

Bullying and Victimization among Students in Special Education and General Education Curricula

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Abstract

International research established over a decade ago that students who are enrolled in special education curricula are victimized and perpetrate more bullying than their general education peers. However, few empirical studies have examined bullying rates among American schoolchildren who receive special education services. In the current study, a sample of middle school students (n = 1009) enrolled in general and special education programs completed the University of Illinois bullying, fighting, and victimization scales. As hypothesized, students with disabilities reported higher rates of victimization and fighting behaviours than students without disabilities. Conversely, students with disabilities and their general education peers reported similar rates of bully perpetration.

While the nation's schools strive to meet adequate yearly progress defined by increased student outcomes, legislative attention continues to focus on academic interventions. For example, The No Child Left Behind Act (NCLB) was established in 2001 to improve academic achievement, accountability, teacher quality, and evidence-based practice (Yell, Shriner, & Katsiyannis, 2006). However, the language included in NCLB is exclusive to core academic instruction and standardized measures (see NCLB, 2001). Interestingly, empirical evidence suggests that appropriate behavioural supports and academic achievement are directly correlated. More specifically, when positive behaviour supports are successfully implemented, they serve as a vehicle to decrease problem behaviour and increase academic achievement (Lassen, Steele, & Sailor, 2006). Unfortunately, educators often lack the appropriate training to address moderate levels of problem behaviours within their classrooms, making behavioural interventions one of the most prevailing

issues facing the educational system (Baker, 2005; Johnson & Fullwood, 2006; Walker, Colvin, & Ramsey, 1995).

One of the most common and pervasive behaviour problems in the school setting is bully perpetration and victimization (Espelage & Swearer, 2003). Based on the high level of American youth involvement in the bullying phenomena, research on perpetration and victimization has increased over the past decade. Evidence suggests that between 28% and 32% of American school children experience some level of victimization at school during the 6-month period prior to being surveyed (Dinkes, Cataldi, Kena, & Baum, 2006; Robers, Zhang, Truman, & Snyder, 2010). However, when the bullying dynamic is considered holistically, where consideration is to the role of the bystander, involvement in bullying includes the majority of the student population (Espelage, Bosworth, & Simon, 2000). These statistics demonstrate how pervasive the problem of bullying has become within the nation's schools.

Although national mandates have traditionally neglected provisions for behavioural interventions (see Individuals with Disabilities Education Act, 1997; Individuals with Disabilities Education Improvement Act, 2004; NCLB, 2001), the preponderance of the nation's states have enacted anti-bullying legislation (Swearer, Espelage, & Napolitano, 2009). While state level policies and programs are necessary for reducing bullying, they may not necessarily address at-risk subpopulations of students. For example, an emerging body of literature has suggested that students with disabilities are overrepresented within the bullying dynamic (McLaughlin, Byers, & Vaughn, 2010; Rose, Monda-Amaya, & Espelage, 2011). Although few empirical studies have examined bullying perpetration and victimization rates among American schoolchildren with disabilities, international research has indicated that students who are enrolled in special education curricula are the perpetrators and victims of more bullying occurrences than their peers without disabilities (Whitney, Smith, & Thompson, 1994). Additionally, it has been documented that students with disabilities may exhibit more aggressive behaviours than students without disabilities (Kuhne & Wiener, 2000). Therefore, it is necessary to investigate the prevalence of bullying perpetration and victimization among American students with disabilities.

Bullying Involvement of Students with Disabilities

As stated previously, approximately one-third of American school children report some level of victimization (Dinkes et al., 2006; Robers et al., 2010), and approximately 13% report involvement in bullying as perpetrators (e.g., saying or doing unpleasant things to others, teasing others repeatedly; Nansel et al., 2001) at school during the 6-month period, or academic term, prior to survey administration. While bullying has become a nation-wide epidemic, consideration must be given to characteristics that place students at increased risk for involvement. When subgroup data on disability status are collected and reported, it becomes evident that characteristics associated with students with disabilities should be considered when exploring the bullying dynamic (McLaughlin et al., 2010; Rose et al., 2011).

In a comprehensive review of the literature, McLaughlin and colleagues (2010) determined that students with special education needs or disabilities are overrepresented within the bullying dynamic as bullies and victims. They argued that this overrepresentation may be attributed to characteristics associated with specific disabilities, class placement, and marginalization. In a similar review, Rose and colleagues (2011) suggested that students with disabilities are twice as likely to be identified as bullies and victims when compared to their peers without disabilities. Overall, the extant literature suggests that students with disabilities are frequent targets of victimization and exhibit more bullying behaviours than the national average (McLaughlin et

al., 2010; Rose et al., 2011). However, with respect to the body of bullying literature as a whole, the dearth of literature in special education serves as a baseline for understanding the involvement of students with disabilities.

Therefore, when considering bullying among students with disabilities, attention must be given to the wide spectrum of disabilities and placements. For example, inclusive and segregated settings may elicit varying rates of victimization and perpetration based on educational practices, classroom structure, and severity of the disability (McLaughlin et al., 2010; Rose et al., 2011). In their seminal work, Whitney and colleagues (1994) investigated the victimization rates of 93 students with disabilities and their demographically matched peers within an inclusive setting. Through student and teacher interviews, the researchers determined that 55% of students with mild learning difficulties and 78% with moderate learning difficulties experienced moderate to severe levels of victimization. Conversely, only 25% of their demographically matched peer group reported being victimized in the same setting. These findings are corroborated in several studies in which students and teachers consistently nominate their classmates with disabilities as frequent victims of bullying (Nabuzoka, 2003; Nabuzoka & Smith, 1993; Sabornie, 1994).

More recently, in an investigation of bullying and fighting perpetration and victimization rates among a large sample of American middle school ($n = 7,331$) and high school students ($n = 14,315$) enrolled in general and special education programs, Rose, Espelage, and Monda-Amaya (2009) attempted to replicate international findings. Data suggested that students with disabilities engaged in higher rates of bullying and fighting perpetration, and were victimized more than their general education peers. Additionally, the restrictiveness of educational placement (i.e., inclusion, self-contained) served as a predictor for fighting and bullying perpetration. For example, as the restrictiveness of placement increased, students engaged in higher rates of bullying and fighting behaviours.

Theoretical Perspective

The phenomenon of bullying is extremely intricate with perpetration and victimization rarely occurring in isolation of other behaviours or social reinforcers. Overall, the act of bullying is based on complex interactions between individuals, families, peer groups, schools, communities, and cultures (Smith, 2004; Swearer & Espelage, 2004). Swearer and Espelage's (2004) Social-Ecological Framework for Bullying/Victimization suggests that an infinite number of variables can influence the interactions between the individual and environmental and personal factors. Based on this framework, the act of bullying is a social construct, and socializing behaviours, influences, and supports may set students with disabilities apart from students without disabilities (Pearl, Donahue, & Bryan, 1986).

At the school level, the discrepancy between educational placements (e.g., self-contained, inclusion) could be attributed to behaviour modeling, increased awareness, a reduction in negative stereotypes (Martlew & Hodson, 1991), and increased participation (Sabornie, 1994) experienced in inclusive settings. However, attention must be given to the severity of the disability and current academic functioning that dictates "Least Restrictive Environment" and classroom placement. This consideration is necessary because several behavioural characteristics of students with disabilities may increase the likelihood of victimization and perpetration. For example, students with Emotional and Behavioural Disorders demonstrate the highest levels of perpetration when compared to other sub-groups of students (Monchy, Pijl, & Zandberg, 2004; Van Cleave & Davis, 2006). On the other hand, students with more observable disabilities are victimized at a greater rate when compared to students with more covert disabilities (Dawkins,

1996). Overall, the literature points to poor social skills as the common contributing factor for increased perpetration and victimization among students with disabilities (Baker & Donnelly, 2001; Doren, Bullis, & Benz, 1996; Kaukiainen et al., 2002; Kuhne & Wiener, 2000; Llewellyn, 2000; Miller, Beane, & Kraus, 1998; Woods & Wolke, 2004).

At the individual level, literature provides several explanations to increased perpetration and victimization among students with disabilities, most of which stem from social information processing deficits or distortions and problems with communication or language (McLaughlin et al., 2010). For example, students with disabilities may be victimized more because they are too passive, misread nonverbal communication, misinterpret non-threatening cues (Sabornie, 1994), or lack the social skills necessary to avoid victimization (Nabuzoka, 2003). Conversely, students with disabilities may engage in bullying behaviours because they misinterpret social stimuli (Sabornie, 1994), misread social communication (Whitney et al., 1994), and overreact to rough and tumble play by acting too aggressively at inappropriate times (Nabuzoka & Smith, 1999). Additionally, a growing body of literature supports the idea that students with disabilities develop aggressive characteristics as a method of combating prolonged victimization (Kumpulainen, Räsänen, & Puura, 2001; O'Moore & Hillery, 1989; Singer, 2005; Van Cleave & Davis, 2006).

Purpose

Although an empirical base that has investigated bullying among students with disabilities exists, several limitations emerge. First, and most importantly, the body of literature is limited and most of the research has been conducted outside the United States (see Rose et al., 2011). Second, gender differences among students with disabilities who are perpetrators and victims are relatively non-existent, making it virtually impossible to determine if involvement in the bullying dynamic is the same for male and female students with disabilities. Finally, how students with and without disabilities react to victimization remains unexplored in the current literature. Therefore, the current study examined trends of bullying perpetration and victimization among a large sample of middle school students enrolled in general and special education programs.

Study Hypotheses

Based on the current literature regarding the bullying and victimization rates of students with disabilities, the following hypotheses were examined: (a) students with disabilities will report higher rates of bullying perpetration, victimization, and fighting behaviours than their general education peers; (b) males with disabilities will report higher levels of fighting and bullying perpetration than any other subgroup of students; and (c) students with disabilities will engage in more aggressive behaviours when they are victims of bullying.

Method

Participants

Based on the high level of bullying among students in the middle grades (Swearer et al., 2009), participants for the current study included 1,009 middle school students from four middle schools in two different Midwestern cities, including grades 5 ($n = 53$), 6 ($n = 261$), 7 ($n = 325$), and 8 ($n = 370$). The sample was 50.6% girls ($n = 510$) and 49.4% boys ($n = 498$). The mean age

of the sample population was 13 years. The overall sample was 42.9% African American, 42.1% Caucasian, 6.6% Other, 3% Hispanic, 2.1% American Indian or Alaska Native, and 2.1% Asian or Pacific Islander. The socioeconomic levels varied across the four schools, with free-reduced lunch eligibility ranging from 0% to 94%. All schools returned surveys for 90% through 95% of their student population, and the institutional review board approved a waiver of written consent.

Special Education Questions

Students were asked whether they had a disability, whether they knew their disability (if so then they were asked to describe it), and whether they participated in special classes for their disability either part-time or full-time. Among the 1009 students, 18% ($n = 182$) indicated that they had a disability. Of these, 4% ($n = 40$) received part-time special education services (i.e., inclusion), 6% ($n = 60$) were enrolled in full-time special education coursework, and 8% ($n = 82$) did not receive special education services. The students with disabilities sample included 44% girls and 56% boys. Students were also asked if they knew what their disability was called, and 46% ($n = 83$) indicated that they could identify their disability. The most frequently cited disability identifiers included 37% ($n = 31$) ADD/ADHD, 33% ($n = 27$) Emotional/Behavioural Disorder, and 20% ($n = 17$) learning disabilities. Therefore, disability was defined as a dichotomy (0 = did not have a disability, 1 = did have a disability) based on the students' self-report on the aforementioned disability items.

Self-report bullying perpetration. The 9-item Illinois Bully Scale (Espelage & Holt, 2001) was used to assess the frequency of teasing, name-calling, social exclusion, and rumour spreading. Students are asked how often in the past 30 days they teased other students, upset other students for the fun of it, excluded others from their group of friends, and helped harass other students. Response options include "Never," "1 or 2 times," "3 or 4 times," "5 or 6 times," and "7 or more times." The construct validity of this scale has been supported via exploratory and confirmatory factor analysis (Espelage & Holt, 2001). A Cronbach alpha coefficient of .87 was found for the development sample and the Bullying Scale correlated .65 with the Youth Self-Report Aggression Scale (Achenbach, 1991) and was not significantly correlated with the Victimization Scale ($r = .12$). The scale consistently emerges as distinct from physical aggression scales (Espelage & Holt, 2001; Espelage, Holt, & Henkel, 2003). A Cronbach alpha coefficient of .86 was found for this sample.

General peer victimization. Victimization from peers was assessed using the University of Illinois Victimization Scale (Espelage & Holt, 2001). Students are asked how often the following things have happened to them in the past 30 days: "Other students called me names;" "Other students made fun of me;" "Other students picked on me;" and "I got hit and pushed by other students." Response options include "Never," "1 or 2 times," "3 or 4 times," "5 or 6 times," and "7 or more times." A Cronbach alpha coefficient of .79 was found for the current study.

Fighting. Fighting was assessed using the four-item University of Illinois Fighting Scale (Espelage & Holt, 2001). This scale assesses physical fighting behaviour (e.g., "I got in a physical fight" and "I fought students I could easily beat"). Higher scores indicate more self-reported fighting behaviour. Response options include "Never," "1 or 2 times," "3 or 4 times," "5 or 6 times," and "7 or more times." The Cronbach alpha coefficient for the current sample was .70.

Procedures

Data were collected in collaboration with school administrators, teachers, and community representatives. Consent forms were mailed to parents of all registered students by the school district and parents were provided with phone numbers, addresses, and fax numbers to return the form if they did not wish their son/daughter to participate in the project. All schools returned surveys for 90% through 95% of their student population. At the beginning of each data collection period, students were informed that the researchers were interested in knowing how they think and feel about some things in their lives, like school, where they live, friends, and family. They were asked to give their written consent by signing their name on the survey coversheet. Students were informed that their name would be converted to a number as soon as the surveys were collected and that no teachers or parents would ever have access to their answers. Students were assured of their anonymity and confidentiality. Those students who elected not to participate or who had consent forms sent back were removed and went to another supervised classroom. The entire procedure lasted approximately 90 minutes over the course of two administration periods (i.e., two consecutive data collection days).

Results

Initially, data were screened for analyses appropriateness, which resulted in transformations to address assumption violations. First, an a priori power analysis was conducted to ensure adequate sample size, which determined a sample of 60 respondents per group, given $\alpha = .05$, would be sufficient. In addition to the power analysis, data were screened for normality. While it should be noted that skewed and kurtotic data were expected due to the nature of the constructs, log base-10 transformations were executed for bullying, victimization, and fighting to reduce skewness from 2.27 (bullying), 2.05 (victimization), and 1.78 (fighting) to 1.29, 1.10, and 1.01, respectively, and to reduce kurtosis from 5.98 (bullying), 4.49 (victimization), and 3.13 (fighting) to 1.28, .45, and .06, respectively. Following the transformation, Box's M for disability status and bullying, victimization, and fighting was calculated; it was determined that heterogeneity of covariances existed within the data (Box's $M = 49.11$, $p < .01$). Overall, the assumption violations may be attributed to the nature of the constructs and unequal sample sizes. To address these violations, significant multivariate statistics were examined through Pillai's trace, which is a robust statistic for multivariate assumption violations (Meyers, Gamst, & Guarino, 2006).

Descriptive Statistics

In order to examine differences in bullying, victimization, and fighting rates between students with and without disabilities, general descriptive statistics were examined, and a multivariate analysis of variance (MANOVA) was calculated. To assess the percentage of students involved in bullying, victimization, and fighting, overall group means and standard deviations were calculated for each subscale [bully = 1.43 (.58), victim = 1.54 (.78), fight = 1.53 (.73)], and separately for students with disabilities [bully = 1.50 (.69), victim = 1.75 (1.03), fight = 1.70 (.84)] and students without disabilities [bully = 1.41 (.56), victim = 1.50 (.70), fight = 1.49 (.70)]. Using the convention of one standard deviation greater than the group mean, students with and without disabilities were compared on each subscale to determine the percentage of students involved (see Table 1). Based on the implications of these descriptive statistics, further analyses proved necessary to confirm the study's hypotheses.

Table 1
Total Involvement in Bullying, Victimization, and Fighting for Students With and Without Disabilities Based on One Standard Deviation Above the Overall Group Mean for Each Subscale

	University of Illinois Bullying Scale	University of Illinois Victimization Scale	University of Illinois Fighting Scale
Students without disabilities	10.1% ($n = 86$)	10.4% ($n = 88$)	11.8% ($n = 100$)
Students with disabilities	13.7% ($n = 21$)	19.6% ($n = 30$)	16.4% ($n = 25$)

Multivariate Analysis of Variance

A MANOVA was conducted with the bullying, victimization, and fighting scales as dependent variables and special education status, gender, and school as the independent variables. An overall MANOVA effect was found for special education status (Pillai's trace = .013, $F_{(3, 986)} = 4.26$, $p < .01$, partial $\eta^2 = .01$); univariate analyses indicated that the groups differed on victimization ($F_{(1, 988)} = 7.52$, $p < .01$, partial $\eta^2 = .01$) and fighting ($F_{(1, 988)} = 5.73$, $p < .05$, partial $\eta^2 = .01$), but did not differ significantly on bullying perpetration ($F_{(1, 988)} = .72$, $p > .05$, partial $\eta^2 = .00$). The transformed mean scale scores for victimization and fighting perpetration by special education interaction indicated that students with disabilities were victimized more and exhibited higher levels of fighting behaviours than their general education peers. However, the transformed mean scale scores for bullying perpetration did not differ significantly across identification status (see Table 2).

An overall MANOVA effect was found for school (Pillai's trace = .12, $F_{(9, 2964)} = 14.23$, $p < .01$, partial $\eta^2 = .04$); univariate analyses revealed significant differences in bullying ($F_{(3, 988)} = 5.43$, $p < .01$, partial $\eta^2 = .02$), victimization ($F_{(3, 988)} = 5.62$, $p < .01$, partial $\eta^2 = .02$), and fighting ($F_{(3, 988)} = 33.58$, $p < .01$, partial $\eta^2 = .09$). While effect sizes ranged from small (bullying, victimization) to moderate (fighting; Cohen, 1988), significant differences warranted further analyses. The Scheffé post hoc test suggested that School 4 ($M = .16$, $SE = .01$) had significantly higher bullying rates than School 1 ($M = .14$, $SE = .01$), School 2 ($M = .08$, $SE = .02$), and School 3 ($M = .13$, $SE = .01$), and School 1 had significantly higher bullying rates than School 2. Additionally, the Scheffé post hoc test suggested that all four schools differed significantly on fighting, where School 4 ($M = .23$, $SE = .01$) reported the highest level of fighting, with School 1 ($M = .20$, $SE = .01$), School 3 ($M = .12$, $SE = .01$), and School 2 ($M = .04$, $SE = .02$) following respectively. Interestingly, the Scheffé test did not reveal a significant difference in levels of victimization across schools.

In addition to the multivariate effect for school, a two-way interaction was found for disability status and school (Pillai's trace = .02, $F_{(9, 2964)} = 1.94$, $p < .05$, partial $\eta^2 = .01$). Univariate analyses revealed that groups significantly differed on victimization ($F_{(3, 988)} = 2.82$, $p < .05$, partial $\eta^2 = .01$) and fighting ($F_{(3, 988)} = 3.95$, $p < .01$, partial $\eta^2 = .01$), but did not differ on bullying ($F_{(3, 988)} = 1.22$, $p > .05$, partial $\eta^2 = .00$). The estimated marginal means of the transformed scales suggest that students with disabilities at School 3 ($M = .25$, $SE = .03$) and School 1 ($M = .23$, $SE = .03$) experienced higher levels of victimization than students with disabilities at School 4 ($M = .15$, $SE = .02$) and School 2 ($M = .11$, $SE = .04$), and students with disabilities at School 1 ($M = .24$, $SE = .02$) and School 4 ($M = .22$, $SE = .02$) engaged in higher levels of fighting than students with disabilities at School 3 ($M = .16$, $SE = .02$) and School 2 ($M = .03$, $SE = .03$).

Similar to disability status and school, gender was evaluated at the multivariate level. Interestingly, gender did not produce a multivariate effect (Pillai's trace = .00, $F_{(3, 986)} = .23$, $p > .05$, partial $\eta^2 = .00$) or interaction for disability status by gender (Pillai's trace = .00, $F_{(3, 986)} =$

Table 2
*Transformed Means (Standard Deviations) of Bullying, Victimization, and Fighting
 Among Students With and Without Disabilities*

	Students without Disabilities	Students with Disabilities	$F_{(1, 988)}$
Bullying	.12 (.01)	.13 (.01)	.72
Victimization	.14 (.01)	.18 (.01)	7.52**
Fighting	.13 (.01)	.16 (.01)	5.73*

Note. * $p < .05$; ** $p < .001$.

1.30, $p > .05$, partial $\eta^2 = .00$), school by gender (Pillai's trace = .01, $F_{(9, 2964)} = 1.44$, $p > .05$, partial $\eta^2 = .00$), or gender by school and disability status (Pillai's trace = .01, $F_{(9, 2964)} = 1.09$, $p > .05$, partial $\eta^2 = .00$). Based on the analyses for the current sample, boys and girls did not differ on levels of bullying, victimization, or fighting.

Correlations

Next, correlations were conducted to determine the interplay between disability status and involvement in bullying. Correlations between bullying, victimization, and fighting were calculated separately for students with and without disabilities (see Table 3). Associations were similar and significant ($p < .01$) for students with disabilities and students without disabilities on bullying and victimization ($r = .31$, $r = .37$) and bullying and fighting ($r = .68$, $r = .60$). Associations for victimization and fighting were also significant ($p < .01$) for students with disabilities ($r = .40$) and students without disabilities ($r = .17$). However, using the Fisher r -to- t transformation, it was determined that the groups significantly differed on associations for victimization and fighting ($z = 3.06$, $p < .01$), where victimization was more closely associated with fighting for students with disabilities.

Discussion

The present study compared rates of bullying, victimization, and fighting between students with and without disabilities. Due to the limited empirical base, this study attempted to expand on current international research that has determined that students with disabilities are victimized and engage in more bullying and aggressive (i.e., fighting) behaviours than students without disabilities (Kaukiainen et al., 2002; O'Moore & Hillery, 1989; Whitney et al., 1994). The results of the study suggest that American schoolchildren with disabilities have higher rates of victimization and fighting, but similar rates of bullying when compared to their peers enrolled in a general education curriculum. However, when students with disabilities are victimized, they reported higher levels of fighting behaviours when compared to students without disabilities.

As hypothesized, students with disabilities reported higher levels of victimization compared to their general education peers. Gender difference, however, was not significant, indicating that both boys and girls with disabilities are targets for victimization more than their general education classmates. According to Whitney and colleagues (1994), "just being different in a noticeable way" (p. 213) may place a student at risk for victimization. Results of the present study support the aforementioned statement and corroborate extant literature (see Dawkins, 1996; Langevin, Bortnick, Hammer, & Wiebe, 1998; Little, 2002; Llewellyn, 2000; Marini, Fairbairn, & Zuber, 2001; Norwich & Kelly, 2004; O'Moore & Hillery, 1989; Rose et al., 2009).

Although this discrepancy cannot be attributed to a single characteristic due to the continuum of victimization (Espelage & Swearer, 2003), students with disabilities are often

Table 3
Group Correlation Coefficients for Bullying, Victimization, and Fighting

Scale	Bullying	Victimization	Fighting
Bullying	1.00	.31**	.68**
Victimization	.37**	1.00	.40**
Fighting	.60**	.17**	1.00

Note. Values above diagonal represent correlation coefficients for students with disabilities and values below the diagonal represent correlation coefficients for students without disabilities.

** $p < .01$.

characterized by several attributes that place them at a greater risk for involvement within the bullying dynamic. For example, students with disabilities may lack age appropriate social skills (Baker & Donnelly, 2001; Doren et al., 1996; Kaukiainen et al., 2002; Kuhne & Wiener, 2000; Llewellyn, 2000; Miller et al., 1998; Woods & Wolke, 2004), which may result in fewer close friendships or unstable relationships (Rose et al., 2011) and their inability to avoid bullying situations (Nabuzoka, 2003). Additionally, students with disabilities may be perceived by their peers as dependent on teacher assistance, which may result in social rejection (Baker & Donnelly, 2001; Kuhne & Wiener, 2000; Llewellyn, 2000; Martlew & Hodson, 1991; Morrison, Furlong, & Smith, 1994; Nabuzoka & Smith, 1993). This social rejection may lead to additional negative outcomes such as anxiety, depression, poor self-esteem, a lack of confidence, and minimal social and academic participation (Dawkins, 1996; Marini, Koruna, & Dane, 2006; Miller et al., 1998; Sabornie, 1994; Unnever & Cornell, 2003; Whitney et al., 1994).

Contrary to extant literature that indicates students with disabilities are more likely to be identified as perpetrators (McLaughlin et al., 2010; Rose et al., 2011), the present study did not find a significant difference between reported bullying behaviours among students with and without disabilities. Therefore, findings from the current study suggest that students with disabilities engage in similar rates of bullying when compared to their peers without disabilities.

However, studies on class placement of students with disabilities have suggested that when academic setting is considered (e.g., inclusive settings, self-contained settings), students with disabilities tend to engage in higher rates of bullying than their peers without disabilities (McLaughlin, 2010; Rose et al., 2009; Rose et al., 2011; Whitney et al., 1994). Additionally, when consideration is given to disability status, students with high incidence disabilities (i.e., learning disabilities, mild learning difficulties, emotional and behavioural disorders) tend to engage in bullying behaviours about twice as often as students without disabilities (Kaukiainen et al., 2002; Whitney et al., 1994). Unfortunately, this level of analysis could not be examined due to biased estimates associated with non-responders for disability label and class placement. Given the findings from the current literature base (McLaughlin, 2010; Rose et al., 2009; Rose et al., 2011; Whitney et al., 1994), it is plausible that by aggregating students with disabilities into one group, without acknowledging the nesting of class level variables or identifying specific disability categories, bullying rates of students with disabilities are not representative of actual rates of behaviours for specific subgroups of students with disabilities.

In contrast to bullying behaviours, the current study confirms the hypothesis and supports the findings of extant literature that indicate students with disabilities engage in more fighting behaviours than their peers without disabilities (Rose et al., 2009). To extend this literature base, present findings indicated that students with disabilities who were victimized tended to engage in more aggressive (i.e., fighting) behaviours. These findings, with some interpretation, extend the work of Björkqvist and colleagues by looking at the developmental patterns of student aggression. Björkqvist (2001) and Björkqvist, Österman, and Kaukiainen (1992) suggested aggression

transitions from direct physical aggression to indirect forms of aggression as students age (see also Monks, Smith, & Swettenham, 2005). For most students, these developmental stages are met at an age-appropriate rate, where maturation leads to more sophisticated verbal and social-cognitive skills. However, bullying is a social construct (Swearer et al., 2009) based on complex interactions between individuals and social-ecological factors (Swearer & Espelage, 2004). Students with disabilities often possess below-average social skills (Baker & Donnelly, 2001; Doren et al., 1996; Kaukiainen et al., 2002; Kuhne & Wiener, 2000; Llewellyn, 2000; Miller et al., 1998; Woods & Wolke, 2004) that may impede their development of verbal or social-cognitive skills. Therefore, they may combat victimization in a more direct, physical manner.

Finally, consideration should be given to school placement, climate, and structure. Swearer and colleagues (2009) stated, "If we want to truly reduce or stop bullying in our schools, we have to believe that these behaviors can be changed" (p. 1). The present study determined that victimization among students with disabilities differed between schools, where students in two schools reported significantly more victimization than students in the other two schools. Conceivably, this variability may be traced to school climate or policies and procedures regarding bullying within the school (Rose et al., 2011). Based on these findings, schools must be proactive in addressing bullying and establish a climate that is not conducive to the victimization of students, especially those that may be at greater risk.

Although the present study provides a strong foundation for American special education bullying literature, the study does have several limitations. First, the data were collected through self-report methods where it was the responsibility of the students to indicate whether they had a disability and were enrolled in a special education curriculum. Although most bullying literature is founded in self-report, this method may confound the data by providing a potentially underrepresented sample of students with disabilities. Second, a distinction in curricular participation (i.e., inclusive setting, self-contained classroom) could not be determined due to non-responders. This limitation is attributed to the self-report procedure and should be addressed in future research. Third, the data did not isolate specific disability categories to determine individualized representation of bullying, victimization, or fighting behaviours. This is a significant limitation because current research indicates that students with emotional and behavioural disorders exhibit more aggressive behaviours (Van Cleave & Davis, 2006), while students with more observable disability characteristics are victimized more than other subgroups of students (Dawkins, 1996). Fourth, while the findings of this study were significant for victimization and fighting, it should be noted that the effect sizes associated with these outcomes were relatively small (Cohen, 1988). Although the small effect sizes should be interpreted with caution, the findings from this study corroborated existing literature in the field of bullying among students with disabilities. Finally, the present study did not investigate preventative or protective factors that may account for the increased victimization and fighting rates among students with disabilities. Although the present study does possess a number of limitations, the outcome data presents clear evidence that American students with disabilities are overrepresented in the bullying dynamic.

Based on the lack of American empirical data, future research in the field of victimization and perpetration in special education should take several paths. First, this study should be replicated in other regions of the country to determine if the findings from the present study are generalizable to the American school population. Second, research should attempt to isolate specific disability categories to determine if certain student subgroups are predisposed to victimization and/or perpetration. Third, predictive and protective factors, such as class placement, familial structures, and peer group status, should be investigated to determine the

maintaining variables in victimization and perpetration. Finally, intervention studies should be conducted to address effective and efficient strategies for decreasing bullying, victimization, and fighting behaviours among specific subgroups of students. All of the aforementioned studies will provide the necessary empirical evidence to effectively address the persistent problem of victimization and perpetration among students with disabilities. It is imperative for researchers, school personnel, and community members to collaborate to develop effective interventions for the entire school population and targeted interventions for individual student subgroups who may be predisposed to the bullying phenomena. These collaborative practices and intervention strategies could prove instrumental in decreasing bullying perpetration and victimization prevalence among American schools.

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