AN EXPLORATION OF PEER SOCIAL DYNAMICS AS SETTING EVENTS FOR THE
BULLYING INVOLVEMENT OF STUDENTS WITH HIGH INCIDENCE
DISABILITIES

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by
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Abstract

Bullying is a complex, social-relational problem that has become a significant issue in schools and classrooms across the United States. While decades of research have been devoted to identifying a cause and cure, prevalence rates remain high. This is of particular concern for students with disabilities (SWD) who are significantly more likely than their non-disabled peers to be involved in bullying, particularly as victims and bully-victims. While these students tend to have patterns of social interactions that increase their risk for involvement in bullying, these have not been connected to specific social contexts that may serve to elicit and maintain bullying interactions. The purpose of this study was to identify differences in peer social processes of SWD involved in bullying that might indicate differentiated social roles that may set the occasion for bullying interactions. Results indicated significant heterogeneity within groups of SWD identified as bullies, victims, and bully-victims. Results are discussed in terms of theoretical, practical, and policy implications.
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Chapter 1

Introduction

Problem Statement

School bullying is a pervasive problem in schools and classrooms throughout the United States. Traditionally considered a childhood rite of passage, bullying is now regarded as a public health concern and has been associated with academic, social, and emotional problems that persist well into adulthood (Wolke & Lereya, 2014). As of this writing, no universally accepted definition of bullying exists, however, it is generally agreed upon by experts in the field, as well as the U.S. Centers for Disease Control, the American Psychological Association, and the National Association of School Psychologists, that bullying is a subtype of aggressive behavior characterized by *intent to harm, repetition,* and an *imbalance of power* between participants (Gladden, Vivola-Kantor, Hamburger, & Lumpkin, 2104; Olweus, 1993b; Vaillancourt & Hymel, 2004; VandenBos, 2007). Based on these considerations, all acts of bullying take the form of aggression, yet not all aggressive behaviors meet the criteria to be considered bullying.

National prevalence rates for bullying among school-aged youth vary significantly across investigations. On the whole, reports indicate that between five and thirty-three percent of students acknowledge bullying others or being victimized (Cook, Williams, Guerra, Kim, & Sadek, 2010; DeVoe & Murphy, 2011; Nansel et al., 2001; Zweig, Dank, Yahner, & Lachman, 2013). Bullying is evident as early as pre-school, however, the frequency of occurrence is highest during the middle school years (DeVoe & Murphy, 2011; Espelage & Swearer, 2003). According to a recent report from The National Center for Education Statistics, approximately 30% of students aged 12-18 were involved in some form of bullying perpetration or victimization during the 2010-2011 school year (DeVoe & Murphy, 2011). These included
physical fights, giving or receiving threats, and harassment based on race, religion, ethnic background, and/or sexual orientation. Rates of perpetration and victimization were highest amongst students in sixth, seventh, and eighth grade.

Although no federal law exists protecting students from bullying, all states currently have laws directing school districts to develop policies that address bullying (Temkin, 2015). State anti-bullying statutes vary widely, however generally include features that define, prohibit, investigate and monitor levels of bullying, and provide for training staff to recognize and report bullying. On the whole, the effectiveness of anti-bullying or bullying prevention programs have been mixed. Those based on harsh disciplinary measures (e.g., zero-tolerance) and peer facilitated approaches (e.g., mediation, mentoring, conflict-resolution) have been criticized for exacerbating or even increasing the bullying problem (Alley & Limber, 2009; Ttofi & Farrington, 2011). More promising are programs relying on positive, preventive, school-wide approaches focused on creating a safe and welcoming school environment (e.g. The Olweus Bullying Prevention Program; Bully Prevention in Positive Behavior Support, Multi-Tiered Systems of Support). Elements of these programs focus on classroom management strategies, teacher training, and schoolwide rules related to bullying, typically in a tiered system of supports (Ttofi & Farrington, 2011).

Over the past 15 years, the U.S. Department of Education (DOE) and office for Civil Rights (OCR) have provided guidance to schools with regard to bullying and harassment of students with disabilities (SWD). This guidance, in the form of Dear Colleague Letters or DCL (Ali, 2010; Cantu & Heumann, 2000; Musgrove & Yudin, 2013) warn that disability based harassment constitutes denial of equal educational opportunities for SWD by preventing access to a free and appropriate public education (FAPE). The most recent DCL (Lahmon, 2014)
stresses that bullying of a SWD on any basis results in a denial of FAPE requiring immediate attention and resolution. Despite this, prevalence rates remain high. Studies reporting the prevalence of bullying involvement for SWD indicate that as many as 50% experience some form of bullying (Blake et al., 2014; Blake, Lund, Zhou, Kwok, & Benz, 2012; Rose, Monda-Amaya, & Espelage, 2011). Additionally, once SWD experience peer victimization, the risk for further, on-going harassment increases five-fold (Blake et al., 2014; Hartley, Bauman, Nixon, & Davis, 2015).

**Theoretical underpinnings**

Bullying is a *complex social phenomenon* (Mishna, 2003; Rose, Espelage, Monda-Amaya, Shrogen, & Aragon, 2013; Swearer & Espelage, 2004; Thornberg, 2011). *Complex* because many factors work together to form the foundation of bullying relationships, but none act alone; *social* because bullying involves interactions between peers and is embedded within the social structure of schools and classrooms (Rodkin & Gest, 2011). Thus, bullying is not simply an isolated event occurring between a bully and a victim, but is embedded within the intricate social tapestry of peer social dynamics (Bronfenbrenner, 1994; Swearer & Doll, 2001).

Consistent with a social-ecological framework of development, peer bullying and victimization are reciprocally influenced by individual, family, peer, school, neighborhood, and cultural variables (Espelage & Swearer, 2010; Swearer & Espelage, 2011). While it is unrealistic to expect teachers to assess all areas contributing to student bullying, it may be feasible for teachers to identify antecedent contextual conditions, or *setting events*, that may serve as catalysts for anti-social behavior (Farmer, Wilke, Alexander, Rodkin, & Mehatji, 2015; Fox & Conroy, 1995; Hendrickson, Gable, & Shores, 1987; Rodkin, Espelage, & Hanish, 2015).
The remainder of Chapter 1 provides an explanation of key terms related to peer social processes and bullying involvement of SWD and concludes by outlining research questions guiding this investigation. Relevant research pertaining to social dynamics and bullying involvement of SWD is reviewed in Chapter 2. Research methods, study participants, data collection procedures and measures are described in Chapter 3. Results of statistical analyses appear in Chapter 4, while Chapter 5 provides a discussion of findings, limitations, and recommendations for future research.

Explanation of Terms

Student with a Disability

According to The Individuals with Disabilities Education Act (IDEA), a student with a disability: (1) meets criteria for one or more specific disability categories as measured by appropriate diagnostic instruments and procedures, and (2) requires special education and related services in order to access an appropriate education (U.S. Department of Education, 2004). The Department of Education has identified 13 specific disability classifications, six of which apply to participants in the current study.

Autism (ASD). Autism is a developmental disability characterized by deficits in both verbal and nonverbal communication and social interaction that manifest before age three. Children with autism may have adversely affected academic performance, engage in repetitive activities and movements, resist change, and react atypically to sensory experiences (e.g., loud noises, clothing tags). These symptoms range from minor to severe. Some students with autism are included in the general education environment with their typically developing peers, while others require more self-contained settings.

Emotional disturbance (EBD). Both emotional and behavioral disorders are included in this category. Characteristics of EBD include:
• inability to learn that cannot be explained by intellectual, sensory, or health factors
• inability to build or maintain interpersonal relationships with peers and teachers
• inappropriate types of behavior under normal circumstances
• pervasive unhappiness or depression
• psychosomatic symptoms or fears associated with school or personal situations
• schizophrenia

**Intellectual Disability (ID).** Students with ID function significantly below average intellectually and may exhibit deficits in adaptive behavior that adversely affect academic performance. According to provisions set forth in IDEA, students with ID participate in school with their typically developing peers to the greatest extent possible.

**Other health impairment (OHI).** Students identified as OHI experience symptoms that limit their ability to successfully participate in general education, however, do not completely meet the necessary criteria for other identifications. Conditions associated with OHI include chronic or acute health problems (e.g., attention deficit hyperactivity disorder, attention deficit disorder, asthma, Tourette Syndrome, cancer, heart disease) that significantly interfere with the ability to access one’s educational program.

**Specific Learning Disability (SLD).** Students with SLD are affected by disorders in one or more basic psychological processes involved in understanding or using written or spoken language that manifest themselves as deficiencies in the ability to speak, listen, read, write, spell, or complete calculations. The category of SLD includes perceptual disabilities, minimal brain dysfunction, dyslexia, and developmental aphasia. This category does not include conditions that are the result of visual, hearing, motor, intellectual, or emotional disabilities, or cultural, environmental, or economic disadvantage.
Speech and language impairment (SLI). Speech and language impairments include communication disorders that interfere with a child’s educational performance. Examples include stuttering and other impairments of articulation, voice, or language.

Bullying

Bullying is a social process involving a range of aggressive behaviors including physical, verbal, social, and/or relational attacks on other, weaker individuals (Olweus, 1978). Bullying is distinct from general forms of aggression in that bullying entails a power differential whereby stronger individuals deliberately and continuously mistreat other weaker individuals for the sole purpose of inflicting harm. While bullying occurs in a variety of contexts (e.g., workplace, families), the scope of this discussion focuses on student bullying in schools, specifically as it pertains to adolescents with high-incidence disabilities. In schools, students involved in bullying largely fall into one of three bullying involvement subtypes or participant roles: bully, victim, or bully-victim (Olweus, 1993a).

Bully. Students identified as bullies deliberately inflict harm on their physically and/or socially vulnerable peers. Contrary to stereotypical misconceptions identifying bullies as loners with few friends, these students are generally confident and socially successful (Olweus, 1978, p. 34). Students identified as bullies characteristically behave more aggressively than other students and are also more socially adept at using these behaviors in attacks against weaker peers (Olweus, 1993b). Some bullies are popular and well-integrated, socially skilled, charismatic, and well-liked by teachers. They employ subtle forms of aggression to manipulate others in order to improve or maintain their own social status (Gordon, 2014). On peer behavioral assessments, bullies tend to receive many nominations for both liked-most and liked-least, may be sociometrically popular or controversial, and are often perceived by their peers as cool and/or popular (Farmer, Hall, Leung, Estell, & Brooks, 2011a).
Victim. Victimized students are the targets of physical, emotional and social harm inflicted by bullies. These students typically display more withdrawn, submissive, and avoidance behaviors than either bullies or bully-victims (Lagerspetz, Bjorkvist, Berts, & King, 1982; Olweus, 1978; Salmivalli, Lagerspetz, Bjorkqvist, Osterman, & Kaukiainen, 1996). Peers may not only avoid victimized students, but also be unwilling to defend them against perpetration for fear of becoming victimized themselves (Salmivalli, 2010; Salmivalli & Neiminen, 2002). On peer assessments, some victimized students receive nominations for being liked most or liked least by their peers. More often, victims receive no nominations at all, indicating their general insignificance within the peer hierarchy (Juvonen, Graham, & Schuster, 2003).

Bully-Victim. Bully-victims are behaviorally similar to bullies in that they rely on verbal and physical aggression to manipulate others, however, they lack the social competence necessary to innovatively influence others. These students may be bullied by stronger, more powerful peers, but also bully those who are weaker. Bully-victims tend to exhibit more externalizing behaviors, conduct problems, and emotional dysregulation than ether bullies or victims (Haynie et al., 2001). Socially, bully-victims are actively disliked by their peers, perceived as socially insignificant, and are the most severely rejected students in school (Coie, Dodge, & Coppotelli, 1982).

Types of Bullying

There is not one standard, operational definition for bullying. It is commonly accepted, however, that bullying occurs when a weaker individual is subjected “repeatedly and over time to negative actions on the part of one or more other students.” Negative actions refer to “intentional attempts to cause harm or discomfort to another.” Bullying takes many forms and
can be carried out by an individual or a group (Olweus, 1993a, p. 9).

**Direct bullying.** Most acts of physical and verbal perpetration are considered direct, or face-to-face bullying (Harris & Petrie, 2003). These include interactions between bullies and victims that are open, observable and easy for others to recognize (Olweus, 1993a, p. 10).

**Physical.** Physical bullying involves acts of physical aggression between a bully and a victim. Examples of physical bullying include hitting, punching, kicking, slapping, choking, and can also include destruction of another’s property. Because they are overt in nature, acts of physical bullying are the most common form of school bullying (Crick, 1996; Crick & Bigbee, 1998).

**Verbal.** Verbal bullying includes behaviors such as name-calling, threats, racial slurs and blackmail meant to cause distress and embarrassment to the victim (Nansel, et al., 2001). Although verbal bullying does not include physical contact, the effects can be equally, if not more damaging. Verbal bullying takes place through a variety of modalities, including face-to-face encounters, telephone, e-mail, and social media (Wang, Iannotti, & Nansel, 2009).

**Indirect Bullying.** Indirect bullying includes behaviors intended to harm a victim through peer rejection, isolation, and social exclusion. Since acts of indirect bullying are subtler and more covert in nature, they are more difficult to observe. However, practices of indirect bullying typically result in more serious harm than do more direct attacks (Wang, et al., 2009).

**Relational.** Also known as emotional, psychological, exclusionary, or social bullying, relational bullying involves manipulation of peer relationships leading to rejection and exclusion meant to damage the self-esteem or social status of a victim (Cairns, Cairns, Neckerman, Gest, & Gariepy, 1988; Crick, 1996). Relational aggression includes behaviors such as spreading rumors, threatening to terminate a friendship, negative verbal expressions, ignoring, and deliberate
exclusion (Pelligrini, 2002). Since relational bullying is more difficult to observe, instances are more likely to be overlooked (Harachi, Catalano, & Hawkins, 1999).

**Sexual.** Sexual bullying can be both direct and indirect. Harassment based on an individual’s sexuality or gender characteristics constitute sexual bullying. Examples of sexual bullying include derogatory comments referencing one’s sexuality, spreading rumors about someone’s sexual orientation or experiences, pressuring someone to act in a sexual way, unwanted touching, jokes and/or comments (Pelligrini, 2002).

**Social Constructs**

**Sociometric status.** Historically, the construct of *popularity* has referenced those students who are well accepted by their peers and exhibit positive academic and behavioral characteristics (Bukowski, 2012). Sociometric status, an index of peer acceptance, is most commonly derived through peer nominations. Typically, scores based on both positive and negative peer nominations are calculated to determine an individual’s level of social impact (i.e., total number of positive and negative nominations) and social preference (i.e., difference between positive and negative nominations). Based on these scores, students are selected into one of five sociometric categories: popular, controversial, average, neglected or rejected (Coie et al., 1982). Thus, children who are well-liked, lack unpleasant behaviors, and are prosocial tend to be preferred by their peers, and therefore, sociometrically popular. Research on bullying involvement of SWD has shown that low levels of peer acceptance can result in lower social positions related to involvement as a bully, victim or bully-victim (Estell et al., 2009).

**Social prominence.** Social prominence is an index of how one is seen by others. Also known as perceived popularity, the construct of social prominence emphasizes social salience, prestige, influence, and dominance within the peer hierarchy, and has been associated with both
prosocial and antisocial characteristics (Cairns, Xie, & Leung, 1998; LaFontana & Cillessen, 2002; Parkhurst & Hopmeyer, 1998).

Social prominence is based on individual attainments, dominance, prestige, and reputation, rather than personal preference (Parkhurst & Hopmeyer, 1998; LaFontana & Cillessen, 1999, 2002). In this respect, perceived popular status is attained in the presence of a group that recognizes the individual as distinct and prestigious rather than possessing positive academic, social, and behavioral attributes. Therefore, those with highly valued social characteristics are perceived as more popular than those with undesirable social characteristics (Bukowski, 2012).

Sociometric and perceived popularity, while distinct social constructs, are also moderately related. To be socially successful involves attaining satisfactory levels of both acceptance and status. For example, both sociometric and perceived popularity are correlated with aggression. However, the valence of this correlation tends to be positive for perceived popularity and negative for sociometric popularity. Thus, it is possible for students to be perceived as popular and socially salient, but not necessarily well liked (LaFontana & Cillessen, 2002; Parkhurst & Hopmeyer, 1998).

**Social network centrality.** Unlike perceived popularity, social network centrality (SNC) is an index of social position rather than social characteristics, and is measured using the group rather than the individual as the unit of analysis (Cairns et al., 1988; Gest, Graham-Bermann, & Hartup, 2001). That is not to say, however, that the two constructs are unrelated. Youth with high centrality tend to have highly valued social characteristics. For example, students who are physically attractive, athletically skilled, or viewed as trendsetters often have nuclear centrality (Adler & Adler, 1996; Eder & Kinney, 1995). In contrast, students with fewer socially valued
characteristics tend to have correspondingly low social linkages and centrality in the peer system (Corsaro & Eder, 1990; Farmer et al., 2010b; Gest et al., 2001).

There are four categories of centrality: nuclear, secondary, peripheral, and isolated. Students with highly valued social characteristics occupy nuclear or central positions within the social hierarchy, and are therefore well integrated into the social network. Conversely, students who do not have highly valued social characteristics, such as those with disabilities, tend to exhibit behaviors that contribute to social marginalization (Farmer & Rodkin, 1996).

Peer group affiliation. The peer group to which one belongs is established through interactions between individuals, societal and contextual factors (Salmivalli, Huttenen, & Lagerspetz, 1996). Research on classroom social networks shows that children form peer groups based on shared characteristics. This phenomenon, known as homophily, reflects processes of both selection and socialization. In terms of selection, individuals choose to affiliate with others who have similar social, behavioral, and academic characteristics. In terms of socialization, as students affiliate together across time, they synchronize their interactions into mutually reinforcing patterns of behavior (Kandel, 1978).

When aggregated together, students sort themselves through their interactions with each other. Relationships develop when actions and behaviors of both parties reinforce each other, a process known as social synchrony (Farmer, Xie, Cairns, & Hutchins, 2000; Magnusson & Cairns, 1996). There are three forms of social synchrony. The first, imitation, occurs when one individual models his or her own behavior after the behavior of another. The second, reciprocity, occurs when two individuals involved in an interaction respond to each other in similar ways that elicit and reinforce common behaviors. The third, complementarity, involves interactions between two individuals who have different levels of status and forms of behaviors, but the
behavior of each is necessary for the behavior of the other (e.g., bully-victim, leader-follower; Cairns, 1979).

**Social role**

The school environment constitutes a dynamic social system comprised of hierarchical networks of students interacting both individually and as part of social groups (Gronlund, 1965; Moreno, 1953). Children’s behaviors elicit a vast number of responses from peers that are shaped through ongoing social interactions and responses from others (Cairns et al., 1988). Over time, these ongoing patterns of behavior and subsequent peer responses give rise to distinct social roles and reputations. For example, some students exhibit a combination of positive and negative characteristics, and these behaviors evoke positive and negative responses from peers. This pattern of interaction may result in popularity for some students, but rejection for others (Farmer et al., 2010). In the case of bullying and SWD, individual social roles and reputations consistently prompt specific peer reactions that are subsequently reinforced by others (Farmer, Lane, Lee, Hamm, & Lambert, 2012; Kohn, 1966). In this respect, social roles and reputations can act as setting events for student behaviors (Farmer et al., 2015; Hendrickson et al., 1987).

Figure 1. Factors contributing to Social Role Development

Setting event

Setting events can be very complex and include the presence or absence of specific
contextual variables, intrapersonal, physical, social events, and environmental-behavioral histories that comprise an individual’s social role or reputation (see Figure 1; Hendrickson et al., 1987; Leigland, 1984; Wehby, Symons, & Shores, 1995). In behavioral terms, setting events include a range of environmental conditions that determine which stimulus-response interactions will occur at any given point in time (Fox & Conroy, 1995; Kantor, 1959). For example, a SWD may have experienced numerous classroom interactions resulting in peer rejection. Throughout school and over time, the presence of this student may consistently evoke bullying behaviors from others within the classroom context. This history of social interactions becomes part of a social role that consistently sets the occasion for mistreatment by peers. Thus, behaviors associated with different social roles set the occasion for predictable peer responses, such as those connected with bullying perpetration and victimization (Strain, 1977; Strain, Shores, & Timm, 1977).

Summary and Research Questions

Decades of research purport that behavior does not happen in isolation, but is shaped through social interactions with others (Bandura, 1978; Cairns, Leung, & Cairns, 1995; Espelage & Swearer, 2004; Gronlund, 1965; Moreno, 1953). Peer social dynamics play a large role in the establishment and maintenance of bullying interactions (Espelage & Swearer, 2004). Compared to ND students, those with disabilities have a higher risk of being involved in bullying, most often as a victim or bully-victim. Due to differences in socially valued characteristics and manifestations of aggressive behavior, these students are less socially prominent, are lower in social status, and have fewer and poorer quality friendships than their ND peers. This, in turn, contributes to the risk of an ongoing cycle of bullying perpetration and victimization (Bruininks, 1978; Cho, Hendrickson, & Mock, 2009; Estell et al., 2008; Farmer et al., 2002; Nabuzoka &
Smith, 1993; Siperstein, Bopp, & Bak, 1978).

It is possible that, as a field, we are approaching the bullying problem from the wrong angle. Studies investigating school bullying are often concerned with isolating individual characteristics that can serve as risk factors for bullying involvement for SWD. However, and according to an ecological systems framework, many factors work together to support and maintain anti-social behaviors related to bullying. Subsequently, this is the first known investigation exploring how social roles of SWD may act as setting events that enhance or constrain the probability for involvement in bullying. Accordingly, this study was guided by five research questions:

1. Are there differences in peer nominated social preference among students with disabilities who are involved in bullying?
2. Are there differences in peer nominated social prominence among students with disabilities who are involved in bullying?
3. Are there differences in peer nominated aggression among students with disabilities who are involved in bullying?
4. Are there differences in measures of peer social network centrality for students with disabilities who are involved in bullying?
5. Are there differences in patterns of peer group affiliation among students with disabilities who are involved in bullying?

Clarifying differences in social roles of SWD involved in bullying may help inform bullying prevention and intervention efforts for these students. In addition, results are expected to have implications for helping classroom teachers understand combinations of individual and contextual conditions that increase the likelihood of bullying.
Chapter 2

Summary of Literature

Introduction

Bullying is not a new problem. During the late 1800’s, reports of bullying were associated with acts of physical aggression, often ending in the death of a victim (Burk, 1897; The Times, 1885; Hughes, 1913). Despite such severity, bullying was accepted as mischievous behavior, inherent to every boys’ human nature (Koo, 2007). Serious investigations of bullying as a social phenomenon did not begin until the 1970’s, when Dan Olweus conducted the first systematic, large-scale study of school bullying (Olweus, 1973, 1978). In the years since Olweus’s first investigation, interest in bullying as a social-relational problem has grown. Today, school bullying is recognized as a serious social problem that develops and is maintained through environmental and peer processes (Doll, Song, Champion, & Jones, 2004; Espelage, Bosworth, & Simon, 2000; Farmer, Estell, Bishop, O’Neal, & Cairns, 2003; Salmivalli & Huttunen, 1997; Swearer & Espelage, 2004a).

From a social-ecological perspective, development is partially influenced through complex, reciprocal, regularly occurring interactions between an individual and elements of the proximal environment (Bronfenbrenner, 1994). Studies spanning the past several decades have established that school bullying is mediated by individual, peer, and school factors (Bruininks, 1978; Cook et al., 2010; Corsaro & Eder, 1990; Eder, 1985; Espelage, Bosworth, & Simon, 2000). These include peer social preference (Coie & Dodge, 1983), social prominence (LaFontana & Cillessen, 2002; Parkhurst & Hopmeyer, 1998), social position (Cairns et al., 1988; Farmer, Rodkin, Pearl, & VanAcker, 1999), aggression (Prinstein & Cillessen, 2003;
Vaillancourt & Hymel, 2004), and peer affiliations (Duffy & Nesdale, 2009; Huttunen, Salmivalli, & Lagerspetz, 1996).

Following a discussion of prevalence, the remainder of this review presents extant findings relating involvement in bullying to constructs of peer acceptance, social prominence, aggression, social network centrality, and peer group membership. Additionally, peer processes are discussed in terms of students’ social roles and reputations. Finally, literature describing the concept of setting events for antisocial peer interactions is reviewed.

Prevalence

General education. According to the National Center for Education Statistics, approximately 30% of students, aged 12-18 were involved in direct and indirect bullying during the 2011 school year (Chandler, 2013). More specifically, 14% of participants reported physical bullying while 46.4% reported victimization through indirect aggression. Of these students, 64.5% were bullied one or two times per year; 18.5% were bullied one to two times per month, 9.2% were bullied once or twice per week, and 7.8% were bullied every day. Moreover, 10.8% experienced forms of physical bullying, 25.9% were victims of verbal bullying; and 23.8% were victims of relational bullying. Similarly, results from The Urban Institute’s study on bullying reported that 41% of participants were victims of physical bullying while 45% experienced relational bullying (Zweig et al., 2013). This is consistent with findings from a longitudinal investigation of students in grades six through ten conducted by The National Institute of Child Health (Nansel et al., 2001). Nearly 20% of participants reported bullying others at least one time per week, 17% were victimized at least one time per week and almost 30% stated they had bullied others, been bullied by others, or both. Findings from these studies also document that bullying was more prevalent among students in middle school than for those in high school.
These results confirm earlier research findings verifying that bullying becomes more prevalent as children transition from elementary into middle school (Adler & Adler, 1996; Corsaro & Eder, 1990; Eder, 1985; Espelage et al., 2000; Garandeau, Ahn, & Rodkin, 2011; Juvonen, 2007; Merten, 1997).

**Students with disabilities.** Some SWD have patterns of social behavior, social competence, and attributes that make them more vulnerable to involvement in bullying, particularly as victims and bully-victims (Farmer et al., 2010; Gresham & MacMillan, 1997; Martlew & Hodson, 1991; Rose, Swenson, & Waller, 2004; Walker, Colvin, & Ramsey, 1995). Using data from the National Longitudinal Transition Study-2, and The Special Education Elementary Longitudinal Study, Blake and her colleagues (2012) reported that 34% of middle school students, and 27% of secondary SWD experienced bullying by their peers at some point during the 6-12 months preceding data collection. Similarly, Swearer and her colleagues (2012) found that SWD were identified as bullies, victims, and bully-victims more often than their ND peers. In support of these general findings, Farmer et al. (2012) found that boys with disabilities were 2.4 to 3.2 times and girls with disabilities 3.9 to 4.8 times more likely to be identified as victims or bully-victims than were their ND peers. Consistent with prevalence reports for ND students, rates of bullying for SWD increased significantly during the middle school grades.

Several studies have addressed bullying specific to individual disabilities. For example, in a sample of fourth, fifth and sixth grade students, 80% of those with learning disabilities (LD) were bullied, compared to 20% of their ND peers. Similarly, 67% of students identified with emotional and behavioral disorders (EBD) were bullied as opposed to 33% of those without a disability, and 60% of those experienced bullying perpetration compared with 40% of ND students (Howell & Flores, 2014). Data from one national longitudinal study showed that
students identified as having EBD or attention deficit/hyperactivity disorder (ADHD) were at
greater risk for both bullying and victimization (Blake et al., 2014). This is consistent with other
findings demonstrating that students with ADHD and EBD served dual roles as both bully and
victim (Rose & Espelage, 2012; Swearer, Wang, Maag, Siebecker, & Frerichs, 2012; O'Moore &
Hillery, 1989).

**Peer Acceptance**

Students with high incidence disabilities have social and behavioral characteristics that
decrease the likelihood of peer acceptance (Gresham & MacMillan, 1997; Kavale & Forness,
1996). Subsequently, these students have lower levels of perceived popularity than their ND
peers (Estell et al., 2008; Kavale & Forness, 1996). In an investigation of social integration in
general education classrooms, SWD received fewer nominations for being cool, athletic,
prosocial and leaders and more nominations for being shy and seeking help (Pearl, et al., 1998).
Similarly, in a study of interpersonal competence configurations, boys with disabilities were
significantly more likely to be identified as troubled or extremely troubled. That is to say, they
had higher teacher ratings for being aggressive, shy, unfriendly, and unpopular and had lower
levels of academic competence. Girls with disabilities were significantly more likely to be rated
as either unruly or distressed. Distressed girls had higher ratings for internalizing behaviors and
lower ratings for being popular, athletic, friendly, and academically competent while very unruly
girls were rated as more aggressive, unpopular, non-athletic, and unfriendly (Farmer et al.,
1999).

It is also true, however, that a subset of SWD, who exhibit elevated levels of antisocial
behavior and aggression also have high levels of peer perceived popularity. For example, a study
by Farmer and Hallowell (1994) found that boys with EBD were four times more likely to be
nominated as aggressive and/or disruptive than their ND classmates. However, these students were also perceived to be some of the most popular and salient students in the class. Similarly, boys with disabilities were identified as very aggressive, popular, and athletic at a rate commensurate with that of their ND peers.

**Dimensions of Popularity**

What does it mean to be popular? There is not one simple answer for this complex question. Investigations conducted by scholars in both the psychological and sociological traditions provide different perspectives.

**Sociometric popularity.** For many years, psychologists associated popularity with peer acceptance, likeability, and prosocial behaviors (Hymel, Wagner, & Butler, 1990; Asher & Coie, 1990; Cairns & Cairns, 1994). Quintessentially, being popular indicated positive school adjustment and conveyed admirable social skills (Mayeux, Houser, & Dyches, 2011). Sociometric status is an index of peer acceptance that quantifies levels of peer liking or disliking (Coie et al., 1982). Scores based on both positive and negative peer nominations are calculated to determine an individual’s level of social impact (i.e., total number of positive and negative nominations) and social preference (i.e., difference between positive and negative nominations). Based on these scores, students are selected into one of five sociometric categories: *popular, controversial, average, neglected* or *rejected*. Students with a high number of “like most” and a low number of “like least” nominations are sociometrically popular. Conversely, students who receive few, or zero “liked most” nominations and high numbers of “liked least” nominations are sociometrically rejected. Students who receive high numbers of “liked most” and “liked least” nominations are sociometrically controversial, while sociometrically neglected children garner few or no “like most” or “like least” peer nominations. The number of like most and like least
nominations for sociometrically average students does not deviate significantly from the mean. Accordingly, popularity is positively correlated with prosocial and peer valued attributes including being friendly cooperative, kind, honest, and physically attractive (Coie, Dodge, & Kupersmidt, 1990; Newcomb, Bukowski, & Patee, 1993; Parkhurst & Asher, 1992).

**Perceived popularity.** Sociological investigations expanded on Coie and colleague’s (1982) findings by exploring relationships between social impact and popularity. These studies focused on students perceived as popular or unpopular rather than on those nominated as liked or not liked. In their seminal study, Parkhurst and Hopmeyer (1998) reported that while perceived popularity and sociometric popularity were moderately correlated, they were also two separate constructs. Unlike sociometric popularity, which is associated with social preference and likeability, perceived popularity is linked with social impact, salience and dominance. Similarly, a separate investigation designed to identify children’s behavioral expectations about socially accepted peers showed individuals perceived as being popular exhibited both positive (i.e., getting along with others) and negative (i.e., hostile intentions toward others) behaviors (LaFontana & Cillessen, 1999).

For some students, the desire to be popular may overshadow the importance of academic achievement, personal values, or peer acceptance (Adler & Adler, 1996; Coleman, 1961; Corsaro & Eder, 1990; Eder, 1985; LaFontana & Cillessen, 2002; Merten, 1997; Salmivalli, 2010). This is not a new phenomenon. Over 50 years ago, social scientist James Coleman described what he felt was “the high school problem.” Students, he surmised, existed within a separate “society of adolescents” who were not particularly interested in achieving academic success, but worked hard at acquiring social prestige. Prestige was necessary for membership in high level peer groups and could be secured through good looks and athletic ability. Being smart, or earning
good grades, were not characteristics associated with gaining status in the peer hierarchy (Coleman, 1961). Ten years later, the sociologist Eldon Snyder published findings describing the importance of prestige as a factor in adolescent popularity (Snyder, 1972). Personal qualities, good looks, material possessions, and the right friends were named as the most important criteria for achieving prestige. In another exploration of peer relationships and popularity amongst middle school girls, the desire to be popular surpassed the importance of academic success (Eder, 1985). Similarly, in a review of children’s peer cultures, acceptance and popularity were identified as “paramount” in gaining status (Corsaro & Eder, 1990).

**Popularity and aggression**

Bullying is a hallmark of aggression, and aggression has been connected to perceived popularity (Cillessen & Mayeux, 2004; de Bruyn, Cillessen, & Wissink, 2009; LaFontana & Cillessen, 2002). Students may use a combination of both overt and relationally aggressive tactics to manipulate others and increase their own status, dominance, and popularity in the social hierarchy (Farmer et al., 2002; Rodkin, Farmer, Pearl, & VanAcker, 2000). Those who are best able to organize their behaviors and effectively use aggression to gain high social status most often occupy positions of social power (Farmer et al., 2003; Hawley, 1999; Salmivalli, 2010). Conversely, those whose use of aggression is ineffective in gaining access to resources are more likely to be socially marginalized (Farmer, Petrin, et al., 2010; Rose et al., 2013). Thus, students who bully are a heterogeneous group (Rodkin et al., 2000; Farmer et al., 2003; Shi & Xie, 2012).

Research shows that bullies use both direct and indirect aggression to both establish and maintain social prominence (Adler & Adler, 1996; Cillessen & Mayeux, 2004; Xie, Swift, Cairns, & Cairns, 2002). In one comparative study, aggressive students were perceived as more
popular than would be expected based on actual levels of peer liking (Parkhurst & Hopmeyer, 1998). Similarly, one longitudinal investigation showed that direct and indirect forms of aggression predicted both low levels of peer acceptance and high levels of perceived popularity (Cillessen & Mayeux, 2004). Over the five-year course of data collection, both relational and physical aggression became increasingly predictive of perceived popularity. Another longitudinal exploration used growth curve modeling to examine trajectories of perceived popularity in a sample of students in grades eight through twelve (Cillessen & Borch, 2006). Again, both overt and relational aggression predicted increases in perceived popularity, and these were most pronounced during the transition from middle to high school. A different investigation of students in third, fifth, seventh, and ninth grades addressed potential overlap between acts of overt and relational aggression (Rose et al., 2004). Regression analysis comparing both constructs indicated that many perceived popular students were both overtly and relationally aggressive. In support of these findings, bullies in sixth grade were emotionally stronger and had higher social standing than victims or bully-victims in their classes (Juvonen & Graham, 2001).

**Popularity and bullying.**

**Bully.** Research has differentiated between two subtypes of bullies: those who are aggressive and popular, and those who are aggressive and unpopular (Estell, Farmer, Pearl, VanAcker, & Rodkin, 2003; Farmer et al., 2003; Farmer, Petrin et al., 2010; Robertson et al., 2010; Rodkin et al., 2000; Shi & Xie, 2012). Farmer and his colleagues (2003) suggested that these subtypes comprised two distinct social worlds made up of bullies who were tough and those who were troubled. Tough bullies were popular, aggressive and had strong social skills. Conversely, troubled bullies were aggressive, unpopular, socially marginalized, and had poor
social skills. In terms of social acceptance, both tough and troubled boys were more often disliked, however tough bullies were perceived as popular leaders.

Additional studies have speculated that forms of aggressive behavior vary as a function of different social goals, and peers may overlook or even reward antisocial behaviors in an attempt to improve their own social position (Cillessen & Borch, 2006; Parkhurst & Hopmeyer, 1998; Vaillancourt & Hymel, 2004). For instance, in a study of overt versus relationally aggressive status seeking behaviors, girls and boys spread disparaging rumors about others to secure and maintain their own status (Juvonen, Wang, & Espinoza, 2013). One study of adolescents in eighth grade revealed that popular, socially intelligent bullies used more covert forms of relational aggression, while unpopular, less socially intelligent bullies used direct relational aggression. Along these same lines, Caravita and Cillessen (2011) differentiated between bullies with likeability (communal) versus status (agentic) goals. There was a direct positive association between agentic goals and bullying that predicted high-perceived popularity. Moreover, the correlation between perceived popularity and bullying increased significantly from middle childhood through early adolescence. Similarly, when exploring associations between perceived popularity, bullying, and victimization, deBruyn et al. (2001) found that adolescents who were popular and disliked bullied others more than those who were popular and liked.

**Victim.** Individuals identified as victims exhibit physical, emotional and/or behavioral characteristics that can signal their inability or unwillingness to retaliate against bullying attacks (Olweus, 1978). Pure victims are most often sociometrically rejected or neglected and regarded as unpopular when compared with bullies and uninvolved students (Hodges & Perry, 1999; Prinstein & Cillessen, 2003). Bullies may deliberately target these students simply because there
is little chance of retaliation or risk of interference or protection from others (Boulton & Smith, 1994; Ostrov & Godleski, 2013).

**Bully-victim.** In the bullying literature, bully-victims are also referred to as *aggressive*, *provocative*, or *reactive* victims. These students exhibit behaviors characteristic of both pure bullies and pure victims. Like pure victims, bully-victims have been described as physically, socially, and emotionally weaker than their non-involved peers (Olweus, 1993b). However, bully-victims exhibit higher levels of both physical and verbal aggression, a characteristic similar to bullies (Craig, 1998). These students score highest on measures of externalizing behaviors, emotional dysregulation, and impulsiveness and score lowest on measures of academic competence, prosocial behavior, social acceptance and self-esteem (Nansel et al., 2001; Schwartz et al., 2000). They have also been described as deficient in patterns of overall psychosocial functioning (Haynie, et al., 2001). Sociometrically, bully-victims are negatively regarded by teachers, actively disliked by peers, and are amongst the most severely rejected students in school (Olweus, 1993b; Pelligrini, Bartini, & Brooks, 1999).

**Social Network Centrality**

**General Education.** The construct of SNC emerged as a measure of students’ prominence within the classroom social structure (Adler & Adler, 1996; Farmer & Rodkin, 1996; Gest et al., 2001). Investigators constructed sociograms from mathematical models (e.g., graph theory, statistical theory, algebraic theory) that quantitatively depicted students’ positions within the social network (Gronlund, 1965; Moreno, 1956). With this approach, it was possible to describe each student’s position and influence in the social network based on the number of social linkages they had with peers.

In many respects, social network centrality taps the same social dimensions as perceived
popularity. Youth with nuclear centrality tend to have highly valued social characteristics. For example, students considered physically attractive, athletically skilled or viewed as trendsetters often have high centrality (Adler & Adler, 1996; Eder & Kinney, 1995). In contrast, students with low levels of desired social characteristics tend to have correspondingly low social linkages and centrality in the peer system (Corsaro & Eder, 1990; Farmer, Irvin et al., 2010; Gest et al., 2001).

One of the common features between perceived popularity and SNC is that high levels of perceived popularity and high levels of SNC have been associated with both social dominance and aggression. Students perceived as popular and nuclear may use relationally aggressive behaviors (e.g., gossip, spreading rumors, forming alliances with other socially prominent peers) to exclude or humiliate those with lower status, thereby maintaining or improving their own position within the social system (Merten, 1997). Conversely, those perceived as unpopular, and occupy peripheral or isolated social positions, may not only avoid interactions or associations with lower status individuals, but also participate in bullying perpetration against them (Brown, 2011; Evans & Eder, 1993; Salmivalli, 2010).

Just as antisocial behaviors do not necessarily result in low levels of perceived popularity, they also do not always suppress students’ social positions. Early in the study of social dynamics, Eder (1985) described a cycle of popularity in which girls perceived as popular also formed the most salient social groups. These popular girls were described as stuck-up, exclusive, aloof, and non-communicative; however, they were also identified as the most visible and attractive girls in the school. Conversely, students with low perceived popularity were often socially isolated and more likely to be victimized by others.

Several studies examine the relationship between SNC and correlates of prosocial and
aggressive behavior. In an investigation involving elementary aged students, nuclear central boys and girls were most often nominated by peers as popular, cool, athletic, leaders, and cooperative. Conversely, isolated boys and girls were most often described as shy or withdrawn. When examining antisocial behaviors, however, nuclear central boys had higher mean scores than lower centrality boys, suggesting that antisocial behaviors do not necessarily result in lower centrality (Farmer & Rodkin, 1996). This premise is supported in Gest et al.’s (2001) exploration of peer experiences, friendships, SNC and sociometric status. Significant results were found for both prosocial and antisocial characteristics of students with high network centrality. Moreover, prosocial nuclear students were liked most, while those with antisocial behaviors were liked least.

Only one study was located that examined relationships between bullying involvement subtype and SNC. In an investigation of bullies and victims in rural African American youth, Estelle, Farmer, and Cairns (2007) found male victims had secondary centrality, while female bullies were nuclear. Conversely, victimized boys and girls were most often peripheral in the social network.

**Students with Disabilities.** Several studies have addressed the relationship between behaviors of SWD and SNC. For example, one investigation showed students with LD not only had difficulties with social functioning, but also were also more likely to be socially isolated when compared to their ND peers. In addition, ND students and teachers perceived students with LD as lower in social status (Kavale & Forness, 1996). A similar investigation showed that students with mild disabilities who were included in general education classes were overrepresented as being social isolates (Pearl et al., 1998). Supporting these general findings, a longitudinal examination of social functioning among students with and without LD revealed that
students with LD were consistently lower in social status, and that this maintained over time (Estell et al., 2008).

Students with autism spectrum disorders (ASD) commonly display deficits in social skills and several studies have investigated SNC for this population. For example, one study reported that the majority of students with ASD occupied positions of peripheral centrality (Chamberlain, Kasari, & Rotherman-Fuller, 2007). These findings are supported by Kasari and her colleagues (2011) who found students with ASD were more likely to have isolated or peripheral centrality and less likely to have secondary or nuclear centrality. Along these same lines, Locke, Ishijima, Kasari, and London (2010) reported that the majority of students (74%) with ASD were either isolated or peripheral in their classroom.

Some research shows SWD can also occupy central positions within the social structure. For example, Farmer and Hallowell (1994) found that students with EBD who were included in general education were more likely to have nuclear centrality than their ND or LD peers. Similarly, in their investigation of three inclusive classrooms, Farmer and Farmer (1996) discovered that while distinct clusters of shy, prosocial and antisocial students existed in each class, boys with EBD were often central members of antisocial groups and had nuclear centrality within the classroom. Likewise, Farmer and Rodkin (1996) identified two distinct types of students who achieve high positions in the social structure: those with antisocial traits who also score high on athleticism and popularity, and those with prosocial characteristics who also score high on athleticism and popularity.

As with perceived popularity, students with highly valued social characteristics are more likely to occupy positions of network centrality, while those who do not tend to be socially marginalized. By measuring SNC, it is possible to identify individuals’ social roles within a
group as well as within the entire social network. Overall, these studies indicate that aggression is common among students with nuclear centrality, particularly those without disabilities. While this is sometimes the case for SWD, they are more likely to occupy secondary, peripheral, or isolated positions in the social structure.

Social network analyses of bullies, victims, and bully-victims can be used to determine how characteristics of friendships and friendship groups may be associated with bullying and victimization. More specifically, since SNC is associated with individual attributes, it can provide insight into how one’s specific attitudes, beliefs and behaviors might be influenced by others (Huttunen et al., 1996; Mouttapa, Valente, Rohrbach, & Unger, 2004).

**Peer Group Affiliation**

As students are aggregated together in a classroom or school, they interact with each other in what has been described as a “sorting process” (Adler & Adler, 1996). Relationships develop when the actions, behaviors, and social preferences of individuals reinforce each other, a process known as *social synchrony* (Cairns, 1979, p. 298). As previously discussed, there are three forms of social synchrony, *imitation, reciprocity,* and *complementarity.* As children synchronize their social interactions, they develop patterns of affiliation that result in the formation of distinct peer groups. Typically, peer groups are composed of students who have similar characteristics, a phenomenon, known as *homophily* (Cairns et al., 1988).

**General Education.** It is generally accepted that behaviors are learned through processes of social synchrony, and that these behaviors are supported and maintained through positive and negative reinforcement (Bandura, 1978). Stated another way, peers play a critical role in the development and maintenance of aggressive behaviors (Asher & Coie, 1990; Bierman, 2004; Cairns et al., 1998). Through processes of homophily, individuals tend to seek out friends who
are similar to themselves on key characteristics, including aggressive behavior. Consequently, children who belong to the same friendship groups are likely to participate in similar levels of bullying. For example, a study of bullying behavior in elementary school showed that children who belonged to the same social group were comparable in terms of their involvement and support for both overt and relational bullying. Moreover, these groups tended to have a group norm supporting bullying, which increased the likelihood that members would not only bully, but reinforce each others’ bullying behaviors (Duffy & Nesdale, 2009; Salmivalli & Voeten, 2004). A similar investigation of social network predictors of bullying and victimization found that children who exhibited similarities in bullying behaviors formed friendships and friendship networks with each other. These networks involved students identified as bullies, but also those with bullying tendencies. In addition, children who were friends with bullies reported that they engaged in higher levels of aggressive behavior (Huttunen et al., 1996). In a similar study exploring social behavior and peer relations of bullies, victims, and bully-victims in kindergarten, Perren and Alasker (2006) found not only that bullies were most frequently friends with other bullies, but that they also preferred aggressive playmates. Another examination of bullies’ friendship networks yielded statistically significant relationships between bullying roles and corresponding indices of aggressive behavior within the friendship network. More specifically, bullies and bully-victims tended to have more aggressive friends, while victims reported having both fewer and less aggressive friends (Mouttapa et al., 2004). Supporting these general findings, Farmer, Petrin, and colleagues (2010) found both male and female bullies belonged to groups composed primarily of other bullies, while bully-victims were more likely to associate with peers who were victims.

Some research suggests that being a bully or a victim is significantly correlated with the
number and quality of one’s reciprocated friendships. Friendship quality is a gauge of how strong a friendship is in terms of how each individual involved values it. High quality friendships are characterized as having many positive and few negative attributes, while low quality friendships have more negative than positive attributes (Bagwell & Schmidt, 2011). For example, two studies showed victims tended to be members of small peer groups comprised of other socially marginalized students, or not belong to any peer group at all (Estell et al., 2009; Salmivalli et al., 1997). Similarly, in a study of children’s playground behaviors, victims and bully-victims had fewer reciprocated friendships than non-involved children (Perren & Alasker, 2006). Furthermore, being recognized as a victim may actually result in the loss of friends. This was exemplified in an investigation involving fifth and sixth-grade students in which children with more friends, who were also accepted into a peer group, had lower rates of victimization. Furthermore, higher-quality friendships were a protective factor against overt and relational aggression (Malcolm, Jensen-Campbell, Rex-Lear, & Waldrip, 2006).

**Students with Disabilities.** As discussed throughout this review, SWD tend to have problematic peer relationships that have been linked to increased risk for involvement in bullying (Gresham & Reschly, 1986). Youth must navigate peer-related dynamics and continually adjust their behaviors in order to establish and maintain satisfactory interpersonal relationships resulting in peer acceptance and friendships (Gresham & MacMillan, 1997). Despite having lower rates of social acceptance and higher rates of peer rejection than their ND classmates, SWD do affiliate with others who have similar demographic and social characteristics. There is solid empirical evidence supporting that the majority of SWD are members of peer groups comprised of others with similar academic, behavioral, and social characteristics that in some way reflect and complement their own (Estell et al., 2008; Estell et al., 2009; Farmer & Farmer,
1996; Farmer, Hamm et al., 2010; Pearl, et al., 1998). An early study of students with LD in self-contained settings, and matched pairs of students (LD and ND) in inclusive environments found students with LD tended to keep to their own groups rather than playing with ND peers on the playground (Martlew & Hodson, 1991). Similarly, an investigation of social networks of students with EBD included in general education classes found that boys belonged to peer groups comprised of other students with similar social characteristics who, while not identified as having an EBD, supported and complemented their own behaviors (Farmer & Hollowell, 1994). Along these same lines, an exploration of social structures in inclusive classrooms showed students with EBD were members of peer clusters characterized by less positive characteristics and more antisocial behavior patterns in classrooms where there was more than one EBD student. Interestingly, when there was only one student with EBD in a class, that student exhibited less pronounced antisocial behaviors, suggesting that in this case, antisocial behaviors were not reinforced and maintained by peers (Farmer & Farmer, 1996). Findings by Pearl et al. (1998) support previous analyses in which peer assessed behavioral characteristics were related to peer group membership. Boys with mild disabilities who belonged to peer groups were described as leaders, athletic, and anti-social more frequently than those who were not members of a peer group. For students with EBD, it is possible that anti-social behaviors increase the likelihood of maintaining peer linkages within the classroom.

There is substantial research investigating bullying involvement, peer affiliation and peer group membership for ND students. It is well supported that ND students who are involved in bullying affiliate with those who have similar characteristics and belong to groups comprised of others displaying similar levels of bullying. No studies were found specifically investigating this dynamic for SWD. Overall, studies investigating social relationships of SWD show that peer
groups vary along a continuum that ranges from mutual attraction to mutual rejection (Cairns & Cairns, 1994). On the one hand, students may affiliate with peers who have elevated levels of aggression. On the other hand, they may be more likely to associate with other socially marginalized peers who have few positive social characteristics and are at-risk for peer victimization. Thus, it is likely that patterns of peer affiliation and group interaction mediate involvement in bullying for SWD.

**Setting events**

**Applied behavior analysis.** Over the past 50 years, behavior analysts have argued that behavior is complex. Children’s relationships with peers and adults are shaped through processes of positive and negative reinforcement resulting from reciprocal social interactions. In 1953, J.R. Kantor, a proponent in the field of interbehavioral psychology, described behavior in terms of an individual’s interactions with not only an antecedent and consequence, but also organism-environment interactions, contextual conditions, and interbehavioral histories. Kantor introduced the concept of *setting events* as an umbrella term encompassing all factors influencing a specific response that do not immediately precede that response (e.g., classroom structure, presence or absence of certain individuals in particular situations). It was not until the late 1970’s that the concept of setting events was added to the literature on applied behavior analysis (Bijou, 1976; Bijou & Baer, 1978).

The basic unit of analysis for studying behavior involves a three-term contingency comprised of *antecedents, behaviors, and consequences* (ABC; Cooper, Heron, & Heward, 2007; Skinner, 1969). Antecedent events immediately precede the exhibition of a behavior and make it more likely that a specific behavior will occur. Consequent events determine the reason, or function, of an individual’s behaviors. Functions of behavior for students with high incidence
disabilities typically include obtaining access to preferred items, activities or social attention (positive reinforcement), or escaping from aversive conditions such as non-preferred activities, peer interactions or teacher attention (negative reinforcement). For example, placement of a math worksheet on a student’s desk (antecedent) results in loud verbal protests from the student (behavior). In response, the teacher sends the student to the principal’s office (consequence), and the student avoids having to complete the aversive task (function of behavior). Since the consequence (removal) was contingent on the behavior (verbal protests), and allowed for escape from an aversive task (math worksheet), it is likely that the future frequency of protesting behavior will maintain whenever the student is presented with a math worksheet in the future. This is an example of negative reinforcement (see Cooper et al., 2007, pg. 42). Figure 2 provides a visual representation of this process.

Figure 2: Three-Term Contingency Illustrating Negative Reinforcement.

![Three-Term Contingency Illustrating Negative Reinforcement](image)

Procedures utilizing the three-term contingency model have been successful in changing behaviors in experimental settings where discrete antecedent and consequent conditions can be controlled by the experimenter (Skinner, 1938, 1953, 1974).
Setting events and bullying. In the United States, inquiry into bullying grew out of a national trend toward progressive education in the late nineteenth century. During this time, prevailing psychological theory claimed that a child’s personality was primarily the product of interpersonal relationships, particularly with parents. Jacob Moreno (1953) was among the first to break from these perceptions and suggest that social behavior could be better understood in terms of contexts and groups in which individuals function. Expanding on this work, Norman Gronlund (1965) explored the impacts of social relationships on children’s personal and social development. During this time, several studies explored relationships between peer popularity and status on student’s academic and social achievement, as well as school climate (Schmuck, 1962, 1963, 1966). Although these early works predated the acceptance of setting events as a behavioral construct, results indicated that levels of social acceptance, sociometric status, and peer group structure shaped student’s concepts of their own abilities, self-worth, and school belonging.

This line of inquiry continued, albeit sporadically, throughout the twentieth and into the twenty-first century. A series of investigations conducted by a research team from Vanderbilt University explored the effects of peer social initiations as setting events for positive behavioral peer responses from socially withdrawn and behaviorally challenged pre-school students. In each study, a “confederate peer” was trained to initiate social interactions with targeted students. Results of the first investigation showed that increased social initiation by the confederate increased both the number and frequency of positive social behaviors for all subjects (Strain et al., 1977). Following the same general procedure, a subsequent investigation showed that social interactions initiated by ND pre-school students set the occasion for positive behavior and reciprocated responses among socially withdrawn children (Tremblay, Strain, Hendrickson, &
Shores, 1981). In a follow-up study using similar procedures, social initiations by a ND preschool student set the occasion for positive social behavior by three preschool SWD. Moreover, when the SWD were trained as confederate peers, positive social initiations by these students reliably set the occasion for positive responding from socially withdrawn ND preschool students (Hendrickson, Strain, Tremblay, & Shores, 1982). These studies suggest that as early as preschool, children with and without disabilities can act as behavior change agents and set the occasion for more positive peer interactions.

Although setting event research is sparse, prominent scholars have effectively supported the validity of social-ecological factors as setting events for student anti-social behavior. For example, Shores (1987) suggested that empirically supported classroom management strategies could be viewed as setting events for student/teacher interactions. For instance, students in classrooms with well-developed, positive, and consistently enforced rules were able to predict teacher behaviors, better control their own behaviors and found positive teacher praise more reinforcing (Hendrickson et al., 1987. In similar fashion, Mayer (1995) identified contextual factors and setting events were major contributors to antisocial behaviors. These included specific parenting practices (e.g., coercive and punitive behavior management, low levels of monitoring, inconsistent rule setting and enforcement), and community and peer factors (e.g., antisocial friends and neighbors, deviant peer groups, non-involvement in school or community activities). The most significant determinants of antisocial behavior, however, were factors related to school (e.g., lack of rules, lack of support, academic failure). Providing support for these hypotheses, in a study investigating the impact of targeted classroom interventions on problem behaviors of students with EBD, Trussel (2008) found changes in classroom variables that serve as setting events reduced behavior problems for all participants.
Chapter Summary

Bullying is a serious social problem that has been a documented topic of interest since the late nineteenth century. Throughout time, peer on peer violence and aggression has been regarded as a normal part of childhood development. Moreover, bullying was, and often still is, considered a naturally occurring process resulting in behavior modification and stronger constitutions for victims of this abuse. It was not until the mid-1900’s that solutions to peer bullying were approached from a social interactional, rather than a monadic perspective (Bandura, 1978; Bronfenbrenner, 1943; Cairns et al., 1995; Espelage & Swearer, 2004; Gronlund, 1965; Moreno, 1953).

A social-ecological theory of development provides a viable framework for exploring the role of peer social dynamics as a strong contributor to the development and maintenance of student bullying (Swearer & Doll, 2001; Swearer & Espelage, 2004). Combinations of individual and environmental factors associated with peer social acceptance, popularity, social network centrality, and peer group membership contribute to a selectively inclusive peer social hierarchy. Differences in socially valued characteristics, or lack of adherence to peer constructed social norms often results in the conferral of distinct social roles and reputations that can predictably elicit specific patterns of behavior from others in the school environment. Students with disabilities, who lack social competencies, are noticeably different in some way, or who spend part of the school day in a special education classroom, are particularly vulnerable to ongoing peer rejection and social marginalization. This is a serious concern given the relationship between peer bullying and poor post-high school outcomes for these students, the majority of whom are already at risk (Newman, et al., 2011).

Although there has been a lapse in research exploring the concept of social roles as setting
events for peer bullying and victimization, there is enough to suggest that this is a viable theory. The strong association between constructs of peer social dynamics and bullying involvement suggests that until these underlying motivations are identified and addressed, bullying will continue to be a serious issue, particularly for SWD. Subsequently, until there is stronger evidence supporting a setting event hypothesis for peer bullying, the development and provision of targeted interventions is likely to be misguided and ineffective.
Chapter 3

Method

The current study represents a secondary analysis of data collected during the initial stages of Project REAL (Rural Early Adolescent Learning; IES grant #R305A04056; see Farmer, Hamm et al., 2011). Project REAL is a longitudinal, randomized control study evaluating an intervention program designed to improve the school adjustment of rural early adolescents in grades five through eight. The current study utilized data from the third of five waves of data collected during the fall and spring semesters of the 2005-2009 academic years.

Participants

Participants were recruited from school districts in 10 states designated as rural by the National Center for Education Statistics. Schools with similar demographic, economic, and school performance data were identified as matched pairs by the principal investigators. When both matched pair schools agreed to participate, one was randomly selected for intervention and the other became the control. Parental consent was attained through a signed permission slip sent home and returned to school. The full sample for wave three consisted of 3851 participants in grades five through eight, 3013 of whom provided consent (78%). The full sample included 1,879 (48.8%) females and 1,972 (51.4%) males. The ethnic and racial composition of the sample was primarily White (60.8%), followed by Black (25.8%), Hispanic (5.0 %), American Indian (3.3%), Unknown (3.1%), Multi-Racial (0.6%), Asian (0.5%), and other or unknown ethnicity (0.1%).

The sample of students with special education identification included 209 with high incidence disabilities (5.4%) and 103 who were academically gifted (2.7%). Both groups were classified through school assessment procedures reflecting federal guidelines and included those
with learning disabilities, emotional and behavioral disorders, other health impairments, speech and language impairments, intellectual disability, and autism spectrum disorders. It should be noted that the percentage of SWD in the current sample was lower than the reported national average for years 2005-2009, which ranged from 8.7% to 9.1%. (US Department of Education, 2006, 2007, 2008, 2009, 2010). Several factors may account for this difference. First, the current sample included students in grades five through eight only, while the national sample of school-age children with disabilities ranges from age six to twenty-one. Next, participants in this study attended rural schools. Differences in the structure and composition of schools in rural and remote areas as compared to the range of schools from a national sample may reflect differences in identification procedures and categorization of SWD. Finally, participants in the current sample were included in the general education environment for at least 50% of the school day, while the national sample includes students in low incidence categories who may access their education in more contained settings.

The primary aim of the current study was to explore functional differences across social contextual constructs within a group of SWD involved in bullying. For this reason, all participants identified as having a high-incidence disability were aggregated into one category and treated as a single group. This approach has been used in other studies conducted using data from project REAL (e.g., Farmer, Hall et al., 2011; Estell et al., 2008). Characteristics of study participants appear in Table 1.

**Data Collection Procedures**

All student adjustment data were collected by Project REAL staff using group administration procedures. In this case, consented students were gathered in large common spaces (e.g., cafeteria, auditorium), assured that their responses would remain confidential, and
reminded that they could withdraw from the study at any time. Following protocols used in previous studies (Cairns et al., 1988; Estell et al., 2009; Farmer, Hall et al., 2011), a trained staff member administered materials as students responded individually to a series of questions about themselves, peers, peer relationships, and experiences in school. Additional project staff monitored students and were available to answer questions if necessary. Students were compensated with school supplies for their participation.

Classroom teachers of participating students were invited to be part of the data collection procedure. Teachers completed packets containing surveys about their teaching experiences and answered questions related to students in their classrooms. Survey items were related to both individual and peer group processes. Teachers were compensated financially for their participation.
<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
<th>1971</th>
<th>51.2%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>1879</td>
<td>48.8%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>White</td>
<td>2364</td>
<td>60.8%</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>1003</td>
<td>25.8%</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>193</td>
<td>5.0%</td>
</tr>
<tr>
<td></td>
<td>American Indian</td>
<td>126</td>
<td>3.3%</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>120</td>
<td>3.1%</td>
</tr>
<tr>
<td></td>
<td>Multi-Racial</td>
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</tr>
<tr>
<td></td>
<td>Asian</td>
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<td>0.5%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>4</td>
<td>0.1%</td>
</tr>
<tr>
<td>Grade</td>
<td>Fifth</td>
<td>402</td>
<td>10.4%</td>
</tr>
<tr>
<td></td>
<td>Sixth</td>
<td>2865</td>
<td>74.4%</td>
</tr>
<tr>
<td></td>
<td>Seventh</td>
<td>513</td>
<td>13.3%</td>
</tr>
<tr>
<td></td>
<td>Eighth</td>
<td>71</td>
<td>1.8%</td>
</tr>
<tr>
<td>Educational Status</td>
<td>Disability</td>
<td>209</td>
<td>5.4%</td>
</tr>
<tr>
<td></td>
<td>Academically</td>
<td>103</td>
<td>2.7%</td>
</tr>
<tr>
<td></td>
<td>Gifted</td>
<td>2167</td>
<td>56.3%</td>
</tr>
<tr>
<td></td>
<td>General Education</td>
<td>110</td>
<td>94.3%</td>
</tr>
<tr>
<td>Disability Status</td>
<td>LD</td>
<td>16</td>
<td>6.5%</td>
</tr>
<tr>
<td></td>
<td>OHI</td>
<td>14</td>
<td>5.7%</td>
</tr>
<tr>
<td></td>
<td>ID</td>
<td>7</td>
<td>2.9%</td>
</tr>
<tr>
<td></td>
<td>SLI</td>
<td>4</td>
<td>1.6%</td>
</tr>
<tr>
<td></td>
<td>ASD</td>
<td>4</td>
<td>1.6%</td>
</tr>
<tr>
<td></td>
<td>EBD</td>
<td>2</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

**Measures**

Data collection instruments for Project REAL included multi-informant measures designed to assess student perceptions of peer social adjustment. Students completed an *Activity Booklet* containing questions on different adjustment variables including friends and friendship groups,
perceptions of peers, and bullying (see Appendix). Teachers completed the *Interpersonal Competence Scale-Teacher Edition (ICS-T)*; Cairns, Leung, Gest, & Cairns, 1995) and the social adaptation scale for each participating student. Teacher ratings and peer nominations were used to determine participant’s levels of *social preference, social prominence, social network centrality, peer group affiliations, and involvement in bullying*. Measures utilized in the current study are described below.

**Student Measures**

**Peer behavioral assessments.** To assess peer perceptions of social and behavioral characteristics, students were asked to nominate, from free recall, up to three peers who best fit descriptors for 18 specific items: cooperative, disruptive, acts shy, starts fights, seeks help, leader, athletic, gets in trouble, good students, cool, sad, starts rumors, popular, trendsetter, picked on, friendly, bully, and gets their way. Each item was accompanied by a descriptor (e.g., Cool: “Here is someone who is really good to have as part of your group, because this person is agreeable and cooperates”). Students were told they could nominate themselves and also include the same peer in more than one category (Coie et al., 1982; Farmer et al., 1999). Nominations were recorded on lines appearing beneath each descriptor listed in the *Student Activity Booklet*. This procedure was identical or similar to those used in other research on peer social processes (Cantrell & Prinz, 1985; Coie et al., 1982; Farmer et al., 1996).

Previous studies using data from Project REAL (Estell, 2007; Farmer et al., 2009) indicated moderate to high test-retest reliability ranging from .46 to .88. According to the procedure described by Estell, Farmer, and Cairns (2007), the number of nominations each participant received on each item was summed and divided by the total number of possible nominators, then multiplied by 1000 in order to make mean differences clearer.
**Sociometric popularity.** As discussed in the previous section, participants were asked to nominate up to three classmates best fitting each of the 18 behavioral descriptors. In addition, participants were also asked to list three peers they liked most (LM), three peers they liked least (LL), and one classmate they would most like to be. These items were completed in the *Student Activity Booklet*.

Each student’s number of nominations for liked most ($Z_{LM}$) and liked least ($Z_{LL}$) were standardized within grade level and used to calculate indices of social preference ($Z_{LM} - Z_{LL}$) and social impact ($Z_{LM} + Z_{LL}$). Social preference and social impact variables were then used to select students into one of five distinct sociometric status categories (Coie & Dodge, 1983). Figure 3 illustrates the conceptualization of sociometric status as derived from measures of peer liking, social preference and social impact.

Sociometric status is derived from independent measures of social preference and social impact (Coie et al., 1982). There are five sociometric status categories: popular, rejected, neglected, controversial and average. Individuals were categorized as *popular* if social preference $z$-scores were greater than one, $Z_{LM}$ scores were greater than zero, and $Z_{LL}$ scores were less than zero. The *rejected* category includes all students with social preference $z$-scores less than one, $Z_{LL}$ scores greater than zero, and $Z_{LM}$ scores less than zero. *Neglected* status includes students with standardized social impact scores less than -1, with $Z_{LM}$ and $Z_{LL}$ scores less than zero.

Figure 3: Conceptualization of Sociometric Status
Students were selected into the *controversial* status category if standardized social impact scores were greater than one, with $Z_{LM}$ and $Z_{LL}$ greater than zero. Students in the *average* category had social preference scores greater than -0.5 but less than 0.5. Sociometric status classification using the current procedures has been shown to be moderately stable across school years (Coie & Dodge, 1983). Table 2 illustrates criteria by which sociometric status categories are derived.

**Perceived popularity.** Following procedures established in prior studies (e.g., Estell, 2007; Farmer et al., 2003), peer personal assessments were used to determine classmates perceptions of peer perceived popularity. Nominations for the items *cool, leader, popular,* and *athletic* were highly correlated with social prominence ($\alpha = .85$) and therefore combined into an overall social prominence score (Estell et al., 2007). Summed scores for each of these four

<table>
<thead>
<tr>
<th>Sociometric Status</th>
<th>Social Preference</th>
<th>Social Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controversial</td>
<td>Like Most - Like Least</td>
<td>Like Most + Like Least</td>
</tr>
<tr>
<td>Average</td>
<td>Like Most - Like Least</td>
<td>Like Most + Like Least</td>
</tr>
</tbody>
</table>

Table 2: Criteria by which sociometric status categories are derived.
items were divided by the total number of possible nominators and then multiplied by 1000. From these scores, three levels of perceived popularity were established: *popular* students were
those with social prominence z-scores one standard deviation (SD) above the mean; those with social prominence z-scores ranging from one SD below to one SD above the mean were considered average; and those with z-scores less than one SD below the mean were identified as unpopular (Parkhurst & Hopmeyer, 1998).

Table 2

Derivation of Sociometric Status

<table>
<thead>
<tr>
<th>Sociometric Status Categories</th>
<th>Peer Nominations</th>
<th>Popular</th>
<th>Rejected</th>
<th>Neglected</th>
<th>Controversial</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Like Most</td>
<td>z &gt; 0</td>
<td>z &lt; 0</td>
<td>z &lt; 0</td>
<td>z &gt; 0</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Like Least</td>
<td>z &lt; 0</td>
<td>z &gt; 0</td>
<td>z &lt; 0</td>
<td>z &gt; 0</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Social Preference</td>
<td>z &gt; 1</td>
<td>z &lt; -1</td>
<td>----</td>
<td>----</td>
<td>-5 &gt; z &lt; 5</td>
<td>----</td>
</tr>
<tr>
<td>Social Impact</td>
<td>----</td>
<td>----</td>
<td>z &lt; -1</td>
<td>z &gt; 1</td>
<td>----</td>
<td>----</td>
</tr>
</tbody>
</table>

Aggression. Peer personal assessments were used to determine classmates perceptions of their peers’ aggressive behaviors. A factor analysis of the 18 item list of descriptors yielded a four-factor solution, one of which was aggression (Cronbach’s α = .83; consists of disruptive, starts fights, gets in trouble, and starts rumors). This procedure is similar to those described in Estell’s (2007) examination of popularity and aggression in a sample of students drawn from the REAL dataset.

Peer nominated aggression data were dichotomized using procedures established in past studies using the REAL dataset (Estell, 2007; 2009). Peer nomination totals for each student were sorted into ascending order and standardized into z-scores. The top 30% of students had z-
scores greater than +0.5, and were classified as aggressive (n =35) and all others were categorized as not aggressive (n=192).

Social network centrality. The Social Cognitive Mapping (SCM) procedure was used to identify each participant’s level of social network centrality. Following procedures developed by Cairns and his colleagues (1995), participants were asked, “Are there some kids in your class, grade, or school who hang around together a lot? Who are they?” Students were instructed to list, from free recall, any groups from their class, grade, or school that came to mind, and then identify those perceived as leaders of those groups. These were recorded in the Student Activity Booklet. In order to detect children who were social isolates, students were also asked to list peers who did not belong to any peer group. This method resulted in the identification of differentiated social clusters both inside and outside of school.

The SCM computer program was used to arrange individuals into clusters through the creation of three different matrices. First, a recall matrix summarizing information gathered from respondents on the group membership of students in their class, grade or school was generated. Next, a co-occurrence matrix displaying the number of times each student was named a part of the same cluster as other students was produced. A third matrix, the correlational matrix, was then created to show similarities in “person profiles” for each pair of respondents. Next, based on the frequency of nominations to a group, a centrality index (CI) was generated. The CI was calculated based on the average scores of two individuals in a particular group who received the highest number of peer nominations. In this manner, a status index for each group was calculated. The status index provided a distinction between groups with high, medium, and low centrality, and individuals in each group were classified as having high, medium, or low centrality within that peer group. Thus, individuals with nuclear status were high centrality
members of high centrality groups, individuals with peripheral centrality were low centrality members of any group, or belonged to a low centrality group, and the remaining students were identified as having secondary centrality. Individuals receiving no nominations were regarded as socially isolated within the peer network (Cairns et al., 1995). Total nominations were then used to calculate indices of social network centrality whereby students were classified as nuclear, secondary, peripheral, or isolated. Students whose profiles were significantly correlated with at least 50% of the members of a group were identified as members of the same group (Farmer, 2009). Three-week test-retest reliability coefficients have indicated that 90% of groups retained a majority of members during that time.

Teacher Measures

**Interpersonal competence scale-Teachers.** The Interpersonal Competence Scale-Teacher (ICS-T) is an 18-item survey, consisting of a 7-point Likert type scale, and was completed by teachers in order to assess students’ social development (Cairns et al., 1995). Scores for social acceptance, antisocial behavior, academic performance, and internalizing behaviors yielded three primary factors: *aggression* (argues, trouble at school, fights), *popularity* (popular with boys, popular with girls, lots of friends), and *academics* (spelling and math performance). Subsidiary factors included: *affiliative* (smiles, friendly), *olympian* (appearance, sports, wins), *internalizing* (shyness, sad, worry), and a composite *interpersonal competence* score (mean of subscales with aggressive factor reversed). Three-week test-retest reliability coefficients for the ICS-T were moderately high (.80-.92) as were median test-retest correlation coefficients across factors (.81 for girls; .87 for boys). The ICS-T has convergent validity with direct observation, student records, and peer nomination measures (Cairns & Cairns, 1994; Rodkin et al., 2000).
Teacher assessments of social adaptation. This instrument is a measure of specific aspects of student social adaptation, including bullying and victimization. It includes eight items, each measured on a 7-point Likert scale, each of which has 3 anchors. One anchor is on either end of the scale, and one is in the middle. For example, “frequently bullied by peers” appears on one end, “sometimes” appears in the middle, and “never bullied by peers” appears on the other end. The current study utilized two out of the eight teacher assessed items: bullies peers and bullied by peers (Estell et al., 2007).

Classification Procedures

Subcategories of bullying. Peer-nomination and teacher assessment data were used to classify students into one of four mutually exclusive bullying involvement subtypes (i.e., bully, victim, bully-victim, and other). Peer nominations for bully and picked on, and teacher ratings for bullies peers and bullied by peers were first standardized by gender. Teacher ratings were then standardized by classroom. To be consistent with other studies distinguishing between bullies, victims, and bully-victims (e.g. Estell et al., 2007; Vaillancourt, Hymel, & McDougall, 2003), a .50 standard deviation (SD) cutoff was used to identify youth who were above average on bullying or victimization. Participants who had a Z-score greater than +.50 on either bully or bullies peers and a Z-score of less than or equal to +.50 on both picked on and bullied by peers were classified as bullies. Participants who had a Z-score greater than +.50 on either picked on or bullied by peers and a Z-score of less than or equal to +.50 on both bully and bullies peers were classified as victims. Participants who had a Z-score greater than +.50 on either bully or bullies peers and had a Z-score of greater than +.50 on either picked on or bullied by peers were classified as bully-victims. Participants who had a Z-score less than or equal to +.50 on all four
measures were classified as *other*. Criteria used to derive bullying subtype categories are depicted in Table 3.

Table 3  
*Derivations of Bullying Subtype Categories*

<table>
<thead>
<tr>
<th>Bullying Subtype</th>
<th>Peer Nominated Factors</th>
<th>Teacher Nominated Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bully</td>
<td>Picked On</td>
</tr>
<tr>
<td>Bully</td>
<td>$z$-score $&gt; +.50$</td>
<td>$z$-score $\leq +.50$</td>
</tr>
<tr>
<td>Victim</td>
<td>$z$-score $\leq +.50$</td>
<td>$z$-score $&gt; +.50$</td>
</tr>
<tr>
<td>Bully-Victim</td>
<td>$z$-score $&gt; +.50$</td>
<td>$z$-score $&gt; +.50$</td>
</tr>
</tbody>
</table>

**Peer group membership.** Peer groups identified by the SCM procedure were categorized according to level of *social prominence, aggression, concentration of bullies* and *concentration of victims*. Membership in each group was determined based on the proportion of students in each group nominated according to the procedures described above. For example, participants were identified as affiliating with socially prominent peers if at least 50% of the members had also been identified as socially prominent. Conversely, non-socially prominent groups were comprised of less than 50% of socially prominent others. The same criteria applied to the remaining groups based on the proportion of members exhibiting the given characteristic (Estell et al., 2009; Farmer et al., 2003).
Chapter 4

Results

Overview

Peer bullying has been regarded as a reaction to deviance as well as a struggle for social status, power, and friends (Thornberg, 2011). Through their social interactions with others, children co-construct each other’s social identities or roles. Thus, all children, including those with disabilities, judge themselves and are judged by others according to patterns of conformity to social norms resulting in levels of peer acceptance, social prominence, aggression, social network centrality and peer group membership. Over time, an individual’s social role consistently evokes specific reactions and behaviors from others in the peer ecology (Hendrickson et al., 1987). In other words, the individual becomes the setting event that makes bullying interaction more likely to transpire.

Research on school social dynamics supports that peer group processes contribute to patterns of antisocial behaviors, including those associated with bullying, for students in the general population (Cairns & Cairns, 1994; Espelage, Holt, & Henkel, 2003; Evans & Eder, 1993; Salmivalli et al., 1997; Vaillancourt & Hymel, 2004). Explorations of these constructs for SWD, however, are sparse. Subsequently, results discussed in this section provide a first step in bridging this gap.

Data Analytic Procedures

Pearson’s chi-square tests of independence. Chi-square ($\chi^2$) tests are appropriate for exploring differences between two or more categorical variables. There is no assumption of normality or homogeneity of variance (HOV) when using chi-square analysis. The chi-square test is specific to categorical data, which cannot be normally distributed (Field, 2009, p. 691).
Two assumptions must be met when using the chi-square test. First, independence must be established by ensuring that each participant contributes data to only one cell in the contingency table. Second, to satisfy the assumption of expected frequencies, each cell in the contingency table should contain five or more participants (Field, 2009). In this study, each participant contributed data to only one cell in the contingency table, thus satisfying the assumption of independence. Exact tests were performed in each instance where a statistically significant finding occurred. Exact tests were completed using the EXACON procedure of the SLEIPNER statistical package 2.1 (Bergmann & El-Khoury, 1987).

**EXACON.** In the event that chi-square tests revealed statistically significant differences between variables, single-cell contingency analyses were computed using the EXACON procedure of the SLEIPNER statistical package version 2.1. This procedure is also appropriate for use when within cell sample sizes are less than five. Previous studies utilizing the REAL dataset have used the EXACON program for performing exact tests (e.g., Estell et al., 2008; Farmer, Hall et al., 2011).

**Analysis of Research Questions**

**Question 1.** Do students with disabilities involved in bullying differ on measures of peer social acceptance?

The purpose of this question was to identify differences in sociometric status categorizations within groups of SWD involved in bullying. Research on bullying involvement of SWD has shown that low levels of peer acceptance can result in lower social positions that may contribute to involvement as a bully, victim or bully-victim (Estell, 2007). In terms of social preference, children confer identities onto each other based on patterns of social behavior. For instance, children who are socially competent and exhibit prosocial behavior are preferred by
their peers, while those who do not have favorable social characteristics are not. Sociometric status categorizations (i.e., popular, rejected, neglected, controversial, average) are one component contributing to a student’s social role that can set the occasion for peer bullying and victimization.

Before the inception of the current study, the Project REAL research team tallied and standardized all peer nomination, social preference and social impact scores. For the current analyses, z-scores for like most ($Z_{LM}$), like least ($Z_{LL}$), social preference and social impact were sorted into ascending order and dichotomized using procedures similar to those described by Coie and Dodge (1983). $Z_{LM}$ and $Z_{LL}$ were coded as “0” (all z-scores less than zero) or “1” (all z-scores greater than zero). Similarly, social preference and social impact were coded as “0” (all z-scores less than negative one) or “1” (all z-scores greater than one). For example, the Wave Three $Z_{LM}$ scores ranged from -1.27 through 3.47. All scores between -1.27 and 0 were recoded as “0” while all scores ranging from 1.04 (the next value after zero for this variable) through 3.47 were recoded as “1.” Any participant whose z-score fell between these parameters was considered average. Categorizing continuous data for these variables allowed for analyses using Pearson’s Chi-square Tests of Independence.

**Social preference.** The purpose of this analysis was to determine differences in levels of peer nominated social preference across bullying subtypes for SWD. As previously explained, social preference is an index of peer acceptance based on nominations for like most and like least, and is calculated by subtracting each student’s $Z_{LL}$ from their $Z_{LM}$ score (see figure 3).

Results of chi-square analysis were statistically significant, indicating differences in levels of social preference across bullying subtype categories [$\chi^2 (3) = 9.96, p < .05$]). Results of exact tests indicated that victims ($p < .05$) and bully-victims ($p < .05$) were significantly more
likely to have low social preference. No statistically significant findings emerged for SWD identified as bullies. Table 4 shows differences in peer nominated social preference across bullying involvement subtypes for SWD.

Table 4

*The Observed and (in parenthesis) Expected Frequencies of Peer Nominated Social Preference.*

<table>
<thead>
<tr>
<th>Bullying Subtype</th>
<th>Low Preference</th>
<th>High Preference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bully</td>
<td>19 (23.2)</td>
<td>13 (8.8)</td>
</tr>
<tr>
<td>Victim</td>
<td>40 (34.8)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>8 (13.2)&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Bully-Victim</td>
<td>28 (23.9)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>5 (9.1)&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

*Note:* Superscripts <sup>a,b,c</sup> represent <i>p < .05</i>, <i>p < .01</i>, <i>p < .001</i> respectively.

**Social impact.** Social impact is an index of one’s salience, or visibility within the peer hierarchy and is derived through peer nominations on each of 18 behavioral descriptors associated with prosocial (liked most) and antisocial (liked least) behaviors (Coie et al., 1982). Social impact is calculated by summing each individual’s <i>Z</i><sub>LM</sub> and <i>Z</i><sub>LL</sub> scores (see figure 3). Although the majority of bullies (68%), victims (73%) and bully-victims (80%) were low in social impact (<i>z-score</i> less than -1), it was not at a level greater than what would be expected by chance [<i>χ²</i> (3) = 4.58, <i>p = .21</i>].

**Sociometric status.** Standardized scores for social preference and social impact were used to select students into one of four extreme sociometric status categories: popular, rejected, controversial, and neglected. An additional category, average, acted as a comparison variable (Coie
et al., 1982). Categorizing data allows for investigation using chi-square tests of independence that can then be analyzed using one omnibus test. Individuals were categorized as sociometrically *popular* if their social preference $z$-scores were greater than one, $Z_{LM}$ were greater than zero, and $Z_{LL}$ was less than zero (Coie & Dodge, 1983). Conversely, *rejected* status includes all participants with social preference $z$-scores less than one, $Z_{LM}$ scores less than zero, and $Z_{LL}$ scores greater than zero. Individuals with social impact $z$-scores less than negative one and $Z_{LM}$ of zero were considered sociometrically *neglected* and those with social impact $z$-scores greater than one, as well as $Z_{LM}$ and $Z_{LL}$ scores greater than zero were categorized as *controversial* (see Table 2).

Results of chi-square analysis indicated differences in sociometric identification across bullying subtype for SWD [$\chi^2 (12) = 46.01, p < .001$]. Further exact tests revealed that bullies with disabilities were significantly more likely to be identified as sociometrically *popular* ($p < .05$) as well as sociometrically *controversial* ($p < .05$). Bullies with disabilities were also significantly less likely to meet criterion resulting in sociometrically *neglected* status ($p < .05$). Victims were more likely to be sociometrically *neglected* ($p < .001$), but less likely to be sociometrically *popular* ($p < .05$) or average ($p < .05$) than would be expected by chance. Bully-victims with disabilities were more likely to be sociometrically *rejected* ($p < .001$), but less likely to be sociometrically *popular* ($p < .05$) or *controversial* ($p < .05$). Finally, SWD uninvolved in bullying were significantly less likely to be sociometrically *rejected* ($p < .001$) or *neglected* ($p < .05$). Findings from this analysis appear in Table 5.
Table 5
*The observed and, in parenthesis, expected frequencies of sociometric status of different bullying involvement subtypes*

<table>
<thead>
<tr>
<th>Bullying Subtype</th>
<th>Popular</th>
<th>Rejected</th>
<th>Neglected</th>
<th>Controversial</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bully</td>
<td>9 (5.2)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>5 (5.7)</td>
<td>1 (5.2)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>7 (3.3)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>5 (7.6)</td>
</tr>
<tr>
<td>Victim</td>
<td>2 (6)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>9 (6.5)</td>
<td>14 (6.0)&lt;sup&gt;c&lt;/sup&gt;</td>
<td>2 (3.7)</td>
<td>4 (8.8)&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Bully-Victim</td>
<td>2 (6.0)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>16 (10.0)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>7 (6.0)</td>
<td>0 (3.7)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>11 (8.8)</td>
</tr>
</tbody>
</table>

*Note: Superscripts<sup>a,b,c</sup> represent p < .05, p < .01, p < .001 respectively*
**Question summary.** This question explored differences in levels of peer acceptance for SWD involved in bullying. In terms of social preference, bullies with disabilities were nominated as both liked most and liked least, were high in social impact and were identified as both sociometrically popular and controversial. Victims and bully-victims were low in social preference and social impact, resulting in identification as sociometrically neglected and rejected, respectively. These findings suggest that an individual’s role in the peer social context is influenced by behaviors associated with levels of sociometric status. An awareness of differences in levels of peer acceptance, and subsequently, sociometric status, supports the need for interventions focused on social contextual rather than individual factors.

**Question 2.** Do SWD involved in bullying differ on measures of peer nominated social prominence?

The purpose of this question was to identify within group differences in peer perceived popularity for SWD. As previously discussed, social prominence, or perceived popularity, is a measure of salience, or visibility within the peer social context. It is this type of recognition that stratifies the peer social hierarchy with popular students at the top and unpopular students at the bottom (Adler, Kless, & Adler, 1992). Subsequently, perceived popular students elicit different response interactions from those of perceived unpopular students.

Social prominence is derived from peer nominations for the items cool, leader, popular, and athletic. In the current analysis, count scores for peer nominated social prominence were analyzed using descriptive statistics ($M= 23.40, SD =38.60$). Consistent with previous studies utilizing the REAL dataset (e.g., Estell, 2007; Farmer et al., 2003), social prominence count data was converted to $z$-scores. In this study, social prominence $z$-scores ranged from -.533 through +7.23. Following procedures described by Farmer and colleagues (2011) these scores were trichotomized into three levels of popularity: high,
average, and low. Students with \( z \)-scores in the top one-third were identified as popular, those in the middle one third were considered average, and those in the bottom one third were classified unpopular. Categorizing these data allowed for analyses using Pearson’s Chi-Square Test of Independence.

Results of chi-square analysis indicated statistically significant differences between peer nominated social prominence and bullying subtype \[ \chi^2(6) = 13.55, \ p < .05 \]. Further exact tests revealed bullies with disabilities were significantly more likely to receive a high number of social prominence nominations \( (p < .01) \), while victims with disabilities were significantly more likely to receive a low number of social prominence nominations \( (p < .05) \). The inverse was also true. Bullies with disabilities were significantly less likely to be unpopular \( (p < .05) \), while victims with disabilities were less likely to be popular \( (p < .05) \). No statistically significant differences were evident for bully-victims with disabilities. Results of this analysis appear in Table 6.

**Table 6**

*The Observed and (in parenthesis) Expected Frequencies of Membership in Socially Prominent Peer Groups*

<table>
<thead>
<tr>
<th>Bullying Subtype</th>
<th>Unpopular</th>
<th>Average</th>
<th>Popular</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bully</td>
<td>8 (12.7)(^a)</td>
<td>9 (12.4)</td>
<td>21 (12.9)(^b)</td>
</tr>
<tr>
<td>Victim</td>
<td>17 (11.7)(^a)</td>
<td>11 (11.5)</td>
<td>7 (11.9)(^a)</td>
</tr>
<tr>
<td>Bully-Victim</td>
<td>8 (8.7)</td>
<td>11 (8.5)</td>
<td>7 (11.9)</td>
</tr>
</tbody>
</table>

*Note:* Superscripts \(^a\), \(^b\), \(^c\) represent \( p < .05 \), \( p < .01 \), \( p < .001 \) respectively.

**Question summary.** These findings indicate that some bullies with disabilities are socially skilled and well accepted within the peer social context, while victims and bully-victims with disabilities are not. This is contrary to stereotypes portraying bullies as unskilled and unpopular, and may set the occasion for social interactions and behaviors that maintain this role.
(Crick & Dodge, 1999). It is also possible that unpopular SWD are targets of mistreatment from others who are trying to distinguish themselves from those perceived as socially unimportant.

**Question 3.** Do SWD involved in bullying differ on measures of peer nominated aggression?

The purpose of this question was to identify within group differences in levels of peer nominated aggression for SWD involved in bullying. Consistent with previous studies utilizing the REAL dataset (e.g., Estell, 2007; Farmer et al., 2003), continuous aggression data was converted into $z$-scores. These ranged from -0.38 through +22.25. Z-scores were sorted into ascending order and dichotomized. Following procedures described by Estell (2007), students with $z$-scores greater than .50 were identified as aggressive, while all others were considered not aggressive. There were no cases in which a $z$-score of exactly .50 appeared. Categorizing these data allowed for analyses using Pearson’s Chi-Square Test of Independence.

Results of chi-square analysis indicated statistically significant differences between bullying subtype and levels of peer nominated aggression for SWD [$\chi^2 (3) = 44.80, p < .001$]. Exact tests revealed that both bullies and bully-victims ($p < .001$) with disabilities were significantly more likely to be nominated as aggressive. Conversely, victims ($p < .001$) with disabilities were significantly more likely to be identified as not aggressive ($p < .001$). Results of this analysis appear in Table 7.

**Question Summary.** Overall, the majority of SWD involved in bullying were nominated by their peers as not aggressive, however, a subset of bullies and bully victims emerged as aggressive. Results of this analysis indicate that both bullies and bully-victims were significantly more likely to be nominated by peers as exhibiting aggressive behavior, while victims were significantly more likely to be nominated as not aggressive.
Table 7  
The Observed and (in parenthesis) Expected Frequencies of Peer Nominated Aggression by Bullying Subtype

<table>
<thead>
<tr>
<th>Bullying Subtype</th>
<th>Non-Aggressive</th>
<th>Aggressive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bully</td>
<td>27(38.9)\textsuperscript{a}</td>
<td>19(7.1)\textsuperscript{c}</td>
</tr>
<tr>
<td>Victim</td>
<td>59(50.8)</td>
<td>1(9.25)\textsuperscript{c}</td>
</tr>
<tr>
<td>Bully-Victim</td>
<td>25(31.3)</td>
<td>12(5.7)\textsuperscript{a}</td>
</tr>
</tbody>
</table>

Note: Superscripts \textsuperscript{a} and \textsuperscript{c} represent $p < .05$ and $p < .001$ respectively

Question 4. Do SWD involved in bullying differ across categories of social network centrality?

The purpose of this question was to examine differences in social network positions (nuclear, secondary, peripheral, isolated) for SWD involved in bullying. Results of chi-square analysis indicated significant differences between bullying subtype and social network position for SWD [$\chi^2 (9) = 34.97$, $p < .001$]. Further analysis using exact tests revealed that bullies with disabilities were significantly more likely ($p < .001$), while victims and bully-victims with disabilities were significantly less likely ($p < .01$) to occupy positions of nuclear centrality. Additionally, bully-victims with disabilities were more likely than would be expected by chance to be social isolated ($p < .01$). Results of this analysis appear in Table 8.
Table 8

*The Observed and Expected (in parenthesis) Frequencies of Social Network Position for Students with Disabilities*

<table>
<thead>
<tr>
<th>Bullying Subtype</th>
<th>Isolated</th>
<th>Peripheral</th>
<th>Secondary</th>
<th>Nuclear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bully</td>
<td>2 (4.4)</td>
<td>7 (7.7)</td>
<td>12 (12.9)</td>
<td>12 (5.0)&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Victim</td>
<td>6 (6.6)</td>
<td>14 (11.5)</td>
<td>24 (19.3)</td>
<td>1 (7.5)&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Bully-Victim</td>
<td>10 (4.0)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>7 (6.9)</td>
<td>9 (11.6)</td>
<td>1 (4.5)&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

*Note:* Superscripts <sup>a,b,c</sup> represent *p* < .05, *p* < .01, *p* < .001 respectively.
**Question Summary.** In the peer social network, students with disabilities are not always socially marginalized. Bullies with disabilities were significantly more likely to hold positions of nuclear centrality, while bully-victims were more often socially isolated. Victims, on the other hand, were less likely to be nuclear in the social network. These findings suggest that SWD involved in bullying these can be socially connected and included to some extent in the peer social network.

**Question 5.** Are there differences in peer group affiliation for SWD involved in bullying?

The purpose of this question was to explore differences in peer group membership for students with disabilities that may be mediated by social prominence, aggression, concentration of members identified as bullies, and concentration of members identified as victims. Following procedures described in extant studies (e.g., Estell et al., 2007; Farmer et al., 2002) and described in chapter three of this study, peer groups identified by the SCM procedure were categorized according to level of social prominence, aggression, concentration of bullies and concentration of victims. Groups were considered socially prominent or aggressive if more than 50% of members had a nomination score greater than or equal to 0.5 SD above the mean for either construct. Identical criteria applied for bully and victim groups. Individual chi-square analyses were performed for each of these four variables.

**Social prominence.** Results of chi-square analysis indicated significant differences in membership in socially prominent peer groups for SWD involved in bullying \[\chi^2(6) = 19.56, p < .01\]. Further exact tests showed bullies with disabilities were more likely to belong to groups with a high concentration of socially prominent peers \(p < .05\). Conversely, bully-victims with disabilities were significantly more likely to not be members of groups organized around social
prominence ($p < .01$). No significant differences emerged for victims with disabilities. Results of this analysis appear in Table 9.

Table 9

The Observed and (in parenthesis) Expected Frequencies of Membership in Socially Prominent Peer Groups.

<table>
<thead>
<tr>
<th>Bullying Subtype</th>
<th>Not a Member</th>
<th>Low*</th>
<th>High**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bully</td>
<td>2 (4.4)</td>
<td>19 (20.8)</td>
<td>9 (4.8)*</td>
</tr>
<tr>
<td>Victim</td>
<td>6 (6.6)</td>
<td>35 (31.2)</td>
<td>4 (7.2)</td>
</tr>
<tr>
<td>Bully-Victim</td>
<td>10 (4.0)b</td>
<td>15 (18.7)</td>
<td>2 (4.3)</td>
</tr>
</tbody>
</table>

Note: Superscripts a,b,c represent $p < .05$, $p < .01$, $p < .001$ respectively.
* Low = less than 50% of group members are .5 of a SD above the mean on measures of social prominence.
** High= 50% or more of group members are .5 of a SD above the mean on measures of social prominence

Aggression. Results of Pearson’s chi-square analysis were significant [$\chi^2 (6) = 18.40$, $p < .01$], indicating within group differences in patterns of affiliation organized around aggression. Results of exact test revealed bullies with disabilities were significantly more likely than would be expected by chance to affiliate in groups with a high number of aggressive members ($p < .05$). Bully-victims with disabilities were significantly more likely to not be members of aggressive ($p < .001$) or low aggressive ($p < .01$) peer groups. No significant results emerged for victims with disabilities. Results of this analysis appear in Table 10.
### Table 10

The Observed and (in parenthesis) Expected Frequencies of Membership in Aggressive Peer Groups.

<table>
<thead>
<tr>
<th>Bullying Subtype</th>
<th>Not a Member</th>
<th>Low*</th>
<th>High**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bully</td>
<td>2 (4.4)</td>
<td>19 (19.4)</td>
<td>4 (1.4)*</td>
</tr>
<tr>
<td>Victim</td>
<td>6 (7.5)</td>
<td>37 (34.1)</td>
<td>1 (2.4)</td>
</tr>
<tr>
<td>Bully-Victim</td>
<td>10 (4.3)(^b)</td>
<td>14 (19.4)(^b)</td>
<td>1 (1.0)</td>
</tr>
</tbody>
</table>

*Low* = less than 50% of group members are .5 of a SD above the mean on measures of social prominence.

**High** = 50% or more of group members are .5 of a SD above the mean on measures of social prominence.

**Note:** Superscripts \(^{a,b,c}\) represent \(p < .05, p < .01, p < .001\) respectively.

**Concentration of bullies.** Pearson’s chi-square analysis was significant \([\chi^2 (6) = 15.49, p < .05]\), indicating SWD differentially associated with peers who were also identified as *bullies.* Results of exact tests showed that *bullies* \((p < .05)\) and *bully-victims* \((p < .001)\) with disabilities were most often not members of bullying peer groups. Additionally, *bully-victims* with disabilities were significantly less likely than expected by chance to be members of low bullying groups \((p < .01)\). No significant findings emerged for SWD identified as victims. Results of this analysis appear in Table 11.
Table 11

The Observed and (in parenthesis) Expected Frequencies of Membership in Bullying Groups.

<table>
<thead>
<tr>
<th>Bullying Subtype</th>
<th>Not a Member</th>
<th>Low*</th>
<th>High**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bully</td>
<td>2 (4.4)a</td>
<td>24 (23.5)</td>
<td>4 (2.1)</td>
</tr>
<tr>
<td>Victim</td>
<td>6 (6.6)</td>
<td>36 (35.2)</td>
<td>3 (3.2)</td>
</tr>
<tr>
<td>Bully-Victim</td>
<td>10 (4.0)c</td>
<td>16 (21.1)b</td>
<td>1 (1.9)</td>
</tr>
</tbody>
</table>

Note: Superscripts a, b, c represent p < .05, p < .01, p < .001 respectively.

*Low = less than 50% of group members are .5 of a SD above the mean on measures of social prominence.

**High = 50% or more of group members are .5 of a SD above the mean on measures of social prominence.

Concentration of victims. Pearson’s chi-square analysis was significant [$\chi^2(6) = 34.72$, $p < .001$], indicating within group differences in patterns of affiliation organized around peer victimization. Results of exact tests indicated that bullies with disabilities were more often members of groups with a low number of victims ($p < .001$), and less often members of high victim groups ($p < .001$). Victims were significantly more likely to affiliate in groups with a high number of other victims ($p < .05$). Bully-victims with disabilities were not members of groups comprised of other victims ($p < .01$) or those with a low number of victims ($p < .001$). Results of this analysis appear in table 12.
Table 12

The Observed and (in parenthesis) Expected Frequencies of Membership in Victim Groups.

<table>
<thead>
<tr>
<th>Bullying Subtype</th>
<th>Not a Member</th>
<th>Low*</th>
<th>High**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bully</td>
<td>2 (4.4)</td>
<td>28 (22.9)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0 (2.7)&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Victim</td>
<td>6 (6.6)</td>
<td>30 (34.7)</td>
<td>9 (4.0)&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Bully-Victim</td>
<td>10 (4.0)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>12 (20.6)&lt;sup&gt;c&lt;/sup&gt;</td>
<td>5 (2.4)</td>
</tr>
</tbody>
</table>

Note: Superscripts<sup>a, b, c</sup> represent $p < .05$, $p < .01$, $p < .001$ respectively.

* Low = less than 50% of group members are .5 of a SD above the mean on measures of social prominence.

** High = 50% or more of group members are .5 of a SD above the mean on measures of social prominence.

**Question summary.** Results of these analyses show that SWD differ in patterns of peer affiliation based on bullying involvement subtype. Bullies were most often members of groups with low numbers of other bullies or victims, but a high number of aggressive, socially prominent peers. Victims tended to affiliate with other victims, while bully-victims were most often not members of peer groups, regardless of the social construct around which membership was organized.

**Chapter Summary**

Based on results derived for each research question, some general statements can be made regarding how SWD might be differentially involved in bullying. In terms of peer acceptance, bullies with disabilities were high in peer nominated social prominence, were more likely to be sociometrically popular or controversial, and occupied the highest and most central
positions in the social hierarchy. Bullies with disabilities tended to affiliate in groups with high numbers of other socially prominent and aggressive students and were members of groups comprised of a low number of victims. Conversely, bully-victims with disabilities were low in social preference, sociometrically rejected, and more likely to be socially isolated. These students were significantly more likely to not be members of peer groups organized around social prominence, aggression, and concentration of bullies or concentration of victims. The only statistically significant result for SWD identified as victims was membership in peer groups with a high number of other victims.
Chapter 5

Discussion

Overview

School bullying is a significant problem in schools and classrooms throughout the United States and there is a nationwide urgency to find a solution. Trends in research over the past several decades have indicated the need to employ a preventive rather than punitive approach to effectively decrease bullying. Specifically, attention must be given to peer social processes and status hierarchies that may act as setting events for interactions and behaviors that support and maintain bullying relationships (Farmer & Cadwallader, 2000; Fox & Conroy, 1995; Gronlund, 1965; Swearer & Doll, 2001; VanAcker & Wehby, 2000; Thornberg, 2011). The majority of research exploring the social nature of bullying, however, has focused on identifying these social dynamics in samples of typically developing students.

Students with disabilities are at risk for a wide range of academic, social, psychological, and behavioral problems, all of which can contribute to patterns of antisocial behavior, problematic peer relationships, and increased risk for involvement in bullying (Blake et al., 2014; Blake et al., 2012). The concept of a person-in-context approach as opposed to an individualized approach to address social and behavioral deficits may seem counter-intuitive to special educators whose focus of instruction derives from the specific needs of individual students. While it is true that we strive to include SWD in the general education environment to the greatest extent possible, remediation of social and behavioral deficits typically takes place in a more contained, resource type setting. This is not to say that individualized interventions for building positive social behaviors are ineffective. From a special educator’s perspective,
providing individualized instruction and social skills training may serve to assist SWD with skills related to self-regulation. Bullying, however, is not an individual phenomenon. Peer reactions to and judgements of SWD over time can result in the conferral of social roles that consistently set the occasion for bullying (Armstrong, 2006). It is remiss to overlook past histories of peer social interactions and contextual factors that contribute to the likelihood that bullying perpetration and victimization will take place (Sasso, Conroy, Stichter, & Fox, 2001; Rodkin, Espelage, & Hanish, 2015; Shores & Wehby, 1999).

To identify variances in social profiles that may act as setting events for bullying interactions, this study sought to identify differences within groups of SWD identified as bullies, victims and bully-victims on five indices of peer social dynamics: peer acceptance, social prominence, aggression, social network centrality, and peer group membership. In terms of bullying subtypes, some SWD identified as bullies received many like-most nominations, had high social status and belonged to peer groups with other socially prominent youth. Conversely, other bullies received many nominations for both like-most and like-least, were sociometrically controversial and belonged to peer groups comprised of aggressive peers. Students identified as victims, while not popular, did belong to peer groups. As would be expected based on principles of homophily, victims were significantly more likely to be members of peer groups comprised of a high number of other victims. It was also true, however, that the majority of victims affiliated in groups with others identified as low in social prominence, aggression and bullying. Bully-victims shared characteristics with both bullies and victims. These students were more likely to be aggressive, however, were actively disliked by peers, sociometrically rejected, and isolated from the peer social network. Bully-victims were significantly more likely to not belong to any peer group organized around social prominence, aggression, concentration of bullies or
concentration of victims.

These findings are summarized in Figure 3. The second column (boxed), represents potential social roles of SWD and shows how diverse bullying involvement profiles may reflect a history of differential patterns of social and behavioral interactions. As an aggregated group, SWD were most often disliked by their peers, unpopular, aggressive, low in status and members of socially marginalized peer groups. However, when peer acceptance, social prominence, aggression, social network centrality, and peer group affiliation were analyzed across groups of bullies, victims, and bully-victims, significant differences in social-behavioral profiles emerged. This heterogeneity among SWD involved in bullying suggests that differences in social roles may act as setting events that increase the probability that bullying will occur. The remaining columns are speculative, but indicative of a potential line of research focused on strengthening the current hypothesis.
Figure 4: Conceptual Framework for Social Roles as Setting Events

<table>
<thead>
<tr>
<th>Bullying Subtype</th>
<th>Social Roles as Setting Events</th>
<th>Antisocial Patterns of Behavior</th>
<th>Possible Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bully</td>
<td>Controversial High Prominence Nuclear Centrality Socially Integrated</td>
<td>Direct Aggression Indirect Aggression Proactive Aggression</td>
<td>Peer Attention Teacher Attention Increased Status</td>
</tr>
<tr>
<td>Victim</td>
<td>Neglected Low Prominence Peripheral/Secondary Victim Groups</td>
<td>Internalizing Non-retaliative Non-aggressive Avoidance behaviors</td>
<td>Escape attacks Avoid attention</td>
</tr>
<tr>
<td>Bully-Victim</td>
<td>Rejected Isolated Low Prominence Not in Peer Groups</td>
<td>Internalizing Externalizing Reactive Aggression</td>
<td>Peer Attention Teacher Attention Perceived Acceptance</td>
</tr>
<tr>
<td>Not</td>
<td>Liked Low Impact Average Non-aggressive</td>
<td>No significant anti-social behaviors</td>
<td>No escape/avoid functions</td>
</tr>
</tbody>
</table>
Involved
Taken together, results from this study add to the growing literature base supporting the significant heterogeneity of SWD in terms of involvement in bullying and the prospect that an individual’s social role and reputation within the peer hierarchy may act as a setting event for bullying perpetration and victimization. In other words, some SWD involved in bullying experience their social environment in ways that belie typical stereotypes associated with identification as a bully, victim, or bully-victim. Results are expected to broaden stakeholder perceptions of bullying as a complex social-interactional process requiring attention to the nature of the peer status hierarchy, as well as individual social roles SWD occupy within the school and classroom social context. Additionally, results presented here stress the necessity for school personnel, particularly classroom teachers, to develop antecedent interventions, based on potential student role setting events, that minimize the impact of the peer social structure on student bullying by informing individual, classroom, and school based prevention and intervention programs.

**Theoretical Implications**

Much of the research exploring bullying is grounded in a social-ecological model of development (Bronfenbrenner, 1943). From this perspective, bullying is encouraged or constrained through multiply determined relationships between an individual and all other environmental factors affecting them (Swearer & Doll, 2001). In terms of school bullying, both positive and negative social interactions between individuals, peers, and school factors within the microsystem of schools and classrooms contribute to the development of distinct social roles that serve increase or decrease the likelihood that bullying will occur (Farmer et al., 2015; Tremblay et al., 1981).
Students with disabilities are identified as such due to deficits in academic, social and/or behavioral competencies. As they enter pre-school, SWD may display maladaptive behaviors that discourage peer interactions or withdraw from peer interactions due to numerous failed attempts to be included. Subsequently, these students are often targeted by peers who view them as peculiar, stupid, poor, weird or otherwise devalued and not fitting in (Hendrickson et al., 1982; Thornberg, 2015a). Over time, these stigmatizing labels can become dominant features of one’s social identity and solidify their social role or reputation in the peer social hierarchy (Merten, 1997). Subsequently, an individual’s social reputation, or role, can set the occasion for peer responses that are positively or negatively reinforced, resulting in a perpetual cycle of bullying and victimization (Salmivalli et al., 1996).

One way to begin exploring the idea that histories of peer interaction and resultant social roles influence the likelihood of bullying perpetration and victimization for SWD is thorough the concept of setting events. Setting events are complex antecedent variables that provide the context and condition under which bullying perpetration and victimization will occur (Fox & Conroy, 1995; Krantz & Risley, 1977). These include individual characteristics as well as a history of social interchanges, social network membership, social network centrality, and peer group processes that contribute to an individual’s social role or reputation within the peer ecology of schools and classrooms (Farmer, Lane et al., 2012; Hendrickson et al., 1987; Leigland, 1984; Wehby et al., 1995). From this perspective, bullying involvement of SWD can be differentiated by distinct social positions that increase the likelihood that bullying interactions will occur at any given point in time. Subsequently, an individual’s likeability, popularity, peer group, and means of aggression can effect the types of social interactions and opportunities available, and increase or decrease the probability that bullying will occur. Thus, individual
social roles can serve as setting events that begin the cycle of bullying perpetration and victimization.

As discussed in Chapter 2, a three term contingency comprised of antecedents, behaviors, and consequences is the basic unit for analyzing behavior (Cooper et al., 2007; Skinner, 1969). For example, a possible three term contingency for a bullying interaction may include this scenario: a bully sees a victim in the hallway at school (antecedent), makes a derogatory statement to her friends (behavior), and the friends laugh (consequence). In this case, actions of the bully were reinforced by peer approval and it is likely that this pattern of interaction will repeat itself in future interactions (Farmer, Lane et al., 2012). This scenario, however, represents a singular event in what is likely an ongoing pattern based on participant social roles that increase the likelihood that bullying will occur. In this case, the antecedent occurs immediately before the behavior. However, setting events may represent the cumulative, yet distal variables contributing to individual social roles of the bully and victim. For example, a combination of factors (e.g., shyness, academic deficits, low quality friendships) and a history of negative interactions in which the victim received no peer support, nor made any attempt to retaliate, is one possible setting event for this scenario. For the bully, a different combination of factors (e.g., popularity, peer group affiliates) and a history of peer support for aggression may also act as a setting event. Peers in this scenario may be motivated by social factors (e.g., status goals, avoiding victimization) that increase the likelihood of joining in, regardless of their individual beliefs. A history of social acceptance by the bully when aggressive acts are condoned may act as a setting event as well.

It has been suggested that the three term contingency be expanded to include setting events (Brown, Bryson-Brockman, & Fox, 1986). The finding that bullies with disabilities are a
heterogeneous group supports the hypothesis that social roles of SWD can act as setting events for bullying interactions. On the one hand, some aggressive students were perceived as popular, were socially well connected, and affiliated with both conventional and perceived popular peers (de Bruyn et al., 2009; Vaillancourt & Hymel, 2004). On the other hand, some students were perceived as unpopular, were relegated to the social periphery, and affiliated with other socially marginalized classmates (Farmer, Irvin et al., 2010). These findings indicate that although both groups were categorized as bullies, some SWD had a history of successful social interaction while others did not (Tremblay et al., 1981). This is consistent with and extends Farmer’s (2010) two social world’s hypothesis.

According to the two social worlds hypothesis, some bullies are popular and aggressive, have high social status, and are sociometrically controversial (i.e., both liked and disliked by peers). Since these students are not typically members of bullying peer groups, it is more likely that they are socially well-integrated and associate with others who are not involved in bullying. A second, lesser identified group of bully-victims are perceived as unpopular, aggressive, low status, sociometrically rejected (i.e., actively disliked), and belong to peer groups composed of other, similar individuals (Farmer, Petrin et al., 2010). Findings from the current study extend Farmer’s findings and provide evidence that this dynamic holds true for SWD as well. This finding is an important addition to the literature on bullying involvement of SWD as it provides a distinct example of how social roles of SWD involved in bullying may act as setting events that increase the likelihood of bullying perpetration and victimization.

Initially, results from the current analyses supported that all students identified as bullies were perceived by their peers as being popular, aggressive, and as having nuclear centrality. Without further analyses, this finding would have indicated that, in terms of intervention, bullies
are a homogeneous. The discovery of different patterns of affiliation, however, supports the premise that aggressive behaviors exhibited by bullies with disabilities who are socially connected will garner different responses from peers than will aggressive behaviors exhibited by socially marginalized bullies.

Social roles evolve over years of interactions with peers and others in the school environment. Characteristics associated with these roles may combine in a way such that peers and others confer labels indicative of one’s worth within the social context (e.g., ugly, stupid, weird, and retarded; Thornberg, 2015a). These labels become defining features of one’s personality and can predictably elicit specific responses from others and increase the probability that certain behaviors will occur in particular contexts. In this way, social roles of SWD can act as setting events for bullying interactions.

**Practical Implications**

Traditionally, bullying has been identified as negative behavior requiring punishment and sanctions for perpetrators, or as problems for students to work out on their own (Gest, Madill, Zadzora, Miller, & Rodkin, 2014; Olweus, 1993). Recent research, however, has emphasized the social-interactional nature of bullying as well as the need for teachers to understand, or be attuned to, the hierarchical nature of peer social dynamics within their classrooms (Hamm & Hoffman, 2016; Salmivalli,, 2014; Pepler, 2006). Over the past several decades, teacher’s roles have broadened beyond instructional delivery, and include the provision of positive social, emotional, and behavioral supports to all students, including those with disabilities (Lane, Oakes, & Menzies, 2014). As a result, teachers are often responsible for identifying, intervening, and monitoring student bullying, however, are frequently unaware of, or underestimate the amount of bullying that occurs in their classrooms (Craig & Pepler, 2003; Frisen et al., 2007; Rodkin &
Teachers are in a prime position to influence classroom, both directly by establishing positive social norms, and indirectly as an *invisible hand* that can guide classroom social dynamics (Farmer et al., 2011).

**Implications for Teachers.** Both students and researchers cite teacher involvement as one of the most significant factors in ending peer bullying however, they do not have much faith that teachers will intervene in ways that will solve the problem (Frisen et al., 2007; Mayer, 1995). This may be because teachers are often unaware of, or underestimate the amount of bullying that occurs in their classrooms (Craig & Pepler, 2003; Frisen, Jonsson, & Perrson, 2007; Rodkin & Gest, 2011; Salmivalli, 2010; Veenstra et al., 2014). While not considered part of the peer ecology, teacher attitudes and behaviors influence how students view and treat each other (Farmer et al., 2011). To act as agents of change in preventing bullying, however, teachers must be confident behavior managers who are attuned to peer social processes underlying bullying and victimization in their classrooms (Madill, Gest, & Rodkin, 2014; Norwalk, Hamm, Farmer, & Barnes, 2015).

Students with disabilities involved in bullying exhibit a wide range of behaviors that serve different behavioral functions. For instance, aggressive behavior can result in both peer support and peer rejection depending on students’ social status and affiliation patterns. Bullies with disabilities in this study were significantly more likely to belong to peer groups containing both high and low numbers of other bullies. It is possible that relationships between SWD in high member bully groups support each other’s aggressive behavior through the process of reciprocity while relationships for those in low member bully groups are complementary. In both instances, group members exhibited aggressive behaviors that were topographically similar, but
served different functions (Cairns & Cairns, 1994). Therefore, an understanding of how social roles of individuals in different peer groups would result in interventions that are differentiated between subgroups of aggressive students (Toblin, Schwartz, Op Meyer-Gorman, & Abbou-Ezzedine; 2005).

Teacher attunement to student’s social status and peer group affiliations can guide development of interventions based on the intra and interpersonal needs of their students (Pepler, 2006). In the school context, bullies have historically been viewed as aggressive deviants with low self-esteem, poor social skills, and few or no friends (Duncan, 2013). Findings from this study tell a different story. Although nominated as aggressive, some bullies with disabilities were significantly more likely to be perceived as popular, occupy positions of nuclear centrality and belong to peer groups with a high concentration of other socially prominent youth. Conversely, a second group of bully-victims with disabilities, while also aggressive, had profiles consistent with peer rejection and social marginalization. It is possible that these differentiated social roles contribute to varied social experiences for SWD involved in bullying. For example, the presence of a socially prominent, aggressive, well connected student identified as a bully may signal that perpetration of weaker students will be socially reinforced. Conversely, status and behavior associated with being identified as a bully-victim could act as a setting condition for continued victimization by peers exhibiting behaviors that resulted in popularity for the aforementioned bully. In the above example, teachers attuned to peer affiliations influence class participation for both individuals and groups could restructure the social context to reduce bullying prevention efforts would allow for interventions to be differentiated between subgroups of aggressive students (Toblin, Schwartz, Op Meyer-Gorman, & Abbou-Ezzedine; 2005).
As the classroom leader, it is vital that teachers assess the hierarchical structure of students in their classrooms and use this information to develop interventions specific to the needs of the children in their classrooms (Ahn & Gest, 2014; Pearl et al., 2007). Research has shown that when teachers are attuned to peer processes, including friendships, status, and peer group membership, students report a greater sense of school belonging, higher levels of peer acceptance, and improved academic functioning (Norwald, et al., 2015; Madill et al., 2015). Subsequently, teachers are better able to focus their attention on academics and activities designed to promote healthy student relationships (Hanish et al, 2007). Teachers who model and teach respect, equality, fairness, and compassion create a classroom climate where bullying and victimization are non-normative, and advocacy rather than opposition is the basis for popularity and high status (Wisner, 2015). Thus, teacher behaviors can act as setting events for either positive or negative student interactions and learning behaviors (Shores, Gunter, & Jack, 1993).

**Implications for intervention.** As previously mentioned, teachers are in a unique position to influence classroom peer ecologies and eliminate factors contributing to and maintaining peer bullying and victimization (Farmer et al., 2011; Troop-Gordon, 2015). Through the use of effective teaching and behavior management practices, teachers can serve as an *invisible hand* to address problematic aspects of the peer ecology; a process known as *network-related teaching* (Farmer et al., 2011; Rodkin & Gest, 2011). Teachers who are attuned to classroom social dynamics can make moment to moment changes that can serve to prevent bullying interactions that are prompted by the individual social roles of SWD. Subsequently, the classroom becomes an environment where all students, including SWD have many opportunities to safely practice positive social roles and prosocial behaviors (Gest et al., 2014; Gronlund, 1965).
Classroom interventions. The classroom environment can act as a setting event for both positive and negative student interactions and learning behaviors. At the classroom level, the peer ecology includes interpersonal relationships, social structure, status hierarchy, contextual factors, and patterns of social behavior exhibited by students (Hendrickx, Mainhard, Boor-Klip, Cillessen, & Brekelmans, 2016). Teachers are responsible for managing all of these variables, and this can become overwhelming. If left to chance, however, it is likely that a combination of these factors will contribute to classroom environments that are conducive to bullying (Allen, 2010). Effective classroom management, instructional delivery, and attention to potential setting events creates a safe environment that is conducive to student success.

Classroom management. Teachers can reduce and/or prevent disruptive, problematic student behavior by implementing proactive classroom management procedures (see Epstein, Atkins, Cullinan, & Weaver, 2008). How teachers manage classroom behavior has an effect on the degree of victimization reported by children in the classroom (Kochenderfer-Ladd & Pelletier, 2008). In terms of bullying, one of the goals of classroom management is to create opportunities for students to practice social skills and move out of social roles that are detrimental and into positive peer relationships (Logis, Rodkin, Gest, & Anh, 2013). Most classrooms are organized around social prominence, meaning that popular students have the power to set peer norms and exert social influence over others to maintain or improve their social status (Dijkstra & Gest, 2015; Hawley, 1999; Shi & Xie, 2012). Creating a more egalitarian classroom is one way to promote new friendships and engage students in cooperative group activities. This results in a positive classroom climate in which students have a higher morale and there is greater group cohesiveness amongst peers (Lippitt & White, 1943). Teachers can also downplay social status and provide multiple routes to gaining social status (Farmer et al., 2009).
For example, in the current study, bully-victims with disabilities were nominated as aggressive and also held social positions consistent with social marginalization. If this social role acts a setting event, peers may exhibit patterns of interaction that are negative, exclusionary, and elicit retaliative behaviors from the bully-victim. Subsequently, this student may be removed from the classroom for acting out, thus allowing escape from an aversive situation for both the SWD and the work group. This can not only perpetuate a cycle of victimization, but also contribute to poorer academic and social functioning for all involved.

Teachers who are attuned to the social dynamics of their classrooms can take steps to place students in situations that will promote student strengths. For instance, in the scenario just described, the teacher may separate the bully-victim from peers that reinforce bullying behaviors, and embed that student into a positive, constructive group. In addition, seating arrangements that are intentional rather than random or student selected, and are also based on peer group affiliation can change patterns of liking and disliking among students (Gest et al., 2014). An attuned teacher can utilize information from peer surveys, behavioral observations, and peer verbal reports to organize groups in ways that promote positive social relationships and where the presence of the marginalized student signals prosocial behaviors from peers (Gronlund, 1965; Logis et al., 2013; Pepler, 2006).

Building positive relationships with students, becoming attuned to the classroom social hierarchy and implementing effective classroom management and instructional techniques can all set the occasion for While this may be a daunting task, teachers who are attuned to the peer structure in their classrooms is teacher behavior including student-teacher relationships, instructional delivery and classroom management and classroom climate (Mayer, 1995;
Policy Implications

As of April 21, 2015, all 50 states have adopted some semblance of an anti-bullying law. While this might satisfy constituents who believe that school bullying is harmful, the reality is that these laws simply direct school districts to develop policies that address bullying and do not provide resources for actually addressing the behavior (Cornell & Limber, 2015; Temkin, 2015). Although SWD are protected from bullying under the IDEA, school faculty and staff can only take action if they are aware of the different ways SWD are involved in bullying.

A possible starting point for effecting change is development and acceptance of a clear, standardized, nation-wide definition for bullying as well as specific guidelines to assist school districts in clarifying adult responsibility in terms of measuring, reporting, and taking action to intervene and prevent bullying for all students, including those with disabilities. Currently, the prevalence of bullying remains high, despite state laws and guidance from the Department of Education’s four *Dear Colleague Letters* over the past five years. By overseeing school’s anti-bullying efforts, schools could focus their intervention and prevention programs to successfully decrease student bullying.

Limitations and future research needs

Although the current scholarship provides a new perspective on bullying involvement for SWD, several limitations are noted. First, this study was descriptive in nature; no variables were manipulated and no interventions were tested. Future research should build on current findings and explore the concept of social roles as setting events for bullying involvement of SWD. Next, this investigation is a secondary analysis of quantitative data. Future randomized control investigations would provide real time data exploring students’ social roles that may act as setting events (Hendrickson et al., 1987; Kantor, 1959; Wahler & Fox, 1980). Finally, variables
used in this study represent only one single data point in a sample of students in fifth through eighth grade. Peer hierarchies begin forming in pre-school and social roles conferred on students, particularly victims, are relatively stable over the school career. Longitudinal analysis may be helpful in determining if SWD identified as bullies, victims, and bully-victims retain these roles throughout the elementary, middle, and high school grades.

**Conclusion**

News stories related to school bullying are reported with relative frequency. The majority of these convey details of tragic events that have been attributed to excessive and ongoing peer victimization. The gravity of these stories, which range from school shootings to suicide, create a plausible urgency for schools to find a way to make bullying stop. Currently, all 50 states have adopted some form of anti-bullying policy, and many have implemented school-wide bullying prevention programs. The premise of these programs is on public recognition and rewards for students who exhibit positive behavior that is in line with established rules and guidelines. Aside from the paucity of systematic research examining their efficacy, a significant problem related to school-wide programs is that they do not account for the underlying social dynamics that are at the root of peer bullying and victimization. This is not intended as a criticism of educators dedicated to making school a better place for all students, but as a statement directed at the need to educate the wider public on bullying as both individually and socially mediated.

There has been a renewed interest in addressing bullying from a function based perspective in which peer social dynamics and resultant social roles act as setting events to peer bullying and victimization. This is particularly relevant for SWD. Schools and classrooms tend to be set up in ways that naturally evoke and maintain antisocial behaviors, including bullying. The effects of labeling consigned as part of the special education identification process, and
academic tracking based on student ability, may constrain opportunities to establish meaningful, supportive peer relationships. Some schools, including those with established anti-bullying programs, often operate from a social deficit perspective in which it is the child, and not the school, that is considered defective and in need of fixing. Additionally, in schools with highly stratified peer hierarchies, the popular few determine the socially valued characteristics that make one worthy of belonging. Perceived differences related to disability can result chronic rejection and victimization for SWD.

When a child is being bullied, it is not the victim who needs to be fixed (Wisner, 2015). The consequences of bullying and victimization extend to all students, but are especially detrimental for SWD who are already at risk for poor academic and social outcomes. It is within the power of teachers and schools to promote an egalitarian, strength based environment through the reorganization of social contextual factors that support the active exclusion and mistreatment of those who are identified as different. Through identification of peer groups, and social and behavioral characteristics of peer group members, it is possible to identify interaction patterns that sustain bullying and victimization. Subsequently, interventions can be developed that change how an individual’s role in the peer ecology may set the occasion for bullying interactions.

Results of the current investigation support the significant heterogeneity of SWD within categories of bullies, victims, and bully-victims. This is an important finding as it shows that SWD involved in bullying do not necessarily fit typical criteria describing bullying subtypes, but have diverse social roles that may not be readily observable. This is consistent with research indicating that SWD have distinct roles within bullying subtypes that differentially contribute to the process of bullying (Cho et al., 2009; Farmer & Hallowell, 1994; Locke et al., 2010; Murray & Greenburg, 2006; Pearl, et al., 1998; Rose et al., 2013).
Mayer (1995) suggests that until setting events are dealt with, we will not be able to consistently prevent student’s antisocial behaviors, including those associated with bullying. The current study has exposed the veritable tip of the iceberg in considering social roles as setting events for SWD involved in bullying and cannot be ignored. Research must move beyond conventional quick fixes and approach bullying is not one thing, but as a social issue requiring changes in all levels of the social ecology. Further attention to the concept of student social roles acting as setting events for bullying interactions is, therefore, essential.
APPENDIX

Student Activity Booklet

Name: ______________________________

Homeroom Teacher: __________________

School: _____________________________

Date: _______________________________
Friends and Groups

Are there any kids in your grade who hang around together a lot?  Yes / No

Please write their names on the lines below. Include each person’s last name. Name all the
groups that you can think of.

Group 1: __________________________________________
___________________________________________________
___________________________________________________

Group 2: __________________________________________
___________________________________________________
___________________________________________________

Group 3: __________________________________________
___________________________________________________
___________________________________________________

Group 4: __________________________________________
___________________________________________________
___________________________________________________

Group 5: __________________________________________
___________________________________________________
___________________________________________________

Are there some kids who don't seem to have a particular group, who tend to stay by
themselves a lot?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

If you need more space, turn the paper over. Remember, you don’t have to fill in all the
lines.
For the following, name the three kids in your grade who best fit the description.

1) Cooperative. “Here is someone who is really good to have as part of your group, because this person is agreeable and cooperative – pitches in, shares, and gives everyone a turn.”

2) Disruptive. “This person has a way of upsetting everything when he or she gets into a group – doesn’t share and tries to get everyone to do things their way.”

3) Acts Shy. “This person acts very shy with other kids. It’s hard to get to know this person.”

4) Starts Fights. “This person starts fights. This person says mean things to other kids or pushes them, or hits them.”

5) Seeks Help. “This person is always looking for help, asks for help even before trying very hard.”

6) Leader. “This person gets chosen by others as the leader. Other people like to have this person in charge.”

7) Athletic. “This person is very good at many outdoor games and sports.”

8) Gets in trouble. “This person doesn’t follow the rules, doesn’t pay attention, and talks back to the teacher.”

9) Good student. “This person makes good grades, usually knows the right answer, and works hard in class.”

Do not name more than three persons for each question.
Remember, you do not have to fill in all the lines.

10) Cool. “This person is really cool. Just about everybody in school knows this person.”

_____________________  ____________________  ____________________

11) Sad. “This person often seems sad.”

_____________________  ____________________  ____________________

12) Starts rumors. “This person gossips and says things about others. This person is good at causing people to get mad at each other.”

_____________________  ____________________  ____________________

13) Popular. “Some kids are very popular with their peers. That is, many classmates like to play with them or do things with them.”

_____________________  ____________________  ____________________

14) Trend setter. “This person sets the styles. Other people copy or imitate the way this person looks, dresses or acts.”

_____________________  ____________________  ____________________

15) Picked on. “This person is picked on by others.”

_____________________  ____________________  ____________________

16) Friendly. “This person is usually friendly to others.”

_____________________  ____________________  ____________________

17) Bully. “This person bullies others. This person is always hurting or picking on others.”

_____________________  ____________________  ____________________

18) Gets their way. “Other kids do what this person wants. This person always gets their way.”

_____________________  ____________________  ____________________

19) Name the three classmates you like the most.

_____________________  ____________________  ____________________
20) Name the three classmates you like least.

_________________________  ________________________  ________________________

21) If you could be one of your classmates who would you like to be?

_________________________  ________________________  ________________________
### What About Me?

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>don't like rock music</td>
<td></td>
<td>like rock music</td>
<td></td>
</tr>
<tr>
<td>like country music</td>
<td></td>
<td>don't like country music</td>
<td></td>
</tr>
<tr>
<td>never argue</td>
<td></td>
<td>always argue</td>
<td></td>
</tr>
<tr>
<td>always get in trouble at school</td>
<td></td>
<td>never get in trouble at school</td>
<td></td>
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<tr>
<td>always smile</td>
<td></td>
<td>never smile</td>
<td></td>
</tr>
<tr>
<td>not popular with boys</td>
<td></td>
<td>very popular with boys</td>
<td></td>
</tr>
<tr>
<td>never sad</td>
<td></td>
<td>always sad</td>
<td></td>
</tr>
<tr>
<td>very good at sports</td>
<td></td>
<td>not good at sports</td>
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<tr>
<td>don't like to dance</td>
<td></td>
<td>really like to dance</td>
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<tr>
<td>very good looking</td>
<td></td>
<td>not good looking</td>
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<tr>
<td>very good at spelling</td>
<td></td>
<td>not good at spelling</td>
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<tr>
<td>Statement</td>
<td>Always</td>
<td>Never</td>
<td>Very Good</td>
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<tr>
<td>---------------------------------</td>
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</tr>
<tr>
<td>always get in a fight</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>not good at math</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>never worry</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>very popular with girls</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>lots of friends</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i never get my way</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>win a lot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>never friendly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cry a lot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>not shy</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(continued)
# My School

**The kids I hang around with at school think that it is good to:**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Volunteer to answer questions or work problems on the board.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Do as little school work as possible.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Have a reputation as being really smart.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Offer to help other students if you know the answer or how to solve a problem.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Spend extra time talking to the teacher because you like what you are learning.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Really like learning.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Raise your hand to ask for help.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Hate school.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Talk about things you learn in class outside of class.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Fool around in class.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Study for class together.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**My School**

If I give a wrong answer to a question in my classes, the following happens:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I will be embarrassed or feel dumb.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I will not try to answer a question again that day.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Other students will laugh or make fun of me.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Other students will understand that everyone makes mistakes sometimes.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Other students will think I'm not smart.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Other students will try to help me understand what I missed.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
My School

1. I feel a real part of my school.
   - Completely False
   - Completely True

2. People notice when I’m good at something.
   - Completely False
   - Completely True

3. Other students in this school take my opinions seriously.
   - Completely False
   - Completely True

4. Most teachers at my school are interested in me.
   - Completely False
   - Completely True

5. There’s at least one teacher or adult in this school I can talk to if I have a problem.
   - Completely False
   - Completely True

6. People at this school are friendly to me.
   - Completely False
   - Completely True

7. I am included in lots of activities at my school.
   - Completely False
   - Completely True

8. I am treated with as much respect as other students.
   - Completely False
   - Completely True

9. The teachers here respect me.
   - Completely False
   - Completely True

10. People know I can do good work.
    - Completely False
    - Completely True

11. Other students like the way I am.
    - Completely False
    - Completely True
<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Uncertain</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. School is one of the most important things in my life.</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>2. Many of the things we learn in class are useless.</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>3. Most of what I learn in school will be useful when I get a job.</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>4. School is often a waste of time.</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>5. Dropping out of school would be a huge mistake for me.</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>6. School is more important than most people think.</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>7. School is important to getting a good job.</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Below, you will be asked to respond to questions and statements about “bullies” and “bullying”.

HOW OFTEN HAVE YOU BEEN BULLIED SINCE SCHOOL STARTED? (Circle one.)

a) Never. I don’t get bullied.

b) One or more times a day.

c) One or more times a week.

d) One or more times a month.

DID YOU STOP THE BULLYING FROM HAPPENING? (Circle one.)

a) No. I am still bullied.

b) A Little. Bullying stopped a little, but started again.

c) Mostly. Bullying mainly stopped, and only happened a little.

d) Yes, completely. I stopped it and it didn’t happen again.
e) I don’t get bullied.

IF I KNOW THAT SOMEONE IN MY SCHOOL IS BEING BULLIED:

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>A Little</th>
<th>Sometimes</th>
<th>A Lot</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I would tell the others to stop the bullying.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. I would help them.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. I would stick up for them.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. I would encourage them to tell the teacher about the bullying.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. I would try to make the others stop bullying.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

IF I’M BEING BULLIED:

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>A Little</th>
<th>Sometimes</th>
<th>A Lot</th>
<th>Always</th>
</tr>
</thead>
</table>

98
1. My peers would tell the others to stop the bullying.  
2. My peers would help me.  
3. My peers would tell me nice things to make me feel better.  
4. My peers would stick up for me.  
5. My peers would encourage me to tell the teacher about the bullying.  
6. My peers would hang out with me to make me feel better.  
7. My peers would try to make the others stop bullying.  
8. My peers would talk to me to make me feel better.  
9. My peers would come by to watch.  
10. My peers would laugh.  
11. My peers would encourage the bully by cheering.  
12. My peers would say things to
the bully like ‘show him!’

13. My peers would get other kids to watch.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

**After-School and Extracurricular Activities Measure**

Circle the number that tells how often you’ve done the following activities DURING OR AFTER SCHOOL THIS YEAR.

This school year, about how many times have you

<table>
<thead>
<tr>
<th>Activity</th>
<th>DURING SCHOOL:</th>
<th>AFTER SCHOOL:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Taken part in activities at your school such as band, choir, drama, yearbook, STEP, drill team, or cheerleading</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>2. Taken extra classes or received tutoring in reading or math</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>3. Participated in an academic club (e.g., math club, Spanish club, computer club)</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>4. Participated in activities such as Girl or Boy Scouts,</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
</tbody>
</table>
Girls Inc., 4-H Club, FFA, FBLA

<table>
<thead>
<tr>
<th>SCHOOL:</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFTER SCHOOL:</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Circle the number that tells how often you've done the following activities AFTER SCHOOL THIS YEAR.

This school year, about how many times have you

| 5. Taken lessons in music, art, dance, sports, or some other activity after school | 0 | 1 | 2 | 3 | 4 |
| 6. Played on an organized sports team (e.g., soccer or basketball team) after school | 0 | 1 | 2 | 3 | 4 |
| 7. Gone to a recreation center such as YWCA, YMCA, or Boys and Girls Club after school | 0 | 1 | 2 | 3 | 4 |
| 8. Taken religious classes or participated in religious activities | 0 | 1 | 2 | 3 | 4 |
| 9. Been home alone after school without an adult there | 0 | 1 | 2 | 3 | 4 |
| 10. Taken care of a sister or brother after school without an adult there | 0 | 1 | 2 | 3 | 4 |
| 11. Hung out with friends after school without an adult there | 0 | 1 | 2 | 3 | 4 |

How do you think the move from elementary school to middle school was for you?

_____ 1. Difficult
_____ 2. Somewhat Difficult
_____ 3. Somewhat Easy
_____ 4. Easy

Do you ride the bus to school?
___ Yes
___ No

If yes:

How long is your bus ride on the way to school? ________ (minutes)

How long is your bus ride on the way home from school? ________ (minutes)

What is your bus number? ________
References


for students at risk for EBD during the transition to middle school. *Exceptionality*, 2, 143-155.


Gladden, R., Vivola-Kantor, A., Hamburger, M. E., & Lumpkin, C. D. (2014). *Bullying surveillance among youths: Uniform definitions for public health and recommended data*


The Times (1885). *Bullying at King's college school*, April 27, Col. E, p .7.


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Education
2016       PhD, Special Education, The Pennsylvania State University
1993       M.S.Ed, Education of the Gifted and Talented, The College of New Rochelle
1986       B.S., Education of the Mentally/Physically Handicapped K-12
            Bloomsburg University

Academic/Teaching Experience
Summer 2015   Adjunct Instructor, City College of New York
2010-2013     Graduate Assistant, The Pennsylvania State University
1997-2010     Special Education Teacher, Lewisburg Area School District
1987-1988     Special Education Teacher, Port Jervis City School District

Publications

Conference Presentations and Guest Lectures
“Popularity and the Bullying Involvement of Students with Disabilities: A Teacher’s Primer.” Poster presented at the Council for Children with Behavior Disorders Bi-Annual Conference, September 24, 2015, Atlanta, GA.

“Peer Acceptance and the Bullying Involvement of Students with Disabilities” and “Not in My Classroom! Practical Strategies for Dealing with Bullying at the Classroom Level.” Auburn Anti-Bullying Summit, June 18-19, Atlanta, GA.