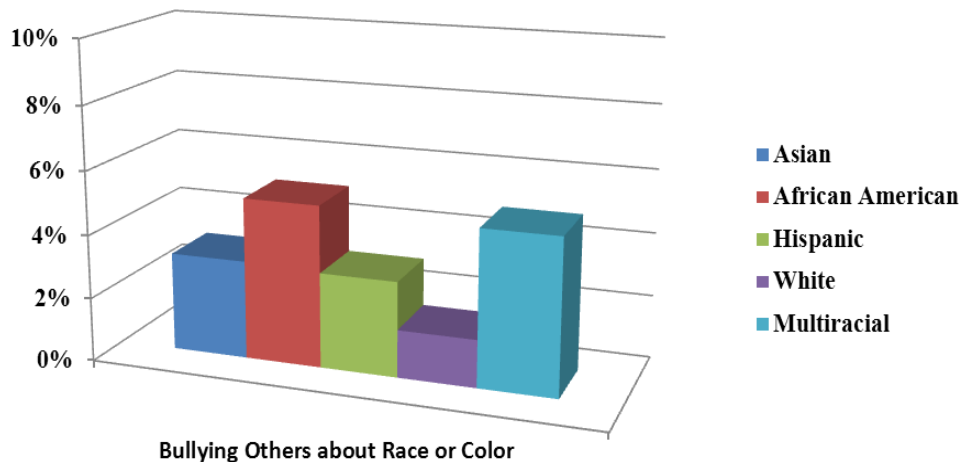


Figure 4.6. Bullying others about race or color (2 or 3 times a month or more often), by race/ethnicity

As shown in Table 4.3, Hispanic and Asian students were less likely to be socially excluded by their peers than African American, White and multiracial students. Multiracial students, White girls, and Asian boys were more likely to be socially excluded. Hispanic students (both boys and girls) reported lowest rates of being socially excluded.

Multiracial and African American students reported the highest rates of being sexually bullied, which was operationalized as being “bullied with mean names, comments, or gestures with a sexual meaning,” than their peers of other racial/ethnic groups. Hispanic students (both boys and girls) were less likely to be sexually bullied than White and Asian students, as presented in Table 4.3.

Multiracial students (both boys and girls) reported the highest rates of being cyber bullied than their peers “with mean or hurtful messages, calls or pictures, or in other ways on their cell phones or over the Internet (computer).” As shown in Table 4.3, White girls (5.2%) and African American students (5.0% of boys and 4.6% of girls) were more likely to be cyber bullied than Asian (both boys and girls), Hispanic (both boys and girls), and White boys (2.8%).

The rest of the hypotheses in H1(d) gave special attention to Asian boys and the probability of being bullied in other forms. Table 4.3 shows that:

- Asian boys were slightly less likely to be verbally bullied (18.4%) than multiracial (both boys and girls) and African American students (both boys and girls), but more likely to be verbally bullied than White and Hispanic students. Asian girls (13.4%) and Hispanic girls (13.6%) reported lowest rates of being verbally bullied.
- Asian boys reported lower rates of being physically bullied (10.0%) than multiracial boys (14.7%), but more likely to be physically bullied than other students. White girls (4.5%) and Hispanic girls (4.5%) reported lowest rates of being physically bullied by their peers in the sample.

- Asian boys (6.3%) were less likely than multiracial students (both boys and girls) and African American boys (6.5%) to have their possessions taken away or damaged. White girls (3.1%) reported lowest rates of have their possessions taken away or damaged in the sample.
- Asian boys (6.7%) were less likely than multiracial students (both boys and girls) and African American boys (7.4%) to be threatened or forced to do things that they did not want to do. Hispanic girls (3.9%) reported the lowest rates of being threatened or forced to do things that they did not want to do in the sample.
- Asian boys (10.4%) were less likely than multiracial, African American, White students (both boys and girls), and Hispanic girls to have rumors spread. Asian girls (9.2%) and Hispanic boys (9.2%) reported lowest rates of having rumors spread in the sample.

Thus, these tests did not support the hypotheses in H1(d) that Asian boys will be more likely to be verbally and physically bullied, socially excluded, have their money or other things taken or damaged, sexually bullied, bullied about their race or color, threatened or forced to do things, have rumors spread, and cyber bullied. The hypothesis H1(d) concerning racial or ethnic bullying was partially supported.

Table 4.3

The Interrelations between the Nine Specific Forms of Being Bullied (2 or 3 times a month or more often) and Race/Ethnicity and Gender

Forms of Being Bullied	Gender	Race/Ethnicity					Total
		Asian	African American	Hispanic	White	Multiracial	
Being Verbally Bullied	Girls	13.4%	18.8%	13.6%	17.0%	25.0%	18.2%
	Boys	18.4%	18.6%	14.8%	18.2%	25.2%	19.5%
	Total	15.9%	18.7%	14.2%	17.5%	25.1%	18.8%
Being Socially Excluded	Girls	9.8%	12.1%	8.3%	12.6%	17.2%	13.1%
	Boys	10.6%	10.2%	7.4%	10.4%	15.9%	11.6%
	Total	10.2%	11.1%	7.9%	11.5%	16.5%	12.4%
Being Physically Bullied	Girls	5.2%	7.2%	4.5%	4.5%	9.2%	6.1%
	Boys	10.0%	9.8%	8.1%	8.5%	14.7%	10.4%
	Total	7.6%	8.6%	6.3%	6.5%	11.9%	8.3%
Having Rumors Spread	Girls	9.2%	16.7%	11.7%	14.2%	20.9%	15.2%
	Boys	10.4%	14.1%	9.2%	10.8%	18.0%	12.7%
	Total	9.8%	15.3%	10.5%	12.5%	19.5%	14.0%
Having Possessions Taken Away or Damaged	Girls	3.8%	5.5%	3.6%	3.1%	7.1%	4.6%
	Boys	6.3%	6.5%	5.2%	4.2%	9.2%	6.1%
	Total	5.1%	6.0%	4.4%	3.6%	8.2%	5.3%
Being Threatened or Forced to Do Things	Girls	5.5%	6.4%	3.9%	4.1%	8.0%	5.6%
	Boys	6.7%	7.4%	5.0%	4.6%	9.9%	6.6%
	Total	6.1%	6.9%	4.4%	4.4%	8.9%	6.1%
Being Racially or Ethnically Bullied	Girls	11.3%	12.1%	6.9%	3.9%	12.5%	7.2%
	Boys	17.3%	13.8%	9.7%	5.2%	15.5%	9.5%
	Total	14.3%	13.0%	8.3%	4.5%	14.0%	8.3%
Being Sexually Bullied	Girls	7.6%	9.9%	6.9%	8.7%	14.7%	9.7%
	Boys	9.3%	9.5%	7.4%	8.5%	14.6%	10.1%
	Total	8.5%	9.7%	7.1%	8.6%	14.6%	9.9%
Being Cyber Bullied	Girls	3.8%	5.0%	3.2%	5.2%	8.0%	5.4%
	Boys	4.3%	4.6%	2.8%	2.8%	7.0%	4.2%
	Total	4.1%	4.8%	3.0%	4.0%	7.5%	4.8%

The Effects of Race or Ethnicity and Controlling Variables on Bullying

A multivariate analysis of variance (MANOVA) was conducted to examine the effects of race/ethnicity on students' rates of being bullied and bullying others (both global questions and scales). In the model, four dependent variables were included. There were: being bullied (global question), bullying others (global question), the scaled being bullied variable, and the scaled bullying others variable. The results showed that there was a significant effect of race/ethnicity (Asian, African American, Hispanic, White, and multiracial) on the combined dependent variable, $F(16, 905488) = 626.42, p < .0005$; Wilk's Lambda = .97; partial $\eta^2 = .008$. Analysis of each individual dependent variable, using a Bonferroni adjusted alpha level of .013, showed that the five groups differed in terms of being bullied (global question), $F(4, 296393) = 745.34, p < .0005$, partial $\eta^2 = .010$, bullying others (global question), $F(4, 296393) = 341.01, p < .0005$, partial $\eta^2 = .005$, being bullied (scale), $F(4, 296393) = 737.70, p < .0005$, partial $\eta^2 = .010$, and bullying others (scale), $F(4, 296393) = 1077.44, p < .0005$, partial $\eta^2 = .014$.

Approximately 1% of the variance in each of the dependent variables was accounted for by race/ethnicity. Research indicates that gender and grade level of a child may influence how often children are being bullied and bully others (e.g., Limber, Olweus, & Wang, 2012). To improve the model, the two variables, gender and grade were included as covariates. This study was also interested in several other variables (e.g., students' general satisfaction or dissatisfaction with school, the school's overall poverty level, student/teacher ratio, school locale, the size of students' social networks in school, the likelihood of joining in bullying, and students' perceptions of school safety)

related to involvement in bullying. These nine variables were then included as covariates in the model. A multivariate analysis of covariance (MANCOVA) was used.

The results showed that there was a significant effect of race or ethnicity (Asian, African American, Hispanic, White, and multiracial) on the combined dependent variable, $F(4, 690350) = 273.98, p < .0005$; Wilk's Lambda = .98; partial $\eta^2 = .005$. Analysis of each dependent variable, using a Bonferroni adjusted alpha level of .013, showed that the five groups differed in terms of being bullied (global question), $F(4, 225973) = 383.08, p < .0005$, partial $\eta^2 = .004$, bullying others (global question), $F(4, 225973) = 168.81, p < .0005$, partial $\eta^2 = .003$, being bullied (scale), $F(4, 225973) = 262.60, p < .0005$, partial $\eta^2 = .008$, and bullying others (scale), $F(4, 225973) = 86.24, p < .0005$, partial $\eta^2 = .009$.

The new model explained 20.9% of the variance in being bullied (global question), 15.0% of the variance in bullying others (global question), 23.3% of the variance in being bullied (scale), and 15.6% of the variance in bullying others (scale), as presented in Table 4.4. There was no statistically significant contribution of gender to bullying others (global question); of student/teacher ratio to being bullied (scale); and of school locale to being bullied (global question), bullying others (global question), and bullying others (scale). The likelihood of joining in bullying another student one does not like and students' perceptions of school safety (e.g., feeling afraid of being bullied at school) had the greatest effects on the four dependent variables.

Table 4.4

Effects of Each Independent Variable on the Dependent Variables: MANOVA

Source	Dependent Variables	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Being Bullied (global)	25347.06 ^a	13	1949.77	4603.76	.000	.21
	Bullying Others (global)	11658.66 ^b	13	896.82	3070.36	.000	.15
	Being Bullied (scale)	10076.49 ^c	13	775.12	5295.19	.000	.23
	Bullying Others (scale)	1779.30 ^d	13	136.87	3202.61	.000	.16
Gender	Being Bullied (global)	34.39	1	34.39	81.20	.000	0
	Bullying Others (global)	1.64	1	1.64	5.61	.018	0
	Being Bullied (scale)	1.69	1	1.69	11.54	.001	0
	Bullying Others (scale)	1.53	1	1.53	35.75	.000	0
Grade Level	Being Bullied (global)	1581.73	1	1581.73	3734.75	.000	.02
	Bullying Others (global)	358.65	1	358.65	1227.89	.000	.01
	Being Bullied (scale)	664.48	1	664.48	4539.41	.000	.02
	Bullying Others (scale)	61.96	1	61.96	1449.79	.000	.01
School Poverty Level	Being Bullied (global)	17.32	1	17.32	40.89	.000	0
	Bullying Others (global)	23.20	1	23.20	79.43	.000	0
	Being Bullied (scale)	49.95	1	49.95	341.2	.000	.002
	Bullying Others (scale)	29.86	1	29.86	698.74	.000	.003
Satisfaction or Dissatisfaction with School	Being Bullied (global)	243.31	1	243.31	574.50	.000	.003
	Bullying Others (global)	126.70	1	126.70	433.79	.000	.002
	Being Bullied (scale)	205.94	1	205.94	1406.85	.000	.01
	Bullying Others (scale)	33.21	1	33.21	776.97	.000	.003
Size of a Child's Social Networks in School (Friendship)	Being Bullied (global)	588.38	1	588.38	1389.27	.000	.01
	Bullying Others (global)	39.20	1	39.20	134.21	.000	.001
	Being Bullied (scale)	318.02	1	318.02	2172.56	.000	.01
	Bullying Others (scale)	1.84	1	1.84	43.04	.000	0
Likelihood of Joining in Bullying	Being Bullied (global)	769.62	1	769.62	1817.21	.000	.01
	Bullying Others (global)	9571.78	1	9571.78	32770.03	.000	.13
	Being Bullied (scale)	389.50	1	389.50	2660.86	.000	.01
	Bullying Others (scale)	1296.62	1	1296.62	30339.70	.000	.12
School Safety (Feeling Afraid)	Being Bullied (global)	18324.07	1	18324.07	43266.41	.000	.16

of Being Bullied at School)	Bullying Others (global)	625.15	1	625.15	2140.28	.000	.01
	Being Bullied (scale)	6802.98	1	6802.98	46474.49	.000	.17
	Bullying Others (scale)	84.84	1	84.84	1985.05	.000	.01
Student / Teacher Ratio	Being Bullied (global)	16.69	1	16.69	39.40	.000	0
	Bullying Others (global)	14.04	1	14.04	48.08	.000	0
	Being Bullied (scale)	0.01	1	0.01	0.09	.77	0
	Bullying Others (scale)	0.98	1	0.98	22.84	.000	0
School Locale	Being Bullied (global)	2.14	1	2.14	5.05	.03	0
	Bullying Others (global)	0.18	1	0.18	0.62	.43	0
	Being Bullied (scale)	17.71	1	17.71	120.96	.000	.001
	Bullying Others (scale)	0.15	1	0.15	3.43	.06	0
Race/ Ethnicity	Being Bullied (global)	383.08	4	95.77	226.13	.000	.004
	Bullying Others (global)	168.81	4	42.20	144.48	.000	.003
	Being Bullied (scale)	262.60	4	65.65	448.48	.000	.01
	Bullying Others (scale)	86.24	4	21.56	504.46	.000	.01
Error	Being Bullied (global)	95703.48	225973	0.42			
	Bullying Others (global)	66004.31	225973	0.29			
	Being Bullied (scale)	33078.14	225973	0.15			
	Bullying Others (scale)	9657.36	225973	0.04			
Corrected Total	Being Bullied (global)	121050.54	225986				
	Bullying Others (global)	77662.97	225986				
	Being Bullied (scale)	43154.64	225986				
	Bullying Others (scale)	11436.66	225986				

Note. a. R Squared = .209 (Adjusted R Squared = .209); b. R Squared = .150 (Adjusted R Squared = .150); c. R Squared = .233 (Adjusted R Squared = .233); and d. R Squared = .156 (Adjusted R Squared = .156)

Table 4.5

Pairwise Comparisons between Racial/Ethnic Groups: MANCOVA

Dependent Variable	(I)Race/Ethnicity	(J)Race/Ethnicity	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
						Lower Bound	Upper Bound
Being Bullied (global question)	White	African American	.078*	.005	.000	.065	.091
		Hispanic	.088*	.005	.000	.074	.102
		Asian	.045*	.009	.000	.021	.070
		Multiracial	-.064*	.004	.000	-.077	-.051
	African American	White	-.078*	.005	.000	-.091	-.065
		Hispanic	.010	.006	.923	-.007	.027
		Asian American	-.033*	.010	.006	-.060	-.006
		Multiracial	-.142*	.006	.000	-.159	-.126
	Hispanic	White	-.088*	.005	.000	-.102	-.074
		African American	-.010	.006	.923	-.027	.007
		Asian	-.043*	.010	.000	-.070	-.016
		Multiracial	-.152*	.006	.000	-.169	-.135
	Asian	White	-.045*	.009	.000	-.070	-.021
		African American	.033*	.010	.006	.006	.060
		Hispanic	.043*	.010	.000	.016	.070
		Multiracial	-.109*	.009	.000	-.136	-.083
	Multiracial	White	.064*	.004	.000	.051	.077
		African American	.142*	.006	.000	.126	.159
		Hispanic	.152*	.006	.000	.135	.169
		Asian	.109*	.009	.000	.083	.136
Bullying Others (globe question)	White	African American	-.061*	.004	.000	-.072	-.050
		Hispanic	-.028*	.004	.000	-.039	-.016
		Asian	.002	.007	1.000	-.019	.022
		Multiracial	-.078*	.004	.000	-.089	-.068
	African American	White	.061*	.004	.000	.050	.072
		Hispanic	.033*	.005	.000	.020	.047
		Asian	.063*	.008	.000	.040	.085
		Multiracial	-.017*	.005	.004	-.031	-.003
	Hispanic	White	.028*	.004	.000	.016	.039
		African American	-.033*	.005	.000	-.047	-.020
		Asian	.029*	.008	.003	.007	.052
		Multiracial	-.051*	.005	.000	-.064	-.037
	Asian	White	-.002	.007	1.000	-.022	.019
		African American	-.063*	.008	.000	-.085	-.040
		Hispanic	-.029*	.008	.003	-.052	-.007
		Multiracial	-.080*	.008	.000	-.102	-.058
	Multiracial	White	.078*	.004	.000	.068	.089
		African American	.017*	.005	.004	.003	.031
		Hispanic	.051*	.005	.000	.037	.064
		Asian	.080*	.008	.000	.058	.102
Being Bullied (scale)	White	African American	-.049*	.003	.000	-.056	-.041
		Hispanic	.009*	.003	.017	.001	.017
		Asian	-.021*	.005	.000	-.035	-.007
		Multiracial	-.103*	.003	0.000	-.110	-.095
	African American	White	.049*	.003	.000	.041	.056
		Hispanic	.057*	.003	.000	.048	.067
		Asian	.028*	.006	.000	.012	.043
		Multiracial	-.054*	.003	.000	-.064	-.045
	Hispanic	White	-.009*	.003	.017	-.017	-.001
		African American	-.057*	.003	.000	-.067	-.048

		Asian	-.030*	.006	.000	-.046	-.014
		Multiracial	-.112*	.004	.000	-.122	-.102
	Asian	White	.021*	.005	.000	.007	.035
		African American	-.028*	.006	.000	-.043	-.012
		Hispanic	.030*	.006	.000	.014	.046
		Multiracial	-.082*	.006	.000	-.098	-.066
	Multiracial	White	.103*	.003	0.000	.095	.110
		African American	.054*	.003	.000	.045	.064
		Hispanic	.112*	.004	.000	.102	.122
		Asian	.082*	.006	.000	.066	.098
	White	African American	-.057*	.002	0.000	-.061	-.053
		Hispanic	-.016*	.002	.000	-.020	-.011
		Asian	-.011*	.003	.001	-.018	-.003
		Multiracial	-.044*	.001	.000	-.048	-.040
	African American	White	.057*	.002	0.000	.053	.061
		Hispanic	.042*	.002	.000	.036	.047
		Asian	.047*	.003	.000	.038	.055
		Multiracial	.013*	.002	.000	.008	.018
	Hispanic	White	.016*	.002	.000	.011	.020
		African American	-.042*	.002	.000	-.047	-.036
		Asian	.005	.003	1.000	-.004	.014
		Multiracial	-.029*	.002	.000	-.034	-.023
	Asian	White	.011*	.003	.001	.003	.018
		African American	-.047*	.003	.000	-.055	-.038
		Hispanic	-.005	.003	1.000	-.014	.004
		Multiracial	-.034*	.003	.000	-.042	-.025
	Multiracial	White	.044*	.001	.000	.040	.048
		African American	-.013*	.002	.000	-.018	-.008
		Hispanic	.029*	.002	.000	.023	.034
		Asian	.034*	.003	.000	.025	.042

Note. Based on estimated marginal means. *. The mean difference is significant at the .05 level. b. Adjustment for multiple comparisons: Bonferroni. This model used a Bonferroni adjusted alpha level of .013.

Table 4.5 shows a sense of the group differences between and among races/ethnicities in each of the dependent variables. Statistical significance was determined at a Bonferroni adjusted alpha level of .013. Asian students were more likely than African American and Hispanic students and less likely than White and multiracial students to be bullied (global question); Asian students were more likely than White and Hispanic and less likely than African American and multiracial students to be bullied (scale); Asian students were less likely to bully others (global question) than African American, Hispanic, and multiracial students (there was no statistically significant difference between Asian and White students); and Asian students were more likely than

White students and less than African American and multiracial students to bully others (scale) (there was no statistically significant difference between Asian and Hispanic students). Therefore, H1 was partially supported.

Hypothesis 2

The second research question in this study examined the racial or ethnic group differences in students' perceptions of school safety, the likelihood of joining in bullying, students' general satisfaction or dissatisfaction with school, and the size of students' social networks in school, and the following hypothesis was proposed.

H2. Asian American students will report significantly lower perceptions of school safety, smaller size of students' social networks in school, lower likelihood of joining in bullying, and higher school satisfaction than will students of other races/ethnicities taking gender and grade level into account.

Before examining the influence of race or ethnicity on the four dependent variables (school safety, the size of students' social networks in school, school satisfaction or dissatisfaction, and the likelihood of joining in bullying), this study used a series of Cross-tabulations to look at the frequencies of the dependent variables and the interactions with gender and grade levels.

School Safety

School safety was examined by asking students how often they were afraid of being bullied by other students in their school. In the data, 12.9% of girls and 8.2% of boys reported that they were afraid of being bullied in school "often" or "very often."

Multiracial (13.4%) and White students (9.3%) reported higher rates of fear of bullying than Asian (9.0%), African American (9.0%) and Hispanic students (8.5%). Girls (12.9%) were more likely than boys (8.2%) to say that they were afraid of being bullied in school. Among girls, Asian girls reported lower rates of fear of bullying (10.2%) than other girls (11.5% of White, 11.6% of African American, 10.4% of Hispanic, 16.3% of multiracial and 18.9 of those students who did not know their races/ethnicities). Among boys, Asian boys (7.9%) were more likely than African American boys (6.8%), Hispanic boys (6.4%) and White boys (7.0%) to say they were afraid of being bullied in their school. Thus, Asian boys reported lower rates of perceptions of school safety than students of other races/ethnicities, but Asian girls reported higher rates in terms of school safety.

The Size of Students' School Networks in School

Students' perceptions about the number of friends they have in class give an indication of the size of their social networks at school. Although some students may have friends outside of their classes and some actually prefer to be mostly on their own, it is reasonable to assume that most students would like to have more than one friend in their classes. Having several good friends may serve as a protective factor against being bullied. This study found that African American students (9.1% of girls; 8.7% of boys) reported the highest rates of having "none or 1 good friend" in their class(es), followed by multiracial (8.1% of girls; 7.8% of boys), and Asian students (6.3% of girls; 7.2% of boys). White boys (5.9%) and Hispanic boys (6.0%) reported the lowest rates of having none or 1 good friend in their class(es).

The Likelihood of Joining in Bullying

Students reported the perceptions of their own actions as witnesses to bullying. For example, students were asked if they felt they could join in bullying a student whom they did not like. Cross-tabulations showed that 11.9% of girls and 18.5% of boys said “yes”, or “yes, maybe.” At all grades, boys reported a higher likelihood of joining in bullying than girls.

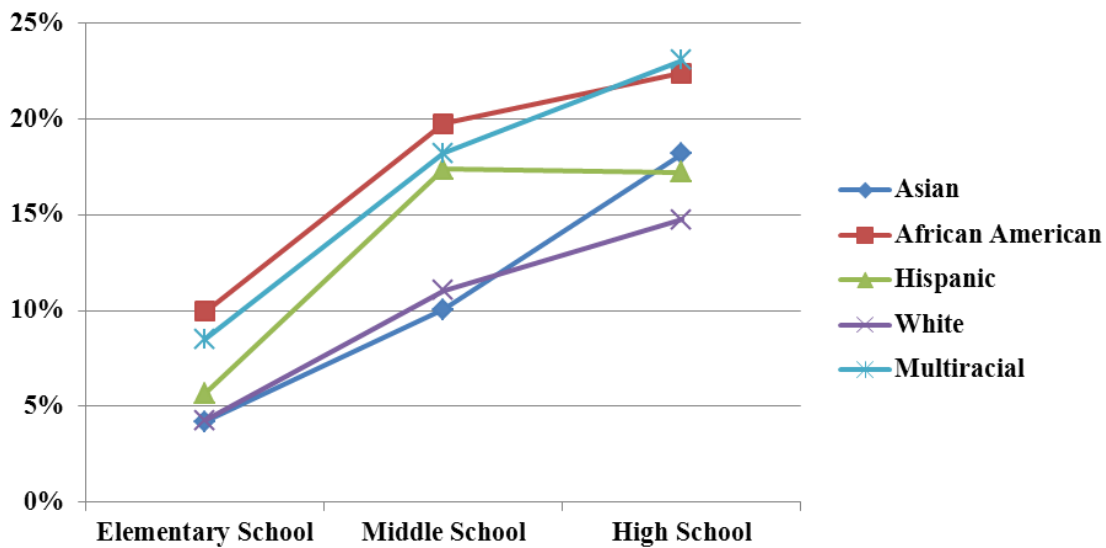


Figure 4.7. The likelihood of joining in bullying (yes, or yes, maybe): by grade group: girls

As illustrated in Figures 4.7 and 4.8, rates of joining in bullying increased with grade level for both boys and girls (an exception was Hispanic girls, who reported a slight decrease from middle school to high school, from 17.4% to 17.2%), regardless of their race/ethnicity. In elementary school, African American students (both boys and girls) were the most likely to join in bullying. Asian and White students (both boys and girls)

reported the lowest rates of joining in bullying in elementary and middle schools. In middle school, African American girls (19.8%) and multiracial boys (24.4%) were the most likely to join in bullying. In high school, multiracial students (both boys and girls, 35.7% and 23.1%, respectively) were the most likely to join in bullying.

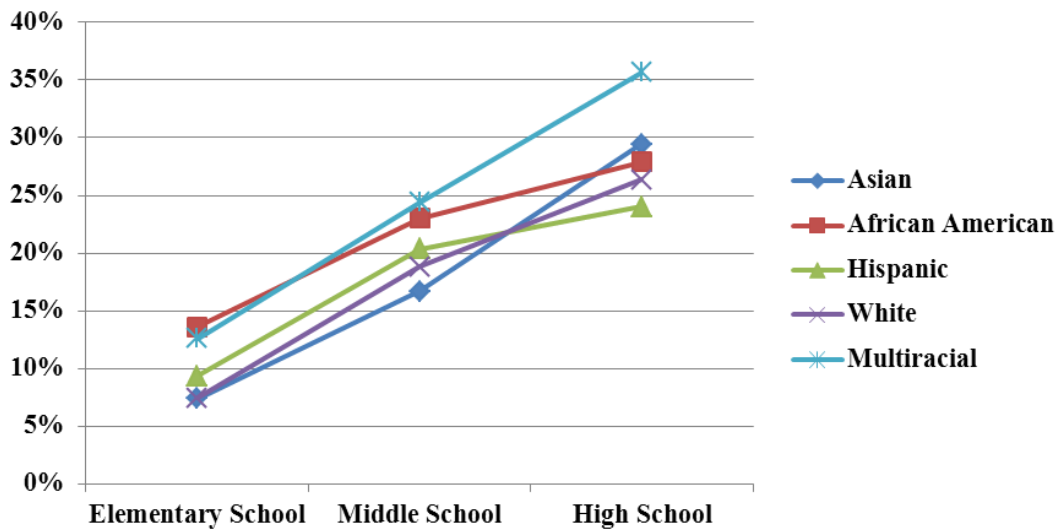


Figure 4.8. The likelihood of joining in bullying (yes, or yes, maybe), by grade group: boys

General Satisfaction or Dissatisfaction with School

Students’ general satisfaction or dissatisfaction with school was examined by asking students how they liked school. This study found that 12.3% of girls and 19.4% of boys said that they “dislike school” or “dislike school very much.” Asian students (10.0%) reported lower rates of “dislike school” or “dislike school very much” than Hispanic (12.7%), White (15.8%), African American (16.2%) and multiracial students (18.5%). Among girls, Asian girls (7.4%) and Hispanic girls (10.7%) reported the lowest rates of “dislike school” or “dislike school very much.” Multiracial girls (14.7%) and

African American girls (14.2%) were most likely to say that they “dislike school” or “dislike school very much”. Among boys, Asian boys (10.0%) and Hispanic boys (12.7%) reported the lowest rates of “dislike school” or “dislike school very much.” Multiracial boys (22.3%) and White boys (19.6%) were most likely to say that they “dislike school” or “dislike school very much.”

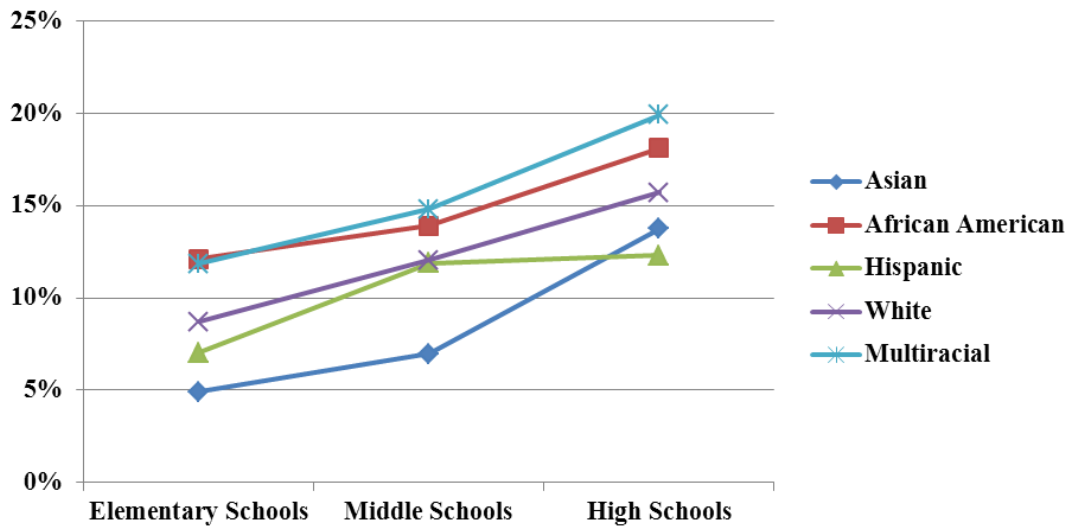


Figure 4.9. Rates of dissatisfaction with school (“dislike school” or “dislike school very much”), by race/ethnicity: girls

Cross-tabulation showed that rates of dissatisfaction were higher for boys than girls at every age, and increased with age. When grades were grouped, 19.7% of multiracial boys, 17.0% of White boys, and 16.9% of African American boys in elementary schools said that they disliked school or disliked school very much. In middle school, 22.5% of multiracial boys, 20.3% of White boys, and 17.7% of African American boys reported they disliked school or disliked school very much. By high school 25.9% of multiracial boys, 21.8% of White boys, 20.1% of African American boys, and 18.1%

of African American girls reported that they disliked school or disliked school very much. As Figures 4.9 and 4.10 illustrate, Asian American students (both boys and girls) reported the lowest rates of disliking school or disliking school very much in elementary school and middle school, but this trend changed in high school, where the Hispanic students (both boys and girls) reported lower rates of disliking school (16.4% boys; 12.3% of girls).

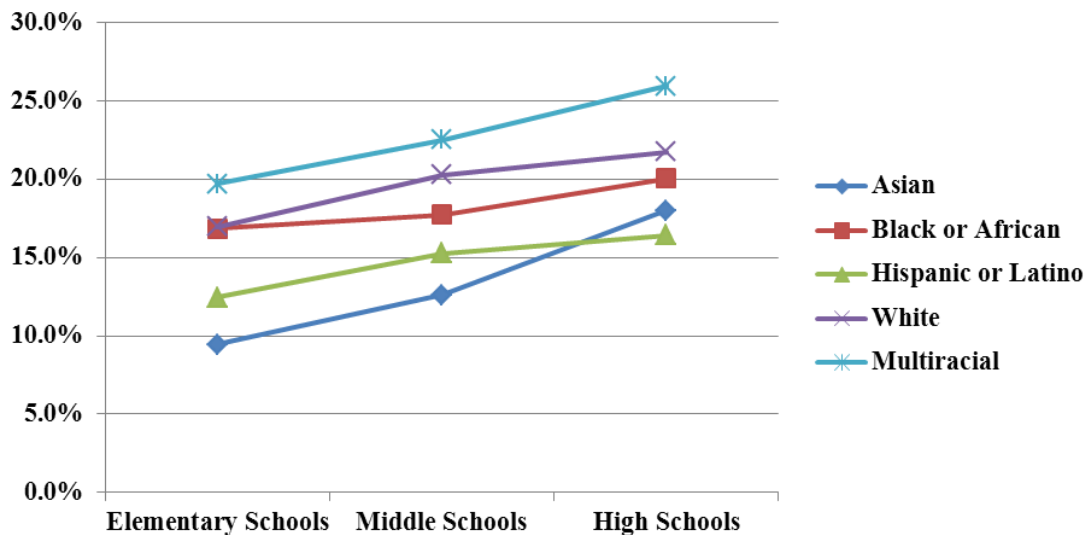


Figure 4.10. Rates of dissatisfaction with school (“dislike school” or “dislike school very much”), by race/ethnicity: boys

Dissatisfaction with school and bullying status. This study further looked at the relationships between students’ general dissatisfaction with school and bullying status and the forms of being bullied. Compared with students who had not been involved in bullying (12.9%), those who were identified as “victims only” (21.7%), “bullies only” (28.9%), and especially “bully victims” (32.6%) were all more likely to say that they disliked school or disliked school very much. Figures 4.11 and 4.12 provide a sense of

the relationship between bullying status and students' general dissatisfaction with school by gender and race/ethnicity.

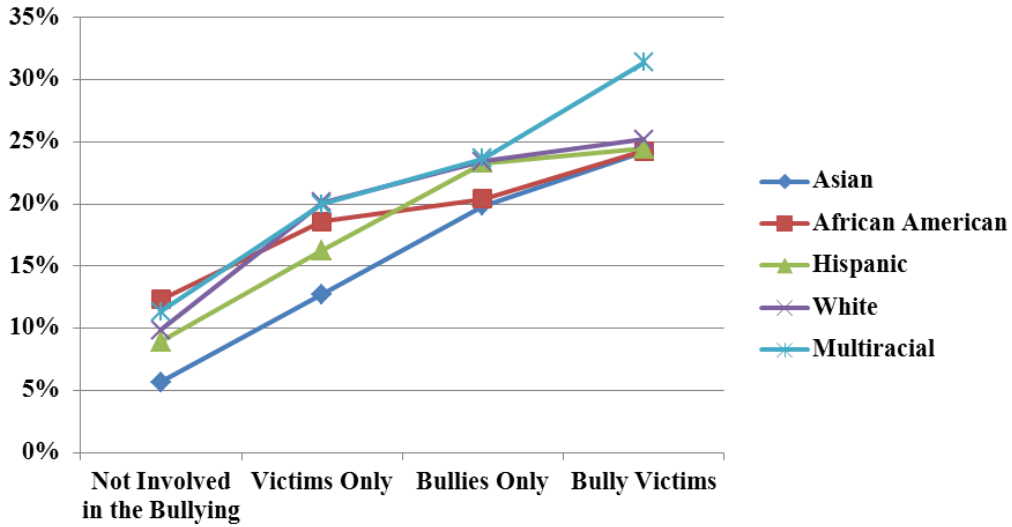


Figure 4.11. Bullying status and students' general dissatisfaction with school (“dislike school” or “dislike school very much”), by race/ethnicity: girls

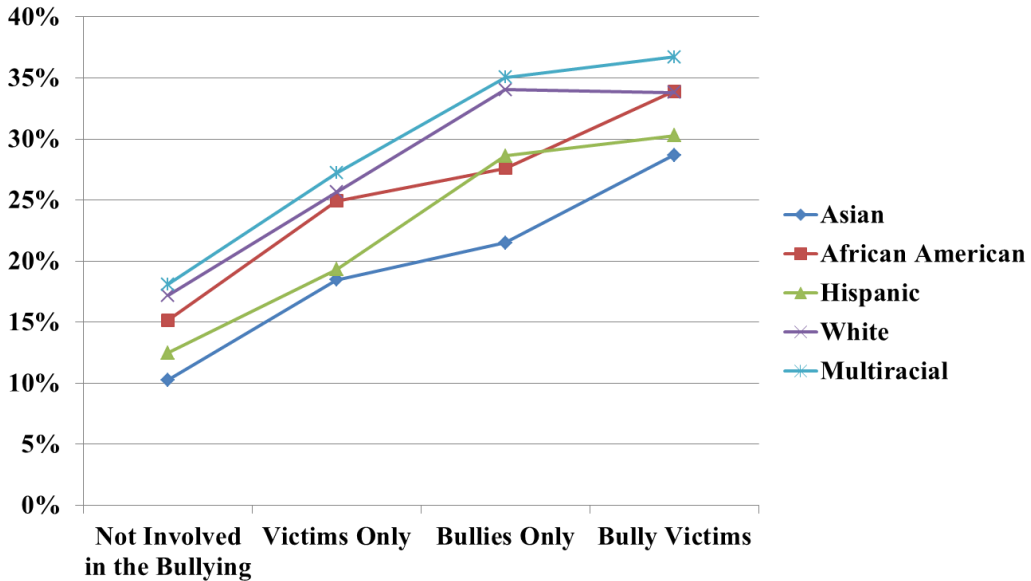


Figure 4.12. Bullying status and students' general dissatisfaction with school (“dislike school” or “dislike school very much”), by race/ethnicity: boys

Students may report a higher level of dissatisfaction with school if they experience some specific forms of being bullied. Cross-tabulation process showed that girls who were cyber bullied (except Asian girls) (28.6% of multiracial girls, 27.6% of White girls, 25.9% of African American girls, and 24.8% of Hispanic girls) were the most likely to say that they disliked school or disliked school very much, compared to girls who were bullied in other forms. For Asian girls, as many as 26.5% of Asian girls who had their possessions taken away or damaged said that they disliked school or disliked school very much, as shown in Figure 4.13.

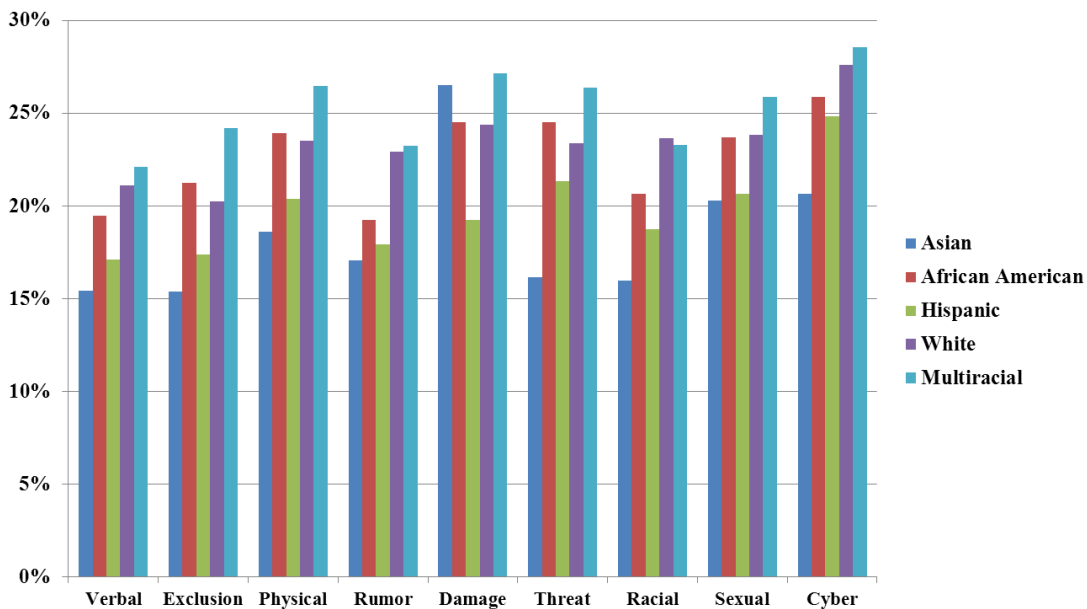


Figure 4.13. Forms of being bullied and students’ general dissatisfaction with school (“dislike school” or “dislike school very much”), by race/ethnicity: girls

Boys who were cyber bullied (36.6% of White boys, 36.3% of multiracial boys, 37.1% of African American boys, 31.9% of Hispanic boys, and 28.9% of Asian boys)

were the most likely to say that they disliked school or disliked school very much, compared to boys who were bullied in other forms, as illustrated in Figure 4.14.

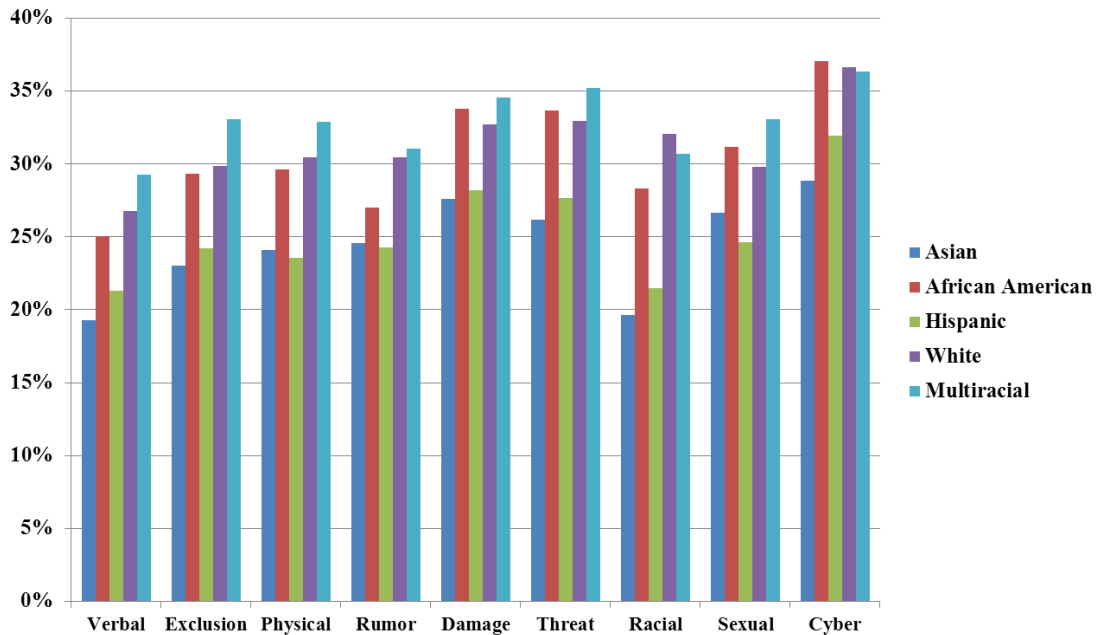


Figure 4.14. Forms of being bullied and students' general dissatisfaction with school ("dislike school" or "dislike school very much"), by race/ethnicity: boys

The Effects of Race/Ethnicity and Controlling Variables on the Dependent Variables

A multivariate analysis of variance (MANOVA) was carried out to look at the effects of race or ethnicity on the four dependent variables (perceptions of school safety, the size of a child's social networks in school, the likelihood of joining in bullying, and general satisfaction or dissatisfaction with school). The results showed that there was a significant effect of race or ethnicity (Asian, African American, Hispanic, White, and multiracial) on the combined dependent variable, $F(16, 956861) = 246.13, p < .0005$;

Wilk's Lambda = .99; partial $\eta^2 = .003$. Analysis of each individual dependent variable, using a Bonferroni adjusted alpha level of .013, showed that the five groups differed in terms of school safety, $F(4, 313209) = 432.24, p < .0005$, partial $\eta^2 = .005$, the likelihood of joining in bullying, $F(4, 313209) = 240.12, p < .0005$, partial $\eta^2 = .003$, the size of students' social networks in school, $F(4, 313209) = 146.71, p < .0005$, partial $\eta^2 = .002$, and general satisfaction or dissatisfaction with school, $F(4, 313209) = 202.19, p < .0005$, partial $\eta^2 = .003$. These contributions were very small, but were significant.

When gender and grade were included as covariates, the model was improved and the new model explained 5.6% of the variance in school safety, 7.4% of the variance in the likelihood of joining in bullying, 2.7% of the variance in the size of students' social networks in school, and 3.0% of the variance in general satisfaction or dissatisfaction with school. Analysis of each individual dependent variable, using a Bonferroni adjusted alpha level of .013, showed that gender differed in terms of school safety, $F(1, 308700) = 8023.38, p < .0005$, partial $\eta^2 = .025$, the likelihood of joining in bullying, $F(1, 308700) = 3668.87, p < .0005$, partial $\eta^2 = .012$, the size of students' social networks in school, $F(1, 308700) = 800.00, p < .0005$, partial $\eta^2 = .003$, and general satisfaction or dissatisfaction with school, $F(1, 308700) = 4147.73, p < .0005$, partial $\eta^2 = .013$.

Grade level differed in terms of school safety, $F(1, 308700) = 8611.46, p < .0005$, partial $\eta^2 = .027$, the likelihood of joining in bullying, $F(1, 308700) = 20432.34, p < .0005$, partial $\eta^2 = .062$, the size of students' social networks in school, $F(1, 308700) = 7214.78, p < .0005$, partial $\eta^2 = .023$, and general satisfaction or dissatisfaction with school, $F(1, 308700) = 4552.70, p < .0005$, partial $\eta^2 = .015$.

This study did not take any further steps to improve the model. The estimated marginal means showed that Asian American students were more likely than African American (M-difference = .27, $p < .0005$), and Hispanic students (M-difference = .15, $p < .0005$), but less likely than multiracial students (M-difference = -.07, $p < .0005$) to feel afraid of being bullied by other students in their school. There was no significant difference between Asian American and White students (M-difference = .04, $p = .020$) (at a Bonferroni adjusted alpha level of .013). Thus, the hypothesis in H2 concerning school safety was partially supported.

Asian American students were more likely than African American (M-difference = .23, $p < .0005$), Hispanic students (M-difference = .16, $p < .0005$), and multiracial students (M-difference = .31, $p < .0005$) to think that they could join in bullying a student whom they did not like. There was no significant difference between Asian American and White students (M-difference = .05, $p = .014$) (at a Bonferroni adjusted alpha level of .013). Therefore, the hypothesis in H2 concerning the likelihood of joining in bullying was not supported.

Asian American students were less likely than Hispanic students (M-difference = -.10, $p < .0005$) to have none or 1 good friend in their class(es). There was no significant difference between Asian American and White students (M-difference = .01, $p = 1.0$), and African American (M-difference = -.03, $p = .029$), and multiracial students (M-difference = -.02, $p = 1.0$) (at a Bonferroni adjusted alpha level of .013). Therefore, the hypothesis in H2 concerning school network was partially supported.

Asian American students were more likely than White (M-difference = .10, $p < .0005$), African American (M-difference = .07, $p < .0005$), Hispanic students (M-difference = .05, $p < .0005$), and multiracial students (M-difference = .17, $p < .0005$) to say that they liked school or they liked school very much. Therefore, the hypothesis in H2 concerning school satisfaction was supported. Thus, the hypothesis H2 was partially supported.

Hypothesis 3

The third research question in this study examined the predictive nature of school factors on being bullied and bullying others (scales) and the moderating roles of the school's overall poverty level and student/teacher ratio on the relationship between race/ethnicity and being bullied and bullying others (scales). The following hypotheses were proposed:

H3. School-level factors including the ethnic densities for Asian American, African-American, Hispanic, White, and multiracial students, the school's ethnic diversity, the overall poverty level of the school, student/teacher ratio, and school locale will significantly predict being bullied and bullying others (scales).

H3(a) Lower densities of Asian student population in schools will be related to higher rates of being bullied for Asian American students (meaning that having more same ethnicity peers will reduce student victimization risk). There will be non-significant relations for students of other groups.

H3(b) Greater school-level ethnic diversity will be related to lower levels of being bullied (scale).

H3(c) There will be no significant urban, suburban, town, and rural differences in rates of being bullied (global question) among all students and among ethnic groups, but there will be significant differences in their reports of how they are bullied according to the school locales. For example, students in town and rural schools will be more likely than their peers in urban and suburban schools to be racially or ethnically bullied, and cyber bullied.

H3(d) The school's overall poverty level and student/teacher ratio will moderate the relationship between race/ethnicity and being bullied and bullying others (scales).

Ethnic Densities and Bullying

Pearson product moment correlations showed that there was a significant negative relationship between the Asian American student ethnic density and being bullied (scale) ($r = -.05, p < .0001$) and between the Hispanic student ethnic density and being bullied (scale) ($r = -.04, p < .0001$). There was a significant positive relationship between the African American student ethnic density, the White student ethnic density, and the multiracial student ethnic density and being bullied (scale), as shown in Table 4.6. These sizes of the relationships were small. Hypothesis H3(a) was supported for Asian American students but was not supported for other racial and ethnic groups.

This study took a further look at this hypothesis. The participants were ranked on the basis of these ethnic densities and converted into rank scores (1, 2, 3, and 4) with higher values indicating greater densities. Then the study selected participants who received rank score 4 for the Asian American student ethnic density and who received rank score 1 for the White student ethnic density. As a result, 548 schools were chosen (N

= 190,833), including 49.2% of girls and 50.3% of boys (0.6% did not indicate gender). Overall, 35.0% were in elementary school, 48.4% were in middle school, and 15.1% were in high school (1.5% did not indicate the grade level). The selected cases included students of White (35.6%), African American (15.6%), Hispanic (31.2%), Asian (4.8%), and multiracial (12.8%).

Pearson product moment correlations found similar patterns for the ethnic densities of Asian, African American, Hispanic, and multiracial students, but there was a significant negative relationship found between the ethnic density of White students and being bullied (scale), as shown in Table 4.6. This study suggests that more analysis procedures be carried out to confirm the H3(a).

Table 4.6

Correlations between Ethnic Densities and Bullying, by Racial/Ethnic Group

Race/Ethnicity	Variable			
	Being Bullied Scale	<i>M (SD)</i>	Being Bullied Scale (<i>Rank Scores</i>)	<i>M (SD)</i>
Ethnic Density (Asian)	-.05** N = 67,274	.03 (.00)	-.04** N = 28,204	.05 (.04)
Ethnic Density (African American)	.02** N = 70,431	.10 (.13)	.06** N = 27,992	.13 (.15)
Ethnic Density (Hispanic)	-.04** N = 72,412	.14 (.22)	-.03** N = 28,629	.26 (.29)
Ethnic Density (White)	.01** N = 77,939	.64 (.31)	-.03** N = 32,986	.41 (.32)
Ethnic Density (Multiracial)	.04** N = 58,962	.03 (.02)	.04** N = 25,868	.02 (.02)

** . Correlation is significant at the 0.01 level (2-tailed).

School’s Ethnic Diversity and Bullying

Bivariate correlation analyses showed that there was a significant, but tiny positive relationship between the school’s ethnic diversity and being bullied (scale) ($r =$

.01, $p < .0001$). When the data were ranked into three groups (1, 2, and 3) with higher values indicating greater ethnic diversities. Analyses showed a significant negative relationship between the school's ethnic diversity and being bullied (scale) for a rank of 1 scores ($r = -.01, p < .0001$), a significant positive relationship for a rank of 2 scores ($r = .03, p < .0001$) and for a rank of 3 scores ($r = .02, p < .0001$). Therefore, the hypothesis H3(b) was not confirmed. More analyses could be carried out to confirm the H3(b).

School Locales and Bullying

A univariate analysis of variance was used to examine whether school locales contributed to students' self-reports of being bullied (global question). The results showed that school locales had a significant influence, $F(3,469648) = 125.18, p < .0005$. Then a two-way (School Locales X Race/Ethnicity) analysis of variance was conducted. The school locales and race/ethnicity explained 1.1% of the variance in being bullied (global question). Estimates marginal means showed that students in schools located in town areas were more likely to be bullied than students in schools located in urban areas (M-difference = .04, $p < .0005$), in suburban areas (M-difference = .05, $p < .0005$), and in rural areas (M-difference = .05, $p < .0005$). Students in schools located in rural areas were more likely to be bullied than students in schools located urban areas (M-difference = .03, $p < .0005$) and in suburban areas (M-difference = .03, $p < .0005$). There was not a significant difference between urban areas and suburban areas (M-difference = .01, $p = .151$).

By race/ethnicity, there were significant differences between Asian and Hispanic (M-difference = .14, $p < .0005$), White (M-difference = -.03, $p < .0005$), African American

(M-difference = .07, $p < .0005$) and Multiracial students (M-difference = -.26, $p < .0005$).

There were also significant differences between African American and White (M-difference = -.10, $p < .0005$), Hispanic (M-difference = .07, $p < .0005$) and multiracial students (M-difference = -.33, $p < .0005$), and between Hispanic and White (M-difference = -.17, $p < .0005$) and multiracial students (M-difference = -.40, $p < .0005$).

Figure 4.15 shows the estimated marginal means for peer victimization (being bullied) plots.

Table 4.7 shows estimated marginal mean differences within races/ethnicities in terms of school locales. In most cases, there were significant differences in being bullied among school locales by races/ethnicities. Thus, H3(c) was partially supported.

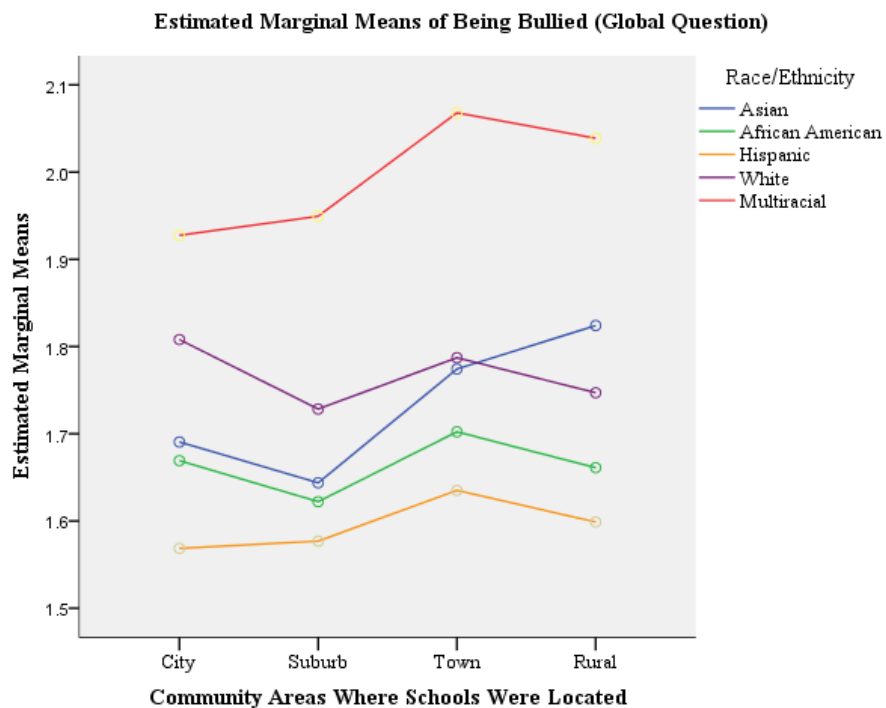


Figure 4.15. Estimated marginal means of being bullied (global question)

Table 4.7

Estimated Marginal Means for School Locales, By Race/Ethnicity

Race/Ethnicity			Mean Difference (I-J)	Std. Error	Sig. ^b	Race/Ethnicity			Mean Difference (I-J)	Std. Error	Sig. ^b
White	City	Suburb	.043*	.006	.000	Hispanic (cont'd)	City	.049*	.012	.000	
		Town	.016*	.007	.023		Suburb	.040*	.012	.001	
		Rural	.050*	.007	.000		Rural	.025	.014	.077	
	Suburb	City	-.043*	.006	.000	Rural	City	.025*	.010	.013	
		Town	-.027*	.005	.000	Suburb	Town	.016	.010	.118	
		Rural	.007	.004	.101	Town	Suburb	-.025	.014	.077	
	Town	City	-.016*	.007	.023	Asian	City	Suburb	.011	.018	.543
		Suburb	.027*	.005	.000		Town	Suburb	-.073*	.031	.018
		Rural	.033*	.005	.000		Rural	Suburb	-.088*	.025	.000
	Rural	City	-.050*	.007	.000	Suburb	City	-.011	.018	.543	
		Suburb	-.007	.004	.101		Town	Suburb	-.084*	.029	.005
		Town	-.033*	.005	.000		Rural	Suburb	-.098*	.023	.000
African American	City	Suburb	.026*	.010	.009	Town	City	.073*	.031	.018	
		Town	-.012	.013	.334		Suburb	Suburb	.084*	.029	.005
		Rural	.006	.012	.619		Rural	Suburb	-.014	.034	.673
	Suburb	City	-.026*	.010	.009	Rural	City	.088*	.025	.000	
		Town	-.038*	.013	.003		Suburb	Suburb	.098*	.023	.000
		Rural	-.020	.012	.089		Town	Suburb	.014	.034	.673
	Town	City	.012	.013	.334	Multiracial	City	Suburb	-.034*	.011	.001
		Suburb	.038*	.013	.003		Town	Suburb	-.103*	.014	.000
		Rural	.018	.014	.199		Rural	Suburb	-.079*	.012	.000
Rural	City	-.006	.012	.619	Suburb	City	.034*	.011	.001		
	Suburb	.020	.012	.089		Town	Suburb	-.069*	.013	.000	
	Town	-.018	.014	.199		Rural	Suburb	-.044*	.011	.000	
Hispanic	City	Suburb	-.009	.007	.210	Town	City	.103*	.014	.000	
		Town	-.049*	.012	.000		Suburb	Suburb	.069*	.013	.000
		Rural	-.025*	.010	.013		Rural	Suburb	.025	.014	.078
	Suburb	City	.009	.007	.210	Rural	City	.079*	.012	.000	
		Town	-.040*	.012	.001		Suburb	Suburb	.044*	.011	.000
		Rural	-.016	.010	.118		Town	Suburb	-.025	.014	.078

*. The mean difference is significant at the .05 level.

A series of two-way univariate analysis of variance were conducted to explore the interactions of school locales and forms of bullying. This study reported two forms of bullying and the interactions with school locales.

Being Racially or Ethnically Bullied. There was a significant interaction between school locales and race/ethnicity for being racially or ethnically bullied: $F(18,384897) = 34.57, p < .0005$. Tukey post hoc tests found that students in urban area schools were more likely to be racially or ethnically bullied than students in suburban areas (M-difference = .05, $p < .0005$). Students in suburban area schools were less likely than those in town (M-difference = -.06, $p < .0005$) and rural area schools (M-difference = -.06, $p < .0005$). No other statistically significant differences were found.

Asian students were more likely to be racially or ethnically bullied than White students (M-difference = .43, $p < .0005$), African American students (M-difference = .06, $p < .0005$), Hispanic students (M-difference = .21, $p < .0005$) and multiracial students (M-difference = .05, $p < .0005$) in all four communities where schools were located, as shown in Figure 4.16. African American students were more likely to be racially or ethnically bullied than White students (M-difference = .37, $p < .0005$) and Hispanic students (M-difference = .15, $p < .0005$), and Hispanic students were more likely to be racially or ethnically bullied than White students (M-difference = .22, $p < .0005$). Multiracial students were more likely to be racially or ethnically bullied than White students (M-difference = .38, $p < .0005$), African American (M-difference = .02, $p < .0005$) and Hispanic students (M-difference = .16, $p < .0005$). Figure 4.16 shows the

interaction of racial or ethnical status and school locales in terms of being racially or ethnically bullied.

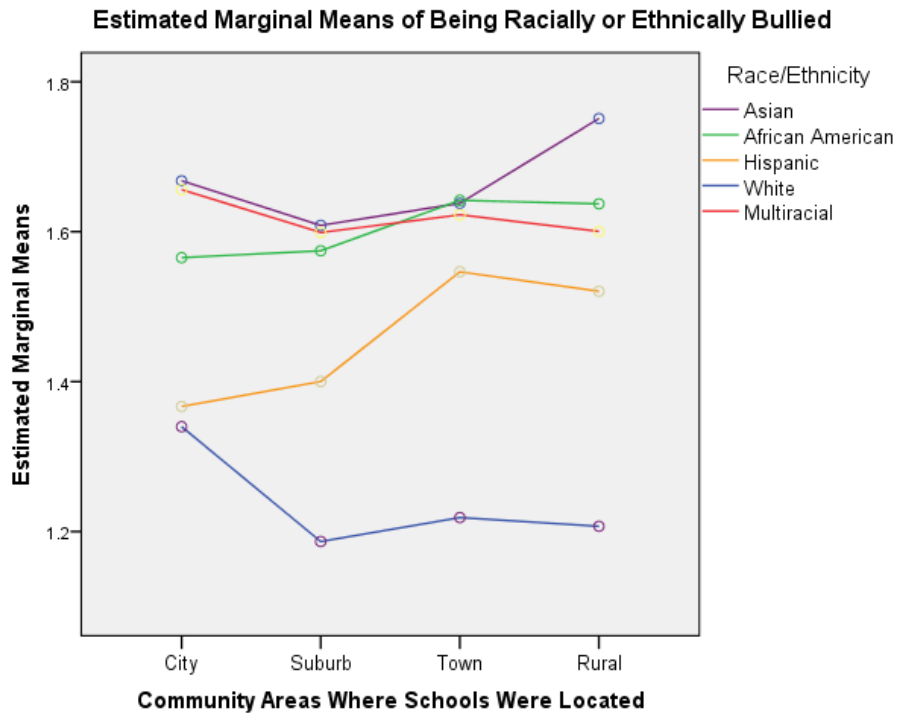


Figure 4.16. Estimated marginal means of being racially or ethnically bullied

Being Cyber Bullied. There was a significant interaction effect of school locale and race/ethnicity on being cyber bullied, $F(18,381853) = 7.476, p < .0005$. Tukey post hoc tests found that students in towns were more likely to be cyber bullied than students in urban areas (M-difference = .06, $p < .0005$), in suburban areas (M-difference = .06, $p < .0005$), and in rural areas (M-difference = .02, $p = .018$). Students in rural areas were more likely to be cyber bullied than students in urban areas (M-difference = .05, $p <$

.0005) and in suburban areas (M-difference = .05, $p < .0005$). There was not a significant difference between urban areas and suburban areas (M-difference = -.002, $p = .569$).

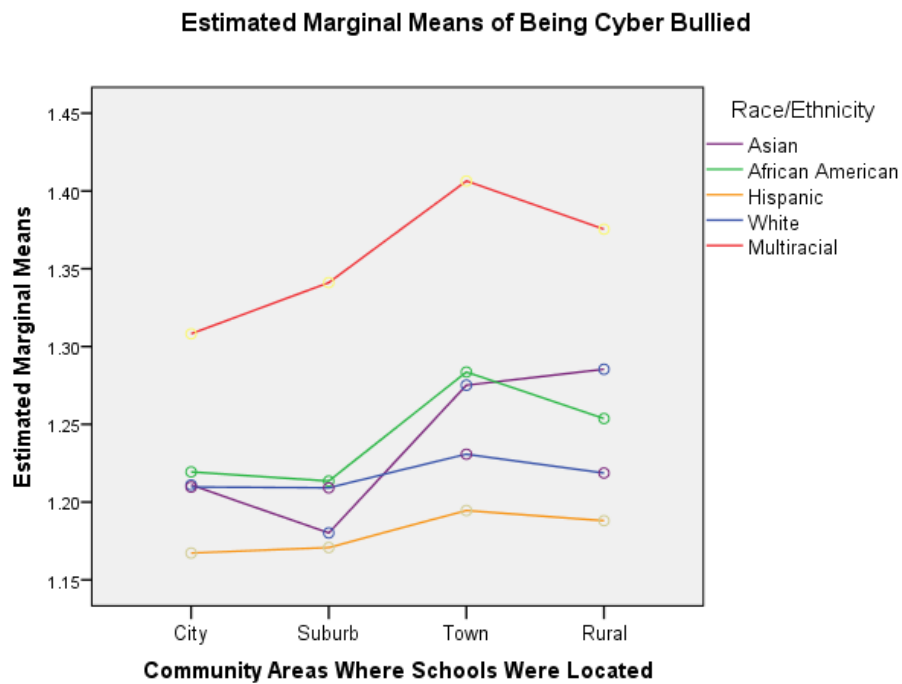


Figure 4.17. Estimated marginal means of being cyber bullied

Asian students were more likely to be cyber bullied than White (M-difference = .02, $p = .024$) and Hispanic students (M-difference = .06, $p < .0005$). White students were more likely to be cyber bullied than Hispanic students (M-difference = .04, $p < .0005$).

African American students were more likely to be cyber bullied than White students (M-difference = .03, $p < .0005$), Hispanic students (M-difference = .06, $p < .0005$).

Multiracial students were more likely to be cyber bullied than their peers in other racial or ethnic groups. There were no statistically significant differences between Asian and

African American students (M -difference = $-.01$, $p = .640$). Figure 4.17 shows the interaction of racial or ethnical status and school locales in terms of being cyber bullied.

In sum, students in schools that were located in town and rural community areas were more likely than their peers attending urban and suburban schools to be racially or ethnically bullied and to be cyber bullied in this study. Thus, hypotheses in H3(c) regarding the differences in how students were bullied in terms of school locales were supported.

The Moderating Effect of the School's Overall Poverty Level and Student/Teacher Ratio on the Relationship between Race/Ethnicity and Bullying

A series of hierarchical multiple regression analyses were carried out, using block entry to examine the moderating roles of the school's poverty level and student/teacher ratio on the relationship between races/ethnicities and bullying.

The variables were entered in two steps, with the school's poverty level and student/teacher ratio entered first followed by races/ethnicities (dummy coded). Of the four models tested, race/ethnicity was a significant predictor of being bullied (scale) and bullying others (scale), and the school's poverty level and student/teacher ratio moderated the effect of race/ethnicity on bullying.

Table 4.8 shows the results of the model predicting being bullied (scale) and the moderating roles of the school's poverty level and student/teacher ratio. The overall model accounted for 1.5% of the variance in being bullied (scale).

The inclusion of the school's overall poverty level and student/teacher ratio resulted in an additional 0.6% of the variance explained (R^2 change = $.006$, $p < .0005$).

More specifically, the school's overall poverty level resulted in an additional 0.5% of the variance and student/teacher ratio resulted in an additional 0.1% of variance explained.

These findings suggested that the school's overall poverty level and student/teacher ratio moderated the relationship between races/ethnicities and the bullying.

Table 4.8

Hierarchical Regression Analysis Predicting Being Bullied (scale): Moderating role

	Predictor Variables	<i>B</i> (SE)	β
Step 1	The school's overall poverty level	.14** (.003)	.07
	Student/teacher ratio	-.002** (.00)	-.01
Step 2	Race/ethnicity		
	White	-.06** (.002)	-.07
	African American	-.05** (.003)	-.03
	Hispanic	-.10** (.003)	-.06
	Asian	-.03** (.006)	-.01
	Multiracial	.07** (.003)	.04
Modal Summary			
	$R^2 =$	.015	
	Adjusted $R^2 =$	.015	
	<i>F</i> value =	756.10	
	Degrees of freedom (<i>df</i>) =	(7/353776)	

** $p < .0001$

Table 4.9 shows the results of testing the predictive values of races/ethnicities and the moderating role of the school's poverty level and student/teacher ratio on the relationship between race/ethnicity and bullying others (scale). Here, the overall model accounted for 1.7% of the variance in bullying others (scale). The inclusion of the school's overall poverty level and student/teacher ratio resulted in an additional 0.6% of the variance explained (R^2 change = .006, $p < .0005$). Almost all the additional 0.6% was

produced by the inclusion of the school's overall poverty level. Student/teacher ratio had a trivial effect on the model.

Table 4.9

Hierarchical Regression Analysis Predicting Bullying Others (scale): Moderating role

	Predictor Variables	<i>B</i> (SE)	β
Step 1	The school's overall poverty level	.10** (.002)	.10
	Student/teacher ratio	-.002** (.00)	-.02
Step 2	Race/ethnicity White	-.02** (.001)	-.03
	African American	.04** (.002)	.05
	Hispanic	-.003 (.002)	-.003
	Asian	-.01** (.003)	-.01
	Multiracial	.04** (.002)	.05
Modal Summary			
	$R^2 =$	.017	
	Adjusted $R^2 =$	.017	
	F value =	886.46	
	Degrees of freedom (df) =	(7/352198)	

** $p < .0001$

In sum, the findings showed that the school's overall poverty level significantly moderated the relationship between race/ethnicity and being bullied (scale) and bullying others (scale). Student/teacher ratio significantly moderated the relationship between race/ethnicity and being bullied (scale). The effect was very small (trivial). Therefore, H3(d) was partially supported.

Testing the Predictive Values of School-Level Factors for Bullying

A series of multiple linear regression analyses were carried out to predict the variance in being bullied and bullying others (scales). The ethnic densities of racial/ethnic

groups, the school's ethnic diversity, the overall poverty level of the school, and student/teacher ratio had a significant bivariate relationship with being bullied and bullying others (scales) and were considered for inclusion in the regression model.

Table 4.10

Multivariate Regression Model: First Iteration (the Being Bullied Scale)

Predictor Variables	<i>B</i> (SE)	β	Tolerance	VIP
Ethnic density of Asian American students	-.08 (.07)	-.01	.21	4.79
Ethnic density of African American students	-.03 (.05)	-.01	.02	57.07
Ethnic density of Hispanic students	-.11** (.05)	-.05	.01	131.98
Ethnic density of White students	-.02 (.05)	-.01	.01	205.14
Ethnic density of multiracial students	-.32** (.07)	-.02	.33	3.00
The school's ethnic diversity	.05** (.01)	.02	.25	3.93
The school's overall poverty level	.11** (.01)	.05	.39	2.79
Student/teacher ratio	.001** (.00)	.01	.93	1.08
Race/ethnicity				
White	-.03** (.00)	-.04	.67	1.50
African American	.02** (.00)	.01	.81	1.24
Hispanic	-.02** (.00)	-.01	.72	1.40
Asian	-.01 (.01)	-.003	.94	1.06
Multiracial	.08** (.00)	.046	.84	1.20
Gender (girl)	-.01** (.00)	-.015	.94	1.06
Grade level				
Elementary school	.10** (.01)	.107	.05	20.53
Middle school	.02 (.01)	.02	.04	22.76
High school	-.05** (.01)	-.05	.06	16.33
School locale				
City	-.004 (.00)	-.003	.68	1.48
Suburb ^a				
Town	.03** (.00)	.02	.76	1.31
Rural	.01** (.00)	.01	.69	1.45
General (dis)satisfaction with school	-.05** (.00)	-.08	.91	1.09
Size of a Child's Social network in school	-.04** (.00)	-.08	.93	1.08
The likelihood of joining in the bullying	-.03** (.00)	-.11	.87	1.15
School safety	.14** (.00)	.40	.92	1.09
Modal Summary				
$R^2 =$	.221			
Adjusted $R^2 =$	.221			
F value =	2678.627**			
Degrees of freedom (df) =	(24,226168)			

** $p < .0001$. ^a Excluded with the presence of multicollinearity

School locale, gender, grade level, and race/ethnicity were dummy coded for inclusion in the regression model. In addition, while testing H1, this study found that

students' general satisfaction or dissatisfaction with school, the size of students' social networks that students have at school, the likelihood of joining in bullying, and students' perceptions of school safety contributed to bullying. These variables also were included in the model. The following section describes the iterations of the multivariate regression model and the modifications made to achieve the final model.

The first iteration of the model included 25 predictors. The results of the model appear in Table 4.10. The model explained 22.1% of the variance in being bullied (scale), and six of the predictor variables did not have significant beta coefficients. Further, the tolerance coefficients and variance inflation factors (VIF) indicated the presence of multicollinearity.

In order to improve the model, the non-significant predictors were removed. The second (final) iteration of the multivariate regression model included 18 variables. This model explained 21.9% of the variance in being bullied (scale) and appears in Table 4.11. With fewer predictors, this model explained a slightly lower proportion of the variance than the first iteration of the model. As shown in Table 4.11, eighteen predictor variables had significant beta coefficients.

The beta coefficients indicated that school safety (feeling afraid of being bullied by other students in the school) had the greatest impact on being bullied (scale) ($\beta = .40$), meaning that the more children feel they are afraid of being bullied by their peers at school, the more likely they are bullied (scale). The likelihood of joining in bullying negatively predicted being bullied (scale) ($\beta = -.11$), suggesting that the more likely children feel that they could join in bullying a student whom they do not like, the less

likely they are bullied (scale). Being in an elementary school ($\beta = .10$), being multiracial ($\beta = .05$), and attending a school located in town area ($\beta = .02$) were associated with more victimization. Having fewer friends in school ($\beta = -.08$), being less satisfied with school ($\beta = -.08$), lower density of Hispanic students ($\beta = -.05$), being in high school ($\beta = -.05$), and being girls ($\beta = -.02$) were associated with greater victimization. The school's overall poverty level also had an impact on being bullied ($\beta = .06$), which means that children are more likely to be bullied in a school with a higher overall poverty level. The student/teacher ratio was not a predictor.

Table 4.11

Multivariate Regression Model: Second Iteration (the Being Bullied Scale)

Predictor Variables	<i>B</i> (SE)	β	Tolerance	VIP
Ethnic density of Hispanic students	-.01** (.01)	-.04	.55	1.82
Ethnic density of multiracial students	-.22** (.04)	-.01	.69	1.46
The school's ethnic diversity	.02** (.01)	.01	.60	1.66
The school's overall poverty level	.11** (.00)	.06	.61	1.63
Student/teacher ratio	.001** (.00)	.004	.95	1.06
Race/ethnicity				
White	-.03** (.00)	-.04	.69	1.44
African American	.02** (.00)	.01	.79	1.26
Hispanic	-.02** (.00)	-.01	.73	1.38
Multiracial	.08** (.00)	.05	.85	1.18
Gender (girl)	-.01** (.00)	-.02	.94	1.06
Grade level				
Elementary school	.09** (.00)	.10	.75	1.34
High school	-.07** (.00)	-.06	.79	1.27
School locale				
Town	.02** (.00)	.02	.82	1.21
Rural	.01** (.00)	.01	.80	1.25
General (dis)satisfaction with school	-.05** (.00)	-.08	.92	1.09
Size of a Child's Social networks in school	-.04** (.00)	-.08	.93	1.07
The likelihood of joining in the bullying	-.03** (.00)	-.11	.87	1.14
School safety	.14** (.00)	.40	.92	1.08
Modal Summary				
$R^2 =$	.219			
Adjusted $R^2 =$	.219			
F value =	4112.628 **			
Degrees of freedom (df) =	(18,264629)			

** $p < .0001$

Similar analysis procedures were used to test the predictive values of the school-level variables, individual variables, and students' perceptions variables in bullying others (scale). The following section describes the three iterations of the multivariate regression model and the modifications made to achieve the final model.

Table 4.12

Multivariate Regression Model: First Iteration (the Bullying Others Scale)

Predictor Variables	<i>B</i> (SE)	β	Tolerance	VIP
Ethnic density of Asian American students	-.09** (.03)	-.01	.21	4.79
Ethnic density of African American students	-.01 (.03)	-.01	.02	56.44
Ethnic density of Hispanic students	-.05 (.03)	-.04	.01	130.71
Ethnic density of White students	-.02 (.03)	-.02	.01	203.39
Ethnic density of multiracial students	-.18** (.04)	-.02	.33	3.00
The school's ethnic diversity	.03** (.01)	.02	.25	3.94
The school's overall poverty level	.05** (.00)	.05	.36	2.78
Student/teacher ratio	.00 (.00)	.00	.93	1.08
Race/ethnicity				
White	-.016** (.001)	-.04	.67	1.50
African American	.033** (.002)	.04	.81	1.24
Hispanic	.001 (.002)	.00	.72	1.40
Asian	-.007** (.003)	-.004	.94	1.06
Multiracial	.027** (.002)	.03	.84	1.20
Gender (girl)	.001 (.001)	.001	.94	1.06
Grade level				
Elementary school	.033** (.004)	.07	.05	20.83
Middle school	.016** (.004)	.04	.04	22.89
High school	-.01** (.00)	-.02	.06	16.22
School locale				
City	.001 (.00)	.002	.68	1.47
Suburb ^a				
Town	.01** (.00)	.02	.76	1.31
Rural	.002 (.00)	.004	.69	1.45
General (dis)satisfaction with school	-.02** (.00)	-.06	.92	1.09
Size of a Child's Social networks in school	.004** (.00)	.02	.92	1.08
The likelihood of joining in the bullying	-.05** (.00)	-.34	.88	1.14
School safety	.02** (.00)	.10	.92	1.10
Modal Summary				
$R^2 =$	.142			
Adjusted $R^2 =$	.142			
F value =	1556.122**			
Degrees of freedom (df) =	(24,226205)			

** $p < .0001$. ^a Excluded with the presence of multicollinearity

The first iteration of the model included the same predictors (as used above in terms of the being bullied scale). The results of the model appear in Table 4.12. The model explained 14.2% of the variance in bullying others (scale), and eight of the predictor variables did not have significant beta coefficients. Further, the tolerance coefficients and variance inflation factors (VIF) indicated the presence of multicollinearity.

Table 4.13

Multivariate Regression Model: Second Iteration (the Bullying Others Scale)

Predictor Variables	<i>B</i> (SE)	β	Tolerance	VIP
Ethnic density of Asian American students	-.14** (.02)	-.02	.68	1.48
Ethnic density of multiracial students	-.04 (.02)	-.00	.70	1.42
The school's ethnic diversity	.02** (.00)	.01	.54	1.87
The school's overall poverty level	.05** (.00)	.03	.66	1.52
Race/ethnicity				
White	-.01** (.00)	-.03	.75	1.33
African American	.04** (.00)	.05	.88	1.13
Asian	-.002 (.00)	-.00	.96	1.05
Multiracial	.03** (.00)	.04	.89	1.12
Grade level				
Elementary school	.03** (.00)	.06	.05	19.27
Middle school	.01** (.00)	.02	.05	21.16
High school	-.02** (.00)	-.03	.07	13.92
School locale				
Town	.01** (.00)	.01	.95	1.05
General (dis)satisfaction with school	-.02** (.00)	-.06	.93	1.08
Size of a Child's Social networks in school	.003** (.00)	.01	.93	1.07
The likelihood of joining in the bullying	-.05** (.00)	-.34	.89	1.13
School safety	.02** (.00)	.10	.94	1.06
Modal Summary				
$R^2 =$	.139			
Adjusted $R^2 =$	.139			
F value =	2811.366**			
Degrees of freedom (df) =	(16,277709)			

** $p < .0001$

The second iteration of the multivariate regression model removed the non-significant predictors, and included 16 variables. This model explained 13.9% of the

variance in bullying others (scale) and appears in Table 4.13. With fewer predictors, this model explained a slightly lower proportion of the variance than the first iteration of the model.

In order to improve the model, a third and final iteration of the model was generated. With the two variables that had non-significant beta coefficients removed, the final model explained 14.1% of the variance in bullying others (scale). The results of this model appear in Table 4.14.

Table 4.14

Multivariate Regression Model: Third Iteration (the Bullying Others Scale)

Predictor Variables	<i>B</i> (SE)	β	Tolerance	VIP
Ethnic density of Asian American students	-.17** (.02)	-.02	.70	1.4
The school's ethnic diversity	.01** (.00)	.01	.72	1.4
The school's overall poverty level	.05** (.00)	.05	.71	1.40
Race/ethnicity	White	-.01** (.00)	.78	1.29
	African American	.04** (.00)	.89	1.12
	Multiracial	.03** (.00)	.90	1.11
Grade level	Elementary school	.03** (.00)	.05	19.95
	Middle school	.01** (.00)	.05	21.67
	High school	-.02** (.00)	-.04	13.92
School locale	Town	.01** (.00)	.95	1.05
General (dis)satisfaction with school	-.02** (.00)	-.06	.93	1.08
Size of a Child's Social network in school	.00** (.00)	.01	.94	1.07
The likelihood of joining in the bullying	-.05** (.00)	-.34	.88	1.13
School safety	.02** (.00)	.10	.94	1.06
Modal Summary				
$R^2 =$	.141			
Adjusted $R^2 =$	.141			
F value =	3988.213 **			
Degrees of freedom (df) =	(14,341269)			

** $p < .0001$

The standardized beta coefficients indicated that the likelihood of joining in bullying had the greatest impact, negatively predicting bullying others (scale) ($\beta = -.34$), which means that the more students could join in bullying another student they do not

like, the more likely that they bully others. School safety also had a great impact on bullying others (scale) ($\beta = .10$), meaning that the more students feel afraid of being bullied by others in school, the more likely that they bully others. The less students like school ($\beta = -.06$), the more likely they bully others. Being in elementary school ($\beta = .05$), being African American ($\beta = .05$) and multiracial students ($\beta = .04$), and the school's overall poverty level ($\beta = .05$) were associated with more bullying perpetration. Being in high school ($\beta = -.04$), being White ($\beta = -.03$), and higher density of Asian American student ($\beta = -.02$) were associated with less bullying perpetration. Gender and student/teacher ratio did not contribute to the bullying others scale. Thus, H3 was partially confirmed.

This chapter presented the findings of the current study. The contribution of races/ethnicities to bullying was explored and a MANOVA model was generated (Research Question 1), which explained 20.9% of the variance in being bullied (global question), 15.0% of the variance in bullying others (global question), 23.3% of the variance in being bullied (scale), and 15.6% of the variance in bullying others (scale).

Research Question 2 examined the nature of bullying in terms of the likelihood of student joining in bullying, general satisfaction and dissatisfaction with school, school safety, and the size of students' social networks in school. Research Question 2 can be considered an extension to Research Question 1.

Two multivariate regression models predicting being bullied and bullying others (scales) were generated that explained 21.9% of the variance in being bullied (scale) and 14.1% of the variance in bullying others (scale) (Research Question 3). In addition to the

school-level variables (such as the school's poverty level variable, the ethnic density variables, and the school locale variable), students' general satisfaction or dissatisfaction with school, school safety, the size of students' social networks in school, and the likelihood of joining in bullying were included in these multivariate models in this study.

A discussion of these findings appears in Chapter 5.

CHAPTER FIVE

DISCUSSION

This study responded to limited research on race/ethnicity and bullying among children and youth in U.S. schools, and to specific school-level variables (such as the ethnic densities, the ethnic diversity, overall poverty level, school locale, and student/teacher ratio) and their association with children's experiences of bullying. The findings of this study of 473,918 students attending 1,524 schools located in various communities in 45 states and the US Virgin Islands revealed that race/ethnicity is an important individual variable that is related to children's bullying behavior. The school's ethnic diversity and the densities of racial/ethnic groups are associated with bullying involvement in school (e.g., frequencies and bullying perceptions and attitudes). The school's overall poverty level significantly moderates the relationship between students' race/ethnicity and their bullying behaviors, and there are differences in students' rates of bullying according to school locales. Children's perceptions of school safety, the size of students' social networks in school, the likelihood of joining in bullying, and the general satisfaction or dissatisfaction with school significantly contribute to bullying.

This chapter outlines key findings, discusses implications for practice stemming from the study, recognizes limitations, and makes recommendations for future research.

Discussion of Findings

One of the major goals of this study was to examine racial or ethnic group differences in bullying. The current study found that races/ethnicities are significantly

related to key dependent variables (such as being bullied and bullying others, both global questions and scales). The influence of races/ethnicities on bullying was small (in some cases, it appeared trivial), but was improved with moderating variables included (e.g., the school's overall poverty level).

Differences in Bullying in Children of Racial/Ethnic Groups

This study examined the frequencies and nature of bullying among children and youth. In order to explore the racial/ethnic group differences in bullying, this study compared Asian American students and their peers of other racial/ethnic groups. Asian American students were chosen to compare with other students in this study because the existing literature has reported very different findings in terms of Asian American students and how often they are bullied, and how often they bullied others in U.S. schools.

Analyses focused on several major items and scales within the OBQ. These included being bullied (both global question and scale), bullying others (both global question and scale), bullying involvement and status (i.e., "victims only," "bullies only," and "bully victims"), and nine specific forms of bullying. In addition, the associations between these variables and gender and grade level were examined, both within and between ethnic groups. Then, the effects of races/ethnicities and controlling variables on bullying were explored.

Being Bullied and Bullying Others. Existing research has suggested that fewer Asian American students are bullied than their peers in U.S. schools (e.g., Robers et al., 2013), but this was not supported by the current study. This study found that multiracial

students, those students who did not know their races/ethnicities, and White students were more likely to be bullied (global question) in U.S. schools than their peers of other ethnic groups and that Hispanic and African American students were less likely than Asian American students to be bullied. In other words, the percentage of students who self-reported being bullied in U.S. schools was highest for multiracial students, those students who did not know their races/ethnicities and White students and lowest for Hispanic students.

This study also found that multiracial and African American students were the most likely to bully others (global question), and White and Asian American students were the least likely to bully others.

This study also examined the racial/ethnic group differences in the nine specific forms of being bullied. Results showed that there were group differences according to the forms of being bullied. For example, Asian students were more likely to be bullied due to their race or color than their peers of other race/ethnicities. Multiracial students were the most likely to be socially excluded and cyber bullied, and Hispanic students were the least likely to be socially excluded or cyber bullied.

In order to better understand bullying among children and youth, one must also examine bullying status/involvement in terms of “bully victims” (students who are bullied and also bully others), “victims only” (students who are bullied but do not bully others), and “bullies only” (students who bully others but are not bullied). This study showed that multiracial students and those students who did not know their races/ethnicities were the most likely to be “bully victims” and “victims only.” African

American students were the most likely to be “bullies only.” White students were the least likely to be “bully victims” and “bullies only,” and Hispanic students were the least likely to be “victims only.” Thus, multiracial students, those students who did not know their races/ethnicities, and African American students were the most likely to be involved in bullying, and Hispanic students were the least likely to be involved in bullying.

These results increase our understanding of multiracial students’ bullying involvement. This study found that those students who identified themselves as belonging to more than one racial or ethnic group (and those students who did not know their races/ethnicities) reported surprisingly higher rates of being bullied and bullying others in U.S. schools. The results should be carefully interpreted, because the ethnic group sizes were unequal in the current study and because the data may not reflect the U.S. population characteristics (as discussed later in this Chapter). However, it is clear that the racial/ethnic variable is an important component that bullying researchers must address in understanding and preventing bullying behaviors in schools. It is unclear why multiracial students report that they are more likely to be involved in bullying. It may be that these data reflect actual differences in the frequency with which children of multiple races/ethnicities are involved in bullying. Multiracial students may have difficulty in identifying their racial/ethnic categories, and they may have cultural values predicting their bullying behaviors. Alternatively, it may be that they understand bullying somewhat differently and/or are more ready to report their experiences on an anonymous survey. Existing bullying research has not addressed this issue.

This study examined grade and gender trends of being bullied and bullying others. Findings supported the existing research findings (e.g., Limber et al., 2012) that there is a steady decrease of being bullied as students age for boys and girls in all racial/ethnic groups. In younger grades, girls appear slightly more likely than boys to be bullied. By middle school, this pattern changes, as boys are slightly more likely to be bullied. However, these trends may not reflect age/grade and gender trends for all nine specific forms of bullying and in different racial/ethnic groups. Future research should examine grade, gender, and racial/ethnic trends for the nine specific forms of bullying.

In terms of bullying others, boys are more likely than girls to bully others in all grades, especially in high schools. For girls, bullying behavior appears to peak in about 8th grade and then decreased through 12th grade. For boys, bullying appears to level off in around 8th or 9th grade and remained fairly high through high school grades. This supported the research findings of Limber and colleagues (2012).

The Effects of Race/Ethnicity on Bullying. A multivariate analysis of variance showed that only 1% of the variance was explained by race/ethnicity in being bullied and bullying others (both global questions and scales). When including another nine variables as covariate variables, the models were improved. These variables included: gender, grade level, the overall poverty level of the school, general satisfaction or dissatisfaction with school, the size of students' social networks in school (i.e., how many good friends an individual child has in his or her classes), the likelihood of joining in bullying, school safety, student/teacher ratio, school locale, and race/ethnicity. These variables explained 20.9% and 23.3% of the variance in being bullied (global question and scale,

respectively), and 15.0% and 15.6% of the variance in bullying others (global question and scale, respectively).

Other Dimensions of Bullying

The OBQ provides a tremendous reservoir of students' self-reported experiences with and perceptions of bullying. Several other dimensions of bullying were analyzed in this study. These dimensions included: school safety (e.g., fear of bullying), the size of students' social networks that students have in school, the likelihood of joining in bullying, and their general satisfaction or dissatisfaction with school.

School Safety. This study found that multiracial and White students were more likely than their peers to say that they were often or very often afraid of being bullied at school. Hispanic students reported the lowest rates of fear of bullying. Girls were more likely than boys to say that they were afraid of being bullied in their school. Fear of bullying decreased with age for both boys and girls in all racial/ethnic groups, but it appeared that there was an increase in high school for Asian boys. Fear of being bullied at school likely reflects students' perceptions about school safety. Asian boys may feel that high school is a less safe place for them to learn and develop because of their fear of being bullied.

The Size of students' Social Networks in School. Racial/ethnic differences were also observed with regard to the size of students' social networks in school, specifically, the likelihood that students were socially excluded. In this study, African American students reported the highest rates of having none or 1 good friends in their class(es), and White students reported the lowest rates of having none or 1 good friend in their

class(es). Some students may have friends outside of their classes and some actually prefer to be mostly on their own, but it is reasonable to assume that most students would like to have more than one friend in their classes. Having several good friends may serve as a protective factor against being bullied. In this study, Asian American students reported the highest rates of having 6 or more good friends in their classes. Asian students have good friends and still are bullied, however, they may understand “good friends” differently from their peers and they might consider some of those students who bullied them as good friends. They may consider those bullied students as their friends because they may have similar school experiences with bullying. Also, having more friends maybe does not protect some minorities from bullying.

School Dissatisfaction. This study found that multiracial and African American students were more likely than their peers of other racial/ethnic groups to say that they disliked school or disliked school very much, and Asian American students were the least likely to say that they disliked school or disliked school very much. This study supported research findings that rates of dissatisfaction are higher for boys than girls at every age, and they increase with age (e.g., Koth et al., 2008; Limber et al., 2012; Mitchell, Bradshaw, & Leaf, 2010; Niehaus, Rudasill, & Rakes, 2012).

There may be many reasons for student dissatisfaction with school. Involvement with bullying is probably one such reason. Compared with students who were not involved in bullying, those who are “victims only,” “bullies only,” and especially “bully victims” are all more likely to say that they dislike school or dislike school very much. This study found that 33% of “bully victims” reported they “dislike or very much dislike”

their school, compared to 29% of “bullies only,” 22% of “victims only,” and 13% of “not involved” students. Similarly, one in five “bully victims” (23%) said that they had no friends or only one friend at school (compared with 9% of “bullies only,” 15% of “victims only,” and 76% of “not involved” students).

Students who experience some forms of bullying may report higher dissatisfaction with school than students who experience other forms of bullying. For example, this study found that cyber bullied students in all racial/ethnic groups (except Asian girls) were more likely to say that they disliked school or disliked school very much, compared to students who were bullied in other ways. Students maybe regard cyber bullying as an especially noxious way to engage in bullying. Through the use of digital communication media (Internet postings, text messages, tweets, etc.), the perpetrator of bullying may exercise great power in creating public humiliation on a continuous, unrelenting basis (Cornell & Limber, under review; Kowalski et al., 2012). For Asian girls, those who had their possessions taken away or damaged were the most likely to say that they disliked school or disliked school very much.

The Likelihood of Joining in Bullying. This study found that African American and multiracial students were more likely to say that they could join in bullying a student whom they did not like. At all grades, boys were more likely than girls to say they could join in bullying, but the difference between boys and girls increased in high school, regardless of their races/ethnicities. Grade trends showed that, across elementary and middle school grades, there was a steady increase for boys and girls until about 10th grade in the percentage who felt they could join in bullying. After 10th grade, there was a bit of

a dip for boys and girls. These findings supported the previous results of Limber and her colleagues (2012).

The Effects of Race/Ethnicity on Selected Dimensions of Bullying.

A multivariate analysis of variance showed that only 1% of the variance was explained by race/ethnicity in the dimensions of bullying that were analyzed in this study (e.g., school safety, the size of students' social networks in school, general satisfaction or dissatisfaction with school, and the likelihood of joining in bullying). When gender and grade were included as covariates, the model was improved, and the new model (including, race/ethnicity, gender, and grade) explained 5.6% of the variance in school safety, 2.7% in the size of students' social networks in school, 3.0% in the general satisfaction or dissatisfaction with school, and 7.4% in the likelihood of joining in bullying.

School-Level Variables and Their Relationship to Bullying

Few studies have looked at the relationships between key school-level variables (such as the densities of racial/ethnic groups, the ethnic diversity, overall poverty level, student/teacher ratio, and school locale) and bullying. This study examined the correlations between the densities of racial/ethnic groups and school ethnic diversity and students' self-reported bullying involvement in school, the moderating effect of the school's poverty level and student/teacher on the relationship between race/ethnicity and bullying, and the racial/ethnic group differences in bullying according to the school locales.

Ethnic Densities and Bullying. As mentioned earlier, the ethnic density was calculated for each of the five races/ethnicities (Asian, African American, Hispanic, White, and multiracial). This study found that the ethnic densities of African American ($r = .02$), White ($r = .01$), and multiracial students ($r = .04$) were associated with a slightly greater likelihood of being bullied according to the scale score. However, the ethnic densities of Asian American ($r = -.05$) and Hispanic students ($r = -.04$) were associated with less bullying according to the scale score.

This study included a much higher percentage of White students than Asian American students, so the densities of the racial/ethnic groups were ranked into scores (1, 2, 3, 4), with higher values indicating greater densities, and if selecting Asian = 4 and White = 1, similar patterns were found, but a negative relationship was produced for White students ($r = -.03$). The findings suggest that a child is slightly less likely to be bullied within a school context where Asian and Hispanic students are well-represented. However, a child is more likely to be bullied within a school context with higher densities of African American and multiracial students. There was not a clear pattern showed for the density of White students and bullying.

School Ethnic Diversity and Bullying. As mentioned earlier, although several studies have examined the relationship between ethnic diversity and students' bullying behaviors within a *classroom* environment (e.g., Graham & Juvonen, 2002; Juvonen et al., 2006), few studies explored the ethnic diversity and bullying within a *schoolwide* context. This study found that there was a very small but statistically significant positive relationship ($r = .01$) between the school's ethnic diversity and being bullied (scale).

However, when the ethnic diversities of schools were ranked into 3 scores (1, 2, 3), with higher values indicating greater diversities, there was a negative relationship found for rank 1 ($r = -.01$), but there were positive relationships for rank 2 ($r = .03$) and rank 3 ($r = .02$). These findings suggest that students are less likely to be bullied within a school context with a moderately high rate of school ethnic diversity, but they will be more likely to be bullied if the ethnic diversity is too high.

School Locales and Bullying. Bullying is not a problem unique to urban schools (Robers, Kemp, & Truman, 2013; Tonya et al., 2001). This study found that students in schools located in town and rural communities were somewhat more likely to be bullied than students in urban and suburban areas. This study did not find differences between urban and suburban areas. Many reasons may explain these differences. One reason might be the school's ethnic diversity. In this study, town (.26) and rural schools (.25) had a lower average ethnic diversity than urban (.42) and suburban schools (.32). A lower ethnic diversity was associated with greater being bullied.

This study also explored the associations between school locale, the nine specific forms of being bullied, and race/ethnicity. For example, findings showed that students attending schools in urban, town and rural communities were more likely than their peers attending suburban schools to be racially or ethnically bullied. Asian American students were more likely than their peers of other racial/ethnic groups to be racially or ethnically bullied in all communities. Students in towns were more likely to be cyber bullied than students in urban, suburban, and rural areas. Multiracial students were the most likely to be cyber bullied and Hispanic students were the least likely to be cyber bullied in all

communities. The findings appear to suggest that an innovative approach for accomplishing bullying prevention efforts should consider addressing these differences in terms of specific forms of bullying, races/ethnicities, and school locations.

The Moderating Role of the School's overall Poverty Level and Student/Teacher Ratio. A series of hierarchical multiple regression analyses were used to look at whether the school's overall poverty level and student/teacher ratio will moderate the relationship between races/ethnicities and the two bullying scales. This study found that the school's overall poverty level and student/teacher ratio significantly moderated the relationship, but student/teacher ratio explained a very small amount of variance in both bullying scales. The findings in this study supported existing research indications that school poverty level moderates the relation between ethnicity and bullying victimization (e.g., Hanish & Guerra, 2000).

Predictive Factors for Bullying

A series of multiple linear regression analysis were carried out to examine the predictive factors for bullying.

Predictive Factors for Being Bullied. In the model predicting being bullied, the overall model was significant and explained 22% of the variance. Children who felt less safe, had a higher likelihood of joining in bullying, were in elementary school, had fewer friends, felt less satisfied with school, were in a school with a higher overall poverty level, were a multiracial student, and were a girl were more likely to be bullied. Student/teacher ratio did not predict being bullied.

Predictive Factors for Bullying Others. In the model predicting bullying others, the overall model was significant and explained 14% of the variance. Students who had a higher likelihood of joining in bullying, felt safer at school, felt less satisfied with school, were in a school with a higher overall poverty level, were an African American student, were a multiracial student, and were in elementary school were more likely to bully others. Gender and student/teacher ratio did not contribute to bullying others (scale).

In addition, Swearer et al. (2012) found that there was a negative relationship between school sense of belonging (e.g., students enjoy going to school; students feel like they belong to their school) and victimization and bullying perpetration. The current study examined students' satisfaction or dissatisfaction with school and found that the less satisfaction with school was associated with greater victimization and bullying perpetration. School satisfaction is related to a student's feeling of belonging to school, at least to some degree. Thus, the findings in the current study regarding school (dis)satisfaction with school supported Swearer and her colleagues (2012) in terms of sense of belonging to school and victimization and bullying perpetration.

Implications for Practice

The Olweus Bullying Questionnaire (OBQ) is a widely used bullying survey to collect data on bullying (Cornell & Bandyopadhyay, 2010). The OBQ is one of the key components of the Olweus Bullying Prevention Program (OBPP), an evidence-based, comprehensive bullying prevention program (Olweus & Limber, 2010b). As discussed earlier, in the existing research on bullying that used the OBQ survey data, students self-reported their demographic characteristics including their gender, grade, and

races/ethnicities. Gender and grade have been well-researched to look at their relationships with bullying, but race/ethnicity has been an area that has received relatively little focus by bullying researchers. In addition, in the OBQ, students self-reported their perceptions of how they liked school, the likelihood of joining in bullying a student whom they do not like, how many friends they had in their class(es), and how often they were afraid of being bullied by other students in their school. The associations between these variables and bullying have not been well examined. Also, the school-level variables such as the densities of races/ethnicities in school, the school's ethnic diversity, the overall poverty level of the school, student/teacher ratio, and school locations may have impacts on bullying, however, these school-level variables have received relatively little attention by bullying researchers. This study expanded the existing body of knowledge of bullying by filling in these research gaps.

The self-reported race/ethnicity of a student is significantly associated with his or her involvement in bullying in terms of the likelihood of being bullied and bullying others, his or her bullying status (i.e. being involved in bullying as "victims only," "bullies only," and "bully victims"), the specific forms of bullying in which he or she involved, the likelihood of joining in bullying, and his or her fear of bullying. Although the effects of races/ethnicities are very small in some cases, these effects are improved when controlling for other variables (e.g., gender, grade, the school's overall poverty level, and school locations). This study produced findings that may inform comprehensive bullying prevention efforts.

The current study highlights a significant need to understand bullying and a child's racial/ethnic characteristics. Many reasons may explain the racial/ethnic differences in bullying. First, students of different races/ethnicities may report higher or lower involvement in bullying because of different understandings of what bullying is (Cornell & Limber, under review; Olweus, 2013). Although the OBQ provides a definition of bullying, students of different racial/ethnic groups may understand it differently according to their gender, grades, and racial/ethnic characteristics. A second explanation may lie in differing in cultural norms within families and communities. There may be some cultural values and practices within a certain race/ethnicity that encourage or discourage bullying behaviors. Few studies have explicitly explored the associations between such cultural values and/or practices and bullying. This study produced critical findings about students who identified themselves as belonging to more than one racial/ethnic group and those students who did not know their races/ethnicities and bullying. Multiracial students and those students who did not know their races/ethnicities were more likely to be involved in bullying behaviors than their peers of other racial or ethnic groups.

Third, the context/culture at the school regarding different races/ethnicities may also explain group differences in bullying involvement. For example, this study found that Asian American students were more likely than their peers of other races/ethnicities to be bullied with mean names or comments about their race or color. Educators could be made aware of this issue through training. However, school culture is also influenced by norms and values of a broader social environment. These issues could be openly

discussed with children in school and community setting. The school climate may also need to be restructured to reduce opportunities and rewards for bullying and build a sense of community among students and adults in the school community (Limber, 2011).

Findings from the current study indicated that the school's ethnic diversity and overall poverty level predicted bullying among children and youth. These findings could inform educators and policy-makers that bullying can be addressed by encouraging, whenever possible, ethnic diversity in school settings. Students in higher poverty schools may be more at risk of being involved in bullying. Students in these schools may benefit particularly from targeted prevention efforts in schools, families, and communities.

Findings from the current study indicated that a child was less likely to be bullied if his or her race/ethnicity was well-represented in a school. Educators and parents could be made aware and promote their supervision of those students who are members of a racial/ethnic group with a low density in a school.

Findings from this study indicated that there were racial/ethnic group differences in bullying according to school locales (urban, suburb, town, and rural). Practically, an innovative approach for accomplishing bullying prevention efforts in urban settings may not work well in town and rural settings. There may be numerous factors that impact urban settings but not necessarily impact town and rural settings (and vice versa). These factors may include community violence, limited resources, competing educational priorities, leadership instability, and demographic challenges (e.g., homeless, poverty, and racial and language diversity).

Recommendations for Future Research

The current study utilized a large sample in which students of different races/ethnicities were not evenly represented, limiting its ability to make comparison between and among students of different racial/ethnic groups. Also, the large sample size limited the capacity to produce acceptable effect sizes in some cases. However, the results from this study are promising and help to make a compelling case for additional studies. It is recommended that future research involve careful participant selections. For example, according to the 2010 Census, the Asian population was heavily concentrated in the West (e.g., in Hawaii and California) and Northeast (e.g., New York, Washington, and New Jersey) (U.S. Census Bureau, 2012a), and more than three-quarters of the Hispanic population lived in the West (e.g., in California) or South (e.g., in Texas, Florida, Arizona) (U.S. Census Bureau, 2012b). Future research exploring racial/ethnic differences in bullying and school climate could target these regions where the Asian and Hispanic populations are the most represented.

The current study took special care to examine children's self-reported experiences with and perceptions of bullying (Olweus, 2013). However, it is recommended that future studies include qualitative data (e.g., using focus groups) on student perceptions and bullying involvement. Qualitative data may help to explore the family and community cultural values and practices that a certain racial/ethnic group may have to contribute to bullying.

Data from the national OBQ survey data have provided researchers with valuable information about children's experiences with and perceptions of bullying. This affords

opportunities to have students' voices heard and their interests considered. This study recognizes that bullying is a civil and human rights issue. However, in the existing literature, this topic has not been well discussed, although the nationwide effort to reduce bullying in U.S. schools can be regarded as part of larger civil and human rights movements that have provided children with many of the rights afforded to adult citizens, including protection from harm in the workplace (Cornell & Limber, under review). It is recommended that future studies include discussions with children, educators, parents, and policy-makers about bullying from a rights perspective.

In addition, this study generated two multivariate regression models predicting the variance in being bullied and bullying others. Although the two models explained 22% of the variance in being bullied and 14% of the variance in bullying others, these two models are needed to be improved by including the roles that individual (e.g., a child's personality), family (e.g., cultural norms and practices, home languages), neighborhood and community (e.g., a child's interactions with children of their age in the neighborhood, involvement in faith-based organizations) components may play in bullying. For example, there are few studies that report the prevalence of bullying beyond the schoolyard. Most commonly, bullying among children and youth beyond schools has examined cyber bullying. However, children's bullying behaviors online are often connected with their bullying experience in schools (Juvonen & Gross, 2008). Future research focus on the natures and prevalence of bullying that children may experience in their neighborhood and communities.

Further, the characteristics of the communities in which children live and go to school may have direct and indirect influences on their behaviors and well-being. Research has indicated that rates of child maltreatment, delinquency, violence, aggression, and general externalizing behavior in youth have been linked to community variables (e.g., Plybon & Kliwer, 2001). Few studies have directly connected community constructs to bullying among children and youth, although community components have been included in some comprehensive bullying prevention efforts (Olweus & Limber, 2010b). Analyses of community variables and bullying are scarce. It is recommended that special attention be paid to community characteristics in future research.

In the U.S., some school districts are school choice districts (e.g., Houston Independent School District). There may be many school features that attract families to enroll their children in their zoned schools. This study suggests that bullying (and a broader school climate) may be one of school features that discourage families from enrolling their children in their zoned schools because school safety is often concerned in discussions about bullying (Pritchard, 2013), and vice versa. It is recommended that future research could address this issue.

This study showed promising results regarding the relationship between the ethnic densities of racial/ethnic groups and school's ethnic diversity and bullying, helping to make a compelling case for additional studies. However, it is recommended that the findings in this study in terms of the relationship between the ethnic density and the school's ethnic diversity and bullying be further explored in future research.

This study found that student/teacher ratio did not predict bullying. However, as discussed in Chapter 2, a higher student/teacher ratio may reduce the teacher's supervision of student interactions and slow the development of the teacher-student relationship in class. In addition, research shows that students who perceive that their teachers (and other school staff) are supportive are more likely to indicate that they would seek help for bullying and threats of violence (Eliot et al., 2010). The reality is that a significant percentage of students (7.6% of girls and 5.4% of boys) are bullied in class when the teacher was in the room (Limber, Olweus, & Wang, 2012). Thus, it is recommended that the findings in this study in terms of the relationship between student/teacher ratio and bullying be further explored in future research.

Limitations

This study produced new knowledge and added to the field's understanding of bullying. However, several limitations must be considered.

About Research Questions and Hypotheses

The first limitation is related to the research questions and hypotheses. The research questions in this study were proposed by drawing heavily on the existing research on bullying. A lack of studies on the influence of race/ethnicity on bullying limited the capacity to accurately capture the nature of race/ethnicity and bullying. For example, because of the limited research base, the researcher was able to form tentative hypotheses about White, African American, Hispanic, and Asian American students, but had no predictions about multiracial students and those students who did not know their

racess/ethnicities. This further led to the situation that most of the hypotheses concerning racial/ethnic group differences were partially supported or not supported. In addition, this study was not able to propose hypotheses to address those students who said that they did not know their races/ethnicities.

About the Data

The OBQ data have been a tremendous reservoir of information on bullying. As discussed above, the data have focused on children's self-reported experiences with, perceptions of, and attitudes towards bullying. Students' cultural values and norms that may be related to their racial/ethnic identity and community and neighborhood components are not included.

As discussed above, one of the weakest parts of the current study was the unrepresentative nature of the sample, despite the large size in this study. Asian American students were a relatively small ethnic group in the data and may not reflect the national population distributions in terms of races/ethnicities. This limited the capacity to make an accurate comparison with other racial/ethnic groups. In addition, the two ethnic groups in this study, Asian and Hispanic, may encompass diverse cultures of origin of ethnic subgroups (U.S. Census Bureau, 2011, 2012a, 2012b). However, it was not possible for this study to look at the intra-ethnic group differences in bullying. In addition, this study was not able to examine whether students were bullied by their peers of same races/ethnicities or those of different races/ethnicities. This study recognizes that it would be inappropriate to make generalizations about racial/ethnic groups and bullying without considering the likely intra-ethnic group differences in bullying.

About the Analyses

In some cases, there was a lack of strong relationships between and among school variables (the densities of racial/ethnic groups, the school's ethnic diversity, overall poverty level, and students/teacher ratio) and the dependent variables (being bullied and bullying others). This lack of strong effects may have been caused by having skewed answer distributions, and a very large sample size.

This study carried out a series of multivariate analysis to examine the moderating roles of school variables on bullying and generate multivariate regression models predicting bullying. It required assessing multivariate skew, but multivariate normality is extremely difficult to test for, given large numbers of linear combinations (Tabachnick & Fidell, 2007). Therefore, this study only tested and corrected for univariate skew, as suggested by some scholars (e.g., Tabachnick & Fidell, 2007).

This study assumed grouping participants by traditional grades into elementary school (3rd-5th), middle school (6th-8th), and high school (9th-12th).

A major school-level variable in this study was the size of students' social networks in school. In the OBQ data, this variable was operationalized as the number of good friends a child had in his or her class(es). This variable may not necessarily capture the information about the number of good friend a child may have beyond their class(es), that is, at school level. Future research should include the number of friends that a child may have at school level to examine his or her social networks in school.

This study shed new light on the understanding of bullying by generating two multivariate regression models. However, the adjusted R^2 in these two models could be

improved perhaps by including neighborhood and community components, among others.

Conclusion

The current study added to our understanding bullying among children and youth by examining the relationship between race/ethnicity and bullying and generating multivariate regression models predicting students' involvement in bullying. There was a significant relationship between race/ethnicity and bullying for groups involved in this study (White, African American, Hispanic, Asian, and multiracial), and this relationship was moderated by the school's overall poverty.

The multivariate regression models that were generated in this study explained 22% of the variance in being bullied and 14% of the variance in bullying others. The likelihood of joining in bullying, being in elementary school and high school, the size of students' social networks in school, general school satisfaction or dissatisfaction, school safety, the school's overall poverty level, being multiracial and African American students, the ethnic densities of Hispanic and Asian American students, the school's ethnic diversity, and attending a school located in towns were all important significant predictors for bullying. The student/teacher ratio was not a predictor in either model. Gender did not contribute to bullying others, but had a very small impact on being bullied.

Bullying has a negative impact on school climate. More than that, though, the experience of bullying has negative effects on child development and child well-being in myriad ways. This study served as an important reminder that students have much to

contribute to the school community – but only if others take the time to listen, supervise, interact and help them to learn and develop within a more positive school climate.

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