

## Bullying and victimisation rates among students in general and special education: a comparative analysis

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Bullying and victimisation remains a pervasive problem within the nation's schools. International research has indicated that students who are enrolled in special education curricula are victimised and perpetrate more bullying than their general education peers. Few empirical studies have examined bullying and victimisation rates among American schoolchildren within special education programmes. The current study examined rates of bullying and fighting perpetration and victimisation among middle-school students ( $n = 7331$ ) and high-school students ( $n = 14,315$ ) enrolled in general education and special education programmes. As hypothesised, students in special education reported greater rates of bullying and fighting perpetration, and victimisation than general education students. Students who were in self-contained classrooms reported more perpetration and victimisation than those in inclusive settings. Fighting perpetration was similar for younger and older students in special education settings, whereas fighting perpetration was lower for older students, versus younger students, in general education.

**Keywords:** bully; disabilities; adolescent

### Introduction

The American education system continues to adapt in order to meet the needs of students, teachers, families, and communities. Most recently, national mandates have addressed academic outcomes for *all* students, but legislators have neglected behavioural issues (Garrett, 2006; *No Child Left Behind*, 2001). The current trend places a strong emphasis on teacher accountability and increased standardised test scores but deemphasises the importance of adolescent social development and mandates regarding problem behaviours and violence prevention (Fleming et al., 2005). Although national legislation continues to focus on academic outcomes, several reports have documented a decline in juvenile violence over the past decade (Brener, Lowry, Barrios, Simon, & Eaton, 2005; Dinkes, Cataldi, Kena, & Baum, 2006).

While a documented decline in juvenile violence is promising, problem behaviours continue to plague the nation's classrooms. Walker, Colvin, and Ramsey (1995)

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stated, 'Educators are not trained to deal with moderate to severe levels of antisocial behaviours occurring among the school-aged population of children and youth' (p. 2). These problem behaviours include bully perpetration and victimisation, and evidence suggests that bullying behaviours have remained relatively stable over the past decade (Garrity, Jens, Porter, & Stoker, 2002). Additionally, involvement in bullying includes the overwhelming majority of the nation's adolescents (Espelage, Bosworth, & Simon, 2000) and can maintain lifelong consequences for victimised youth (Sullivan, Cleary, & Sullivan, 2004).

Based on the high level of American youth involvement in the bullying phenomena, research on perpetration and victimisation has increased over the past decade. Nansel et al. (2001) conducted the only national representative survey on bullying among American schoolchildren and determined that approximately 30% of adolescents are involved in bullying either as a bully or victim. Similarly, the National Center for Educational Statistics reported that 28% of American adolescents were victimised within six months prior to being surveyed (Dinkes et al., 2006). When bystanders, who often reinforce the bullying behaviours, are considered, the estimated involvement dramatically increases. Espelage et al. (2000) reported that as few as 19.5% of middle-school students have not observed, been a victim of, or engaged in bullying behaviours within the six-month period prior to being surveyed. These statistics demonstrate how pervasive the problem of bullying has become within the nation.

Although national mandates neglect social development, the pervasiveness of the bullying phenomenon has prompted several states and school districts to adopt policies and programmes that focus on decreasing the prevalence of bullying within their schools. Since 1999 over 40 states have enacted legislation that prohibits bullying and harassment, and have taken measures to reports policies, programmes, and procedures to students and parents (Swearer, Espelage, & Napolitano, 2009). Schools are often encouraged to adopt research-supported programmes that focus on reducing bullying through teacher awareness, social skill development, and curricular instruction. However, many of these programmes neglect to provide targeted interventions for subgroups of students who are at-risk for increased perpetration or victimisation (Rose, Monda-Amaya, & Espelage, *in press*).

While increasing state mandates regarding bully prevention is a necessary step to eliminating perpetration and victimisation, empirical evidence suggests that certain subgroups of students are at-risk for increased involvement in the bullying phenomenon. More specifically, research suggests that students with disabilities are more likely to be the perpetrators and victims when compared with their general education counterparts. Although few empirical studies have examined bullying perpetration and victimisation 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 general education peers (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). This discrepancy in perpetration and victimisation between students with and without disabilities may be attributed to school factors, disability type, and personal attributes (Rose et al., *in press*). Therefore, it is necessary to investigate the prevalence of bullying perpetration and victimisation among American students with disabilities.

### *Victimisation among students with disabilities*

Research has indicated that approximately 28% of American adolescents are victims of bullying (Dinkes et al., 2006). At the present time, a majority of the bullying research has been reported in a whole school context, and has neglected to report findings for individual subgroups. This is especially true for the population of students with disabilities. However, when these data are isolated it becomes relatively clear that students with disabilities are victimised more than their general education counterparts.

Rose et al. (in press) conducted an extensive literature review in the field of bullying in special education and determined that the documented national average for adolescent victimisation underestimates the victimisation rate of students with disabilities. Based on the 32 articles reviewed, several studies involving students with disabilities reported victimisation rates in excess of 50%. These findings indicate that students with disabilities are frequent targets of victimisation. These escalated victimisation rates may be attributed to school factors, disability type, and personal attributes (Rose et al., in press).

Investigation of inclusive practices suggests that effective integration of students with and without disabilities into the same educational setting might serve as a protective factor. However, statistical variance of victimisation still exists between the two subgroups of students. Whitney et al. (1994) investigated the victimisation 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% of students with moderate learning difficulties experienced moderate to severe levels of victimisation. Conversely, only 25% of their demographically matched peer group reported being victimised within 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).

Legally, students with disabilities must be placed in their least restrictive environment, and for some students with more severe disabilities an inclusive setting might not be academically appropriate. Research has documented that students with moderate intellectual disabilities who are enrolled in special schools or educated in a self-contained classroom are victimised significantly more often than any other subgroup of students (Martlew & Hodson, 1991; Morrison, Furlong, & Smith, 1994; O'Moore & Hillery, 1989; Sabornie, 1994). O'Moore and Hillery (1989) investigated the victimisation rates of students with and without disabilities through a self-report survey. The students with disabilities were educated in either a remedial (i.e., inclusive) or self-contained setting. The researchers reported that 22.3% more students educated within a self-contained setting were victimised when compared with their general education peers. Additionally, the data indicated that approximately 10% more students with disabilities in a self-contained setting were victimised when compared with students with disabilities within the inclusive setting.

Some researchers have documented that inclusion may allow students with disabilities to acquire social skills through behavioural modelling. Furthermore, inclusion may enhance development, increase acceptance, reduce negative stereotypes (Martlew & Hodson, 1991), and increase participation (Sabornie, 1994). However, if students are not fully integrated into peer groups, inclusion may maintain or exacerbate victimisation (Martlew & Hodson, 1991). This isolation then limits opportunities

to learn, practice, and receive validation for social skills (Mishna, 2003). Ineffective integrative practices may also hinder the ability to develop a protective peer base (Morrison et al., 1994; Whitney et al., 1994). Thus, inclusive practices may serve competing functions for individual students. Because data suggest that effective inclusive practices might serve as a protective factor against frequent victimisation, this current study assesses bullying/fighting prepration and victimisation among students who are in special education all day (e.g., self-contained) and students who are in special education classes only part of the day (e.g., inclusion, remedial instruction).

### ***Disability type and personal attributes***

Although the educational setting might serve as a buffering variable against perpetration, several behavioural characteristics of students with disabilities may increase the likelihood of victimisation. Reiter and Lapidot-Lefler (2007) found that 'being a victim was correlated with emotional problems and interpersonal problems' (p. 179). In addition to problem behaviours, victims are often characterised as having poor social skills (Baker & Donnelly, 2001; Doren, Bullis, & Benz, 1996; Kaukiainen et al., 2002; Kuhne & Wiener, 2000; Llewellyn, 2000; Miller, Beane, & Kraus, 1998; Woods & Wolke, 2004). Students with disabilities might be victimised more because they are too passive, and their timid nature might serve as a reinforcer for the bully. Victims may also misread non-verbal communication or misinterpret non-threatening cues (Sabornie, 1994). Additionally, students with disabilities may be at greater risk for victimisation because they lack the appropriate socialising behaviours that help them avoid being victimised (Nabuzoka, 2003). Overall, students with disabilities may have social information processing deficits that serve as a predictor for prolonged victimisation.

In summary, victimisation of students with disabilities remains a significant problem within the school environment. International research has consistently documented a statistically significant difference between the victimisation rates of students with and without disabilities. These data also indicate that students with high incidence disabilities (i.e., learning disability, mild learning difficulties, emotional and behavioural difficulties (EBD)) are victimised less than students with more severe disabilities. In addition, evidence suggests that students who are effectively included into the general education classes are victimised less than students who are educated in more restrictive environments. However, inclusion can serve as both a preventative factor and a vehicle for further victimisation. Students with disabilities may also possess social information processing deficits that exacerbate victimisation. Thus, this study examines victimisation among students who receive limited special education services (e.g., inclusion, resource instruction), full-time special education services (e.g., segregated classes), and no special education services (i.e., general education).

### ***Bullying perpetration among students with disabilities***

The definition of bullying has been debated in the research literature and many view bullying as a subset of aggressive behaviour (Espelage et al., 2000; Pellegrini, 2002; Pellegrini & Long, 2002; Smith et al., 2002; Smith et al., 1999). Dodge and Coie (1987) define bullying as a form of proactive aggression, where the bully is unprovoked and initiates the bullying behaviours. Olweus's (1993) definition of bullying, states that bullying is 'aggressive behaviour'. However, to differentiate bullying from

fighting or physical aggression, the bullying behaviour includes an imbalance of power between the perpetrator and the target, is intentionally harmful, and occurs repetitively (Olweus, 1993). The imbalance of power means that the perpetrator of bullying is stronger in some way (i.e., more popular, physically bigger, smarter, family has high social status, etc.) than the target. In addition to aggressive behaviour, bullying includes other forms of aggression that cannot be readily observed. For example, bullying may include one person making threats to another person without actually being physically aggressive. Thus, in this study bullying and fighting are measured separately, where bullying involves verbal and social forms (exclusion) of aggression and fighting is strictly physical aggression.

Approximately 13% of the American school population engage in bully perpetration (Nansel et al., 2001). However, students with high incidence disabilities (i.e., learning disabilities, mild learning difficulties, EBD) exhibit more bullying perpetration than the national average. Students with learning disabilities or mild learning difficulties have been reported to bully twice as often as students without disabilities (Kaukiainen et al., 2002; Whitney et al., 1994). Empirical data also suggest that students with learning disabilities in self-contained settings exhibit higher levels of aggressive behaviours and/or bullying perpetration than the national average (Kuhne & Wiener, 2000; O'Moore & Hillery, 1989). Although the research base is limited, several studies have indicated that students with disabilities are nominated by their peers and classroom teachers as bullies more often than their general education classmates.

Rose et al. (in press) argue, 'Perpetration of bullying by students with disabilities is often a learned behaviour, a reaction to prolonged victimisation, or an overall lack of social skills' (p. 36). Students with disabilities may act too aggressively toward the wrong peers or misinterpret social stimuli due to social information processing deficits (Sabornie, 1994). Additionally, students with disabilities who are victimised may misread social communication (Whitney et al., 1994) and rough and tumble play by acting aggressively at inappropriate times (Nabuzoka & Smith, 1999). Perpetration may also be adopted as a means of protection from further victimisation or because they have learned the behaviour in other social settings (e.g. peer relationships, family structure [Rose et al., in press]).

Two school factors might serve as predictors for the escalated rates of perpetration by students with disabilities. First, teacher intervention may maintain adolescent perpetration rates because they are often oblivious to the bullying problem or they do not adequately intervene (Rose et al., in press). Teachers are proficient at identifying the perpetrators (Whitney et al., 1994), but they often underestimate the overall prevalence of the victimisation, especially for students with disabilities (Monchy, Pijl, & Zandberg, 2004; Sheard, Clegg, Standen, & Cromby, 2001; Thompson, Whitney, & Smith, 1994). These underestimates might be due, in part, to the covert nature of bullying (Miller et al., 1998), or the reluctance of the victim to bring the problem to the teacher's attention (Brendtro, Ness, & Mitchell, 2001; Miller et al., 1998; Sharp & Smith, 1994; Walker et al., 1995).

Second, restrictive classroom placement might serve as a predictor for perpetration. O'Moore and Hillery (1989) compared the perpetration rates of students with disabilities in segregated and remedial classes with their general education peers. They determined that students in segregated classes engaged in more bullying perpetration than their peers in remedial and general education classes. Research also suggests that students with disabilities who are moved from an inclusive setting to a

more restrictive environment tend to exhibit more bullying behaviours if they have been victimised in the inclusive setting (Whitney, Nabuzoka, & Smith, 1992). However, the research on the restrictiveness of educational environments is quite limited and warrants further investigation (Rose et al., in press).

### **Purpose and hypotheses**

In summary, bullying and victimisation remains a pervasive problem within the nation's schools (Espelage & Swearer, 2003). International research has indicated that students who are enrolled in special education curricula are victimised and perpetrate more bullying and fighting than their general education peers (Whitney et al., 1994). However, few empirical studies have examined bullying, fighting, and victimisation rates among American schoolchildren within special education programmes. The current study examines trends of bullying and fighting perpetration and victimisation among a large sample of middle and high-school students enrolled in general and special education programmes.

### ***Study hypotheses***

Based on the current literature regarding the bullying and fighting perpetration and victimisation rates of students with disabilities, the following hypotheses were examined: (a) students with disabilities will report higher rates of victimisation than their general education peers; (b) students who are in self-contained settings will report higher rates of victimisation than students in inclusive settings; (c) students with disabilities will report more bullying perpetration than their general education peers; (d) students who are in self-contained settings will report higher rates of bullying perpetration than students in inclusive settings; and (e) students with disabilities will report more fighting behaviours than their general education peers. Additionally, it was hypothesised that bullying and fighting perpetration and victimisation rates for students with disabilities would be greater for older students than younger students, whereas older students without disabilities would report less victimisation than younger students without disabilities.

## **Method**

### ***Participants***

High-school participants included 14,315 students from a Midwestern county from 18 different high schools (see Table 1), including ninth grade ( $n = 3795$ ), tenth grade ( $n = 3722$ ), eleventh grade ( $n = 3585$ ), and twelfth grade ( $n = 3213$ ). The sample was 50.4% female ( $n = 7212$ ) and 49.6% male ( $n = 7103$ ). The mean age of these students was 15.8 years. Middle-school participants included 7331 seventh- ( $n = 3535$ ) and eighth-grade ( $n = 3796$ ) students from a large Midwestern county across 14 schools. The sample was 50.6% Female ( $n = 3712$ ) and 49.4% Male ( $n = 3619$ ). The overall sample was 72.9% White, 7.7% Biracial, 6.9% Black, 2% Hmong, 3.7% Hispanic, 3.2% Asian (not Hmong), and 3.7% Other. Socio-economic levels varied across the 32 schools, with free/reduced lunch eligibility ranging from 12% to 58%. All schools returned surveys for 90–95% of their student population. Passive parental consent was approved by the institutional review board.



**Special education question**

Students were asked whether they were involved in special education classes and were given three options: (1) No; (2) Yes, part-time; (3) Yes, full-time. Among the middle-school students, 708 students (9.7%) indicated they received part-time special education services (i.e., inclusion), and 307 (4.2%) indicated they were enrolled in full-time special education coursework. Among the high-school students, 915 students (6.4%) indicated they were in part-time special education classes and 589 (4.1%) indicated they were in full-time special education classes. The middle-school sample included 298 females (8%) and 410 males (11%) who indicated they received part-time special education services, and 135 females (4%) and 172 males (5%) who indicated they were in full-time special education classes. The high-school sample included 368 females (5%) and 547 males (8%) who indicated they were in part-time special education classes, and 257 females (5%) and 332 males (5%) who indicated they received full-time special education services. Overall, the sample included 666 females (6%) and 957 males (9%) who indicated they received part-time special education services, and 392 females (4%) and 504 males (5%) who indicated they were in full-time special education classes. This information is summarised in Table 1.

**Self-report bullying perpetration**

The nine-item Illinois Bully Scale (Espelage & Holt, 2001) was used to assess the frequency of teasing, name-calling, social exclusion, and rumour-spreading. Students were 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 etc. Response options included: '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). Factor loadings in the development sample for these items ranged from 0.52 to 0.75 and this factor accounted for 31% of the variance in the factor analysis (Espelage & Holt, 2001). A Cronbach alpha coefficient of 0.87 was found for the development sample and the Bullying Scale correlated 0.65 with the Youth Self-Report Aggression Scale (Achenbach, 1991) and was not significantly correlated with the Victimization Scale ( $r = 0.12$ ). The scale consistently emerges as distinct from physical aggression scales (Espelage & Holt, 2001; Espelage, Holt, & Henkel, 2003). A Cronbach alpha coefficient of 0.87 was found for this sample.

Table 1. Total sample size (and sample percentage) broken down by school level, disability status, and gender.

School level	Students without disabilities	Students with disabilities – inclusion	Students with disabilities – self-contained	Total
<b>Males</b>				
Middle school	3037 (84%)	410 (11%)	172 (5%)	3619 (49%)
High school	6224 (88%)	547 (8%)	332 (5%)	7103 (50%)
<b>Females</b>				
Middle school	3279 (88%)	298 (8%)	135 (4%)	3712 (51%)
High school	6587 (91%)	368 (5%)	257 (5%)	7212 (50%)

### **General peer victimisation**

Victimisation from peers was assessed using the University of Illinois Victimization Scale (UIVS; Espelage & Holt, 2001). Students were 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 included: 'Never'; '1 or 2 times'; '3 or 4 times'; '5 or 6 times'; and '7 or more times'. Factor loadings ranged from 0.55 to 0.92 for these items, which accounted for 6% of the variance in the factor analysis. Higher scores indicate more self-reported victimisation. A Cronbach alpha coefficient of 0.88 was found for current study.

### **Fighting**

Fighting was assessed using the University of Illinois Fighting Scale (UIFS; Espelage & Holt, 2001). This scale assessed 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 included 'Never'; '1 or 2 times'; '3 or 4 times'; '5 or 6 times'; and '7 or more times'. Factor loadings in the development sample for the UIFS ranged from 0.50 to 0.82 for the five items and accounted for 12% of the variance with a Cronbach alpha coefficient of 0.83 (Espelage & Holt, 2001). The UIFS also had a low correlation with the UIVS ( $r = 0.21$ ) indicating discriminant validity, and was moderately correlated with the Bullying Scale ( $r = 0.58$ ), evidence of convergent validity. The alpha coefficient for the current sample was 0.87.

### **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 90–95% of their student population. At the beginning of the data collection, students were informed that the researchers were interested in knowing how they thought and felt 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 40 minutes.

### **Results**

In order to examine differences on fighting, bullying, and victimisation rates across the three education status groups (i.e., general education, students with disabilities in self-contained settings, students with disabilities in inclusive settings), general descriptive statistics were examined, and a series of univariate analyses of variance (ANOVAs) were calculated. To assess the percentage of students involved in



Table 2. Total involvement in bullying, victimisation, and fighting for students without disabilities, students with disabilities in inclusive settings, and students with disabilities in self-contained settings, based on one standard deviation above the overall group mean for each subscale.

Subscale	Students without disabilities	Students with disabilities in inclusive settings	Students with disabilities in self-contained settings
University of Illinois Bully Scale	10.2% ( $n = 1885$ )	15.6% ( $n = 230$ )	20.9% ( $n = 166$ )
University of Illinois Victim Scale	12.0% ( $n = 2227$ )	18.5% ( $n = 273$ )	21.7% ( $n = 172$ )
University of Illinois Fight Scale	6.8% ( $n = 1272$ )	14.3% ( $n = 214$ )	18.3% ( $n = 149$ )

bullying, victimisation, and fighting; an overall group mean (bully = 0.44, victim = 0.55, fight = 0.50) and standard deviation (bully = 0.66, victim = 0.86, fight = 1.24) was calculated for each subscale. Using the convention of one standard deviation greater than the group mean, each subgroup of students (general education, students with disabilities in self-contained settings, students with disabilities in inclusive settings) was compared on each subscale to determine the percentage of students involved (see Table 2). Based on the implications of these descriptive statistics, further analyses proved necessary to confirm the study's hypotheses.

Three ANOVAs were conducted for middle-school students followed by three additional ANOVAs for high-school students. Significant ANOVAs were then followed with Tukey's post-hoc comparisons. In the middle-school ANOVAs, the three groups differed significantly on all of the three outcomes ( $ps > 0.001$ ,  $\eta^2s = 0.02$ ). Post-hoc comparisons supported the hypothesis that students in special education would report greater rates of bullying and fighting perpetration and victimisation than students in general education (see Table 3). Results also supported the hypothesis that students in self-contained special education classrooms would report greater levels of aggression perpetration and victimisation than students in inclusive settings (see Table 3).

In the high-school ANOVAs, the three groups differed significantly on all of the three outcomes ( $ps > 0.001$ ,  $\eta^2s = 0.01$ ; see Table 3). Post-hoc comparisons for bullying perpetration mirrored the findings for middle-school students. More specifically, students in special education curriculum reported more bullying perpetration than general education peers and students in self-contained special education classes reported slightly more bullying perpetration than students in inclusive settings. For victimisation and fighting perpetration, students in special education

Table 3. Means (and standard deviations) of bullying and fighting perpetration and victimisation among students in general education, partial special education services, and full special education services across 20643 middle- and high-school participants.

	Middle-school students ( $n = 6933$ )			High-school students ( $n = 13,710$ )			<i>F</i>
	General education	Partial	Full	General education	Partial	Full	
Bullying	0.39 (0.62)	0.56 (0.80)	0.78 (1.16)	0.43 (0.62)	0.55 (0.81)	0.69 (1.04)	44.42*
Fighting	0.46 (1.12)	0.78 (1.50)	1.04 (2.09)	0.43 (1.12)	0.87 (1.72)	1.12 (2.08)	73.51*
Victimisation	0.63 (0.91)	0.85 (1.06)	1.01 (1.30)	0.47 (0.77)	0.68 (0.94)	0.76 (1.10)	69.52*

Note: \* $p < 0.001$

curriculum reported greater rates than students in general education. However, a different pattern emerged for high-school students and middle-school students when comparing students in self-contained and inclusive settings. There were no differences between these two subgroups on victimisation or bullying perpetration rates (Table 3).

Additionally, it was hypothesised that bullying perpetration and victimisation rates for students with disabilities would be greater for older students (i.e., high school) than younger students (i.e., middle school), whereas older students without disabilities would report less victimisation than younger students without disabilities. To test this hypothesis, the middle- and high-school datasets were combined and three final ANOVAs were calculated with particular interest in the grade level by education status (general, self-contained, inclusive) interaction term. It was not surprising that the grade by education status interactions were significant for all three of the outcome measures given the large sample size ( $F = 44.42, 73.51, 69.52$ ). Given the large amount of power in the study, this set of analyses are focusing on simply describing the pattern of bullying and fighting perpetration and victimisation rates across the grades within each of the three groups. As depicted in Figure 1, it appears that bullying perpetration is rather consistent and low for general education students and consistent for students in inclusive settings, and it is the highest at seventh grade for self-contained students with a minor decrease for older students. A different pattern emerges for fighting perpetration as depicted in Figure 2. Although students in general education report consistently low rates of fighting perpetration, younger and older students in the two special education groups report similar rates of perpetration. Finally, Figure 3 indicates that victimisation among the two special education groups is higher for younger students than for older students.

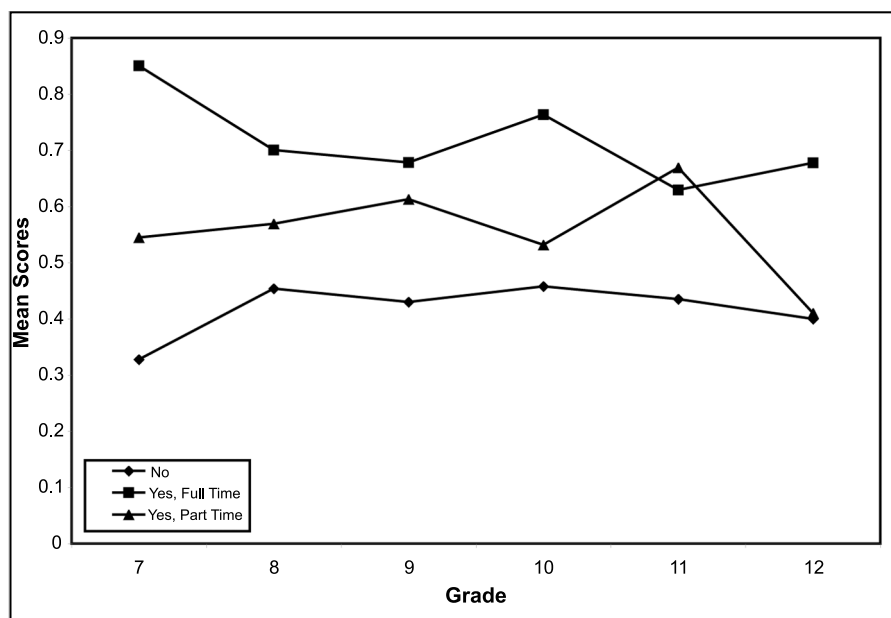


Figure 1. Mean scores for reported bullying behaviour.

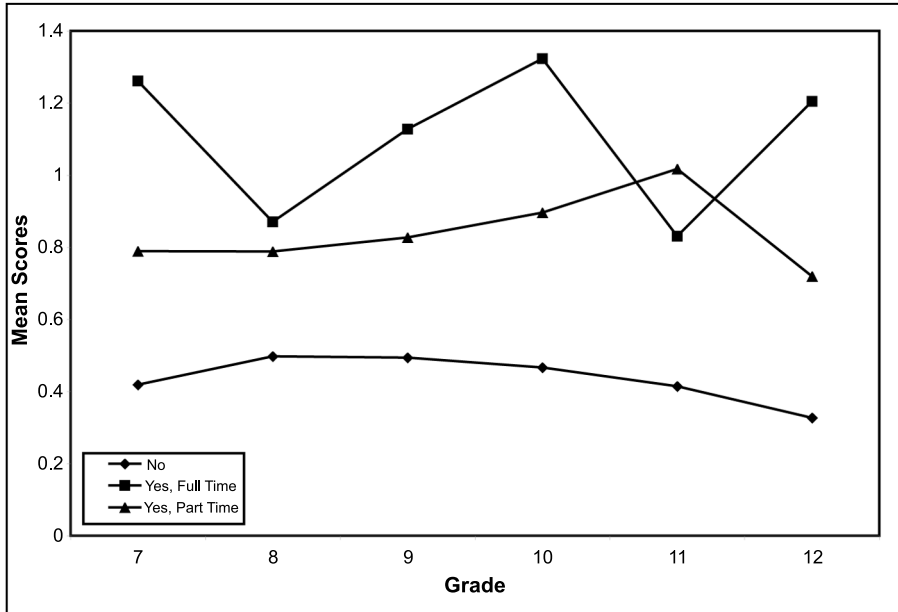


Figure 2. Mean scores for reported fighting behaviour.

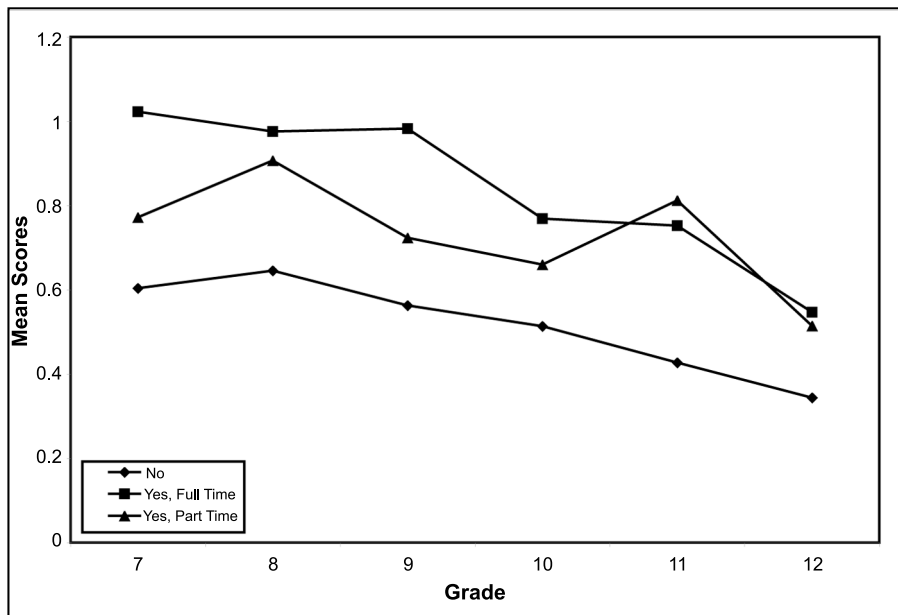


Figure 3. Mean scores for reported victimisation.

## Discussion

The present study examined the victimisation, perpetration, and fighting rates of students with disabilities in self-contained and inclusive special education settings and compared these rates to their general education peers. Due to the limited empirical base, this study attempted to expand on current international research that has indicated that students with disabilities are victimised and engage in more aggressive (i.e., fighting) behaviours and bullying perpetration than students who are not enrolled in a special education curriculum (Kaukiainen et al., 2002; O'Moore & Hillery, 1989; Whitney et al., 1994). The results of the present study confirm that American schoolchildren with disabilities have higher rates of victimisation, aggression, and bullying perpetration when compared with their peers enrolled in a general education curriculum. Furthermore, the results indicate that a more restrictive special education placement elicits higher rates of fighting, perpetration, and victimisation. Additionally, victimisation and perpetration for older students are less than younger students over the middle-school and high-school years, however, students with disabilities report higher rates of bullying, fighting, and victimisation throughout their educational career.

As hypothesised, mean scores for reported victimisation remains higher for students with disabilities when compared with their peers without special education placements. Furthermore, students in self-contained classrooms experience more victimisation than students in full or partial inclusion from grades 7–10. During the latter part of their educational career, the two subgroups of students reported similar victimisation rates. These data may indicate several contingency variables. First, inclusive practices could serve as a buffer for students who are participating in the general curriculum. Second, the students who are in self-contained classes could have more severe and/or noticeable disabilities that would place them at greater risk for victimisation. Third, the cognitive delays for the students in full or partial inclusion may not be evident until the latter part of their secondary education careers, thereby allowing them to participate effectively and efficiently in the general curriculum. Finally, students in self-contained settings could be participating in a more functional curriculum that provides them with social skills training which would eventually allow them to effectively deal with adverse situations.

In addition to reporting higher levels of victimisation, students who were enrolled in special education curricula reported more bullying perpetration than students without disabilities. While the perpetration rate of students without disabilities appeared to stabilise over the course of their educational careers, students with disabilities reported varying rates of bullying. This variability seems to occur during times of educational transition. However, students in inclusive settings and students in self-contained classes appear to react to transition differently. Overall, students in self-contained settings maintain more perpetration than the other subgroups of students, but their perpetration rates appear to escalate during times of transition (i.e., secondary school entrance, secondary school exit). Conversely, students in inclusive settings reported decreased bullying perpetration during times of academic transition. This differential may be attributed to environmental change, routine adjustment, academic rigor, and/or social transition.

Students with disabilities also reported more fighting behaviours than their peers without disabilities. The data indicate that younger students (i.e., eighth grade) in general education reported more fighting behaviours than older general education

students (i.e., twelfth grade). However, older students with disabilities who were enrolled in an inclusive setting reported more fighting than younger students with disabilities. Similar to bullying perpetration, students in a self-contained setting reported elevated fighting behaviours during times of academic transition. These data could indicate a variety of social, academic, or behavioural variables. First, students in general education could exhibit fewer fighting behaviours because they have transitioned into more relational types of aggression. Second, students with disabilities could report more fighting behaviours because they do not possess the social skills necessary to combat relational or emotional aggression. Third, students in the self-contained settings could exhibit elevated fighting behaviours during transitional periods because of cultural, academic, behavioural, or routine change.

The present study also addressed the rates of victimisation, bullying, and fighting behaviours of students with and without disabilities. Data from this study replicated the finding that high-school students enrolled in a general education curriculum report less bullying, fighting, and victimisation than middle-school students (Dinkes et al., 2006). However, this study provides some evidence that those high-school students in inclusive and self-contained settings experience similar to higher rates of perpetration and victimisation than their middle-school peers. This study further suggests that students in self-contained settings who recently experienced the middle- to high-school transition reported high rates of perpetration. These differences indicate that the restrictiveness of the academic setting might play a role in the rate of perpetration and victimisation among students with disabilities.

The present study provides clear evidence that students with disabilities are victimised more and display more fighting behaviours and bullying perpetration than students who are enrolled in general education. These data replicate international studies and provide a strong foundation for special education victimisation and perpetration rates among American schoolchildren. However, if these data are representative of students with disabilities, then maintaining factors must be different for students with and without disabilities. Current literature and the present study suggests that effective inclusive practices may buffer against victimisation by providing students with disabilities the appropriate academic accommodations, social skills training, and peer models (Martlew & Hodson, 1991; Sabornie, 1994). However, partial or ineffective inclusive practices may maintain or exacerbate victimisation and fighting behaviours by isolating students with disabilities and providing them with inadequate practice and validation for appropriate social skills (Martlew & Hodson, 1991; Mishna, 2003). Additionally, students with disabilities may act too aggressively toward the wrong peers, be too passive, misinterpret non-threatening cues (Sabornie, 1994), misread social communication (Whitney et al., 1994), or act too aggressively at inappropriate times (Nabuzoka & Smith, 1999). These factors may, in part, be attributed to the students' disability characteristics, lack of social integration, social information processing deficits, or overall academic deficits.

Although the current study supports international research regarding perpetration and victimisation among students with disabilities, the findings also support several implications for anti-bullying programme development. At the present time, many bully prevention programmes focus on the entire school population. Although this is a necessary component of any programme developed to decrease student aggression, this study demonstrates that targeted interventions are necessary for at-risk student populations. Furthermore, this study supports the current educational trend of implementing multi-tiered academic (e.g., Response to Intervention [RTI]) and behavioural

(Positive Behaviour Supports [PBS]) interventions to address the needs of all students (Bambara & Kern, 2005; Batsche et al., 2006). Given the multi-tiered framework of RTI and PBS, bully prevention should begin to incorporate interventions at the school level, for specific at-risk subgroups of victims or bullies, and individual supports for chronic bullies or victims. If implemented appropriately, this type of multi-tiered approach will address the overall needs of the entire school population by addressing the needs of each individual student.

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 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, the data did not isolate specific disability categories to determine individualised representation of victimisation, perpetration, or fighting behaviours. This is a significant limitation because current research indicates that students with EBD exhibit more aggressive behaviours (Van Cleave & Davis, 2006), while students with more observable disability characteristics are victimised more than other subgroups of students (Dawkins, 1996). Finally, the present study did not investigate preventative or protective factors that may account for the increased victimisation and bullying rates among students with disabilities. Although the present study does possess a number of limitations, the outcome data present clear evidence of the fact that American students with disabilities are overrepresented in the bullying phenomenon.

Based on the limitations of this study and the overall lack of American empirical data, future research in the field of victimisation 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 generalisable to the American school population. Second, research should attempt to isolate specific disability categories to determine if certain subgroups of students are predisposed to victimisation and/or perpetration. Third, preventative and protective factors should be investigated to determine the maintaining variables in victimisation and perpetration. Finally, intervention studies should be conducted to address effective and efficient strategies for decreasing victimisation, bullying, and fighting behaviours among specific subgroups of students. All of the aforementioned studies will provide the necessary empirical evidence to address effectively the persistent problem of victimisation and perpetration among students with disabilities. It is imperative for researchers, school personnel, and community members to collaborate in order to develop effective interventions for both the entire school population and individual subgroups of students who may be predisposed to the bullying phenomena. These collaborative practices and intervention strategies could prove to be instrumental in decreasing bullying perpetration and preventing overt and malicious acts of school violence.

## References

- Achenbach, T.M. (1991). *Integrative guide for the 1991 cbcl/4–18, yrsr, and trf profiles*. Burlington, VT: University of Vermont, Department of Psychiatry.
- Baker, K., & Donnelly, M. (2001). The social experiences of children with disabilities and the influence of environment: A framework for intervention. *Disability & Society, 16*, 71–85.
- Bambara, L.M., & Kern, L. (2005). *Individualized supports for students with problem behaviors: Designing positive behavior plans*. New York: The Guilford Press.



- Batsche, G., Elliott, J., Garden, J.L., Grimes, J., Kovaleski, J.F., Prasse, D., et al. (2006). *Response to intervention: Policy considerations and implementation*. Alexandria, VA: National Association of State Directors of Special Education, Inc.
- Brendtro, L.K., Ness, A., & Mitchell, M. (2001). *No disposable kids*. Longmont, CO: Sopris West.
- Brener, N., Lowry, R., Barrios, L., Simon, T., & Eaton, D. (2005). Violence-related behaviors among high school students: United States, 1991–2003. *Journal of School Health, 75*(3), 81–85.
- Dawkins, J.L. (1996). Bullying, physical disability and the paediatric patient. *Developmental Medicine & Child Neurology, 38*, 603–612.
- Dinkes, R., Cataldi, E.F., Kena, G., & Baum, K. (2006). *Indicators of school crime and safety: 2006*. Washington, DC: Government Printing Office.
- Dodge, K.A., & Coie, J.D. (1987). Social-information processing factors in reactive and proactive aggression in children's peer groups. *Journal of Personality and Social Psychology, 53*, 1146–1158.
- Doren, B., Bullis, M., & Benz, M.R. (1996). Predictors of victimization experiences of adolescents with disabilities in transition. *Exceptional Children, 63*, 7–18.
- Espelage, D.L., Bosworth, K., & Simon, T.R. (2000). Examining the social context of bullying behaviors in early adolescence. *Journal of Counseling & Development, 78*, 326–333.
- Espelage, D.L., & Holt, M. (2001). Bullying and victimization during early adolescence: Peer influences and psychosocial correlates. *Journal of Emotional Abuse, 2*, 123–142.
- Espelage, D.L., Holt, M.K., & Henkel, R.R. (2003). Examination of peer group contextual effects on aggression during early adolescence. *Child Development, 74*, 205–220.
- Espelage, D.L., & Swearer, S.M. (2003). Research on school bullying and victimization: What have we learned and where do we go from here? *School Psychology Review, 32*, 365–383.
- Fleming, C.B., Haggerty, K.P., Catalano, R.F., Harachi, T.W., Mazza, J.J., & Gruman, D.H. (2005). Do social and behavioral characteristics targeted by preventive interventions predict standardized test scores and grades? *Journal of School Health, 75*, 342–349.
- Garrett, J.L. (2006). Educating the whole child. *Kappa Delta Pi Record, 42*, 154–155.
- Garrity, C., Jens, K., Porter, W., & Stoker, S. (2002). Bullying in schools: A review of prevention programs. In S.E. Brock, P.J. Lazarus & S.R. Jimerson (Eds.), *Best practices in school crisis prevention and intervention* (pp. 171–189). Bethesda, MD: National Association of School Psychologists.
- Kaukiainen, A., Salmivalli, C., Lagerspetz, K., Tamminen, M., Vauras, M., Mäki, H., et al. (2002). Learning difficulties, social intelligence, and self-concept: Connections to bully-victim problems. *Scandinavian Journal of Psychology, 43*, 269–278.
- Kuhne, M., & Wiener, J. (2000). Stability of social status of children with and without learning disabilities [Electronic version]. *Learning Disability Quarterly, 23*, 64–75.
- Llewellyn, A. (2000). Perceptions of mainstreaming: A systems approach. *Developmental Medicine & Child Neurology, 25*, 43–57.
- Martlew, M., & Hodson, J. (1991). Children with mild learning difficulties in an integrated and in a special school: Comparisons of behaviour, teasing, and teachers' attitudes. *The British Journal of Educational Psychology, 61*, 355–372.
- Miller, T.W., Beane, A., & Kraus, R.F. (1998). Clinical and cultural issues in diagnosing and treating child victims of peer abuse. *Child Psychiatry and Human Development, 29*, 21–32.
- Mishna, F. (2003). Learning disabilities and bullying: Double jeopardy. *Journal of Learning Disabilities, 36*, 336–347.
- Monchy, M.D., Pijl, S.J., & Zandberg, T. (2004). Discrepancies in judging social inclusion and bullying of pupils with behaviour problems. *European Journal of Special Needs Education, 19*, 317–330.
- Morrison, G.M., Furlong, M.J., & Smith, G. (1994). Factors associated with the experience of school violence among general education, leadership class, opportunity class, and special day class pupils [Electronic version]. *Education & Treatment of Children, 17*, 356–369.
- Nabuzoka, D. (2003). Teacher ratings and peer nominations of bullying and other behaviour of children with and without learning difficulties. *Educational Psychology, 23*, 307–321.
- Nabuzoka, D., & Smith, P.K. (1993). Sociometric status and social behaviour of children with and without learning difficulties. *Journal of Child Psychology and Psychiatry, 34*, 1435–1448.

- Nabuzoka, D., & Smith, P.K. (1999). Distinguishing serious and playful fighting by children with learning disabilities and nondisabled children. *Journal of Child Psychology and Psychiatry*, 40, 883–890.
- Nansel, T.R., Overpeck, M., Pilla, R.S., Ruan, W.J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth: Prevalence and association with psychosocial adjustment. *The Journal of the American Medical Association*, 285, 2094–2100.
- No Child Left Behind Act of 2001, 20 U.S.C. 6301 Sec. 1 et seq.
- Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Oxford, UK: Blackwell.
- O'Moore, A.M., & Hillery, B. (1989). Bullying in Dublin schools. *The Irish Journal of Psychology*, 10, 426–441.
- Pellegrini, A.D. (2002). Bullying, victimization, and sexual harassment during the transition to middle school. *Educational Psychologist*, 37, 151–163.
- Pellegrini, A.D., & Long, J.D. (2002). A longitudinal study of bullying, dominance, and victimization during the transition from primary through secondary school. *British Journal of Developmental Psychology*, 20, 259–280.
- Rose, C.A., Monda-Amaya, L.E., & Espelage, D.L. (In press). Bullying perpetration and victimization in special education: A review of the literature. Manuscript submitted for publication. *Remedial and Special Education*.
- Reiter, S. & Lapidot-Lefler, N. (2007). Bullying among special education students with intellectual disabilities: Differences in social adjustment and social skills. *Intellectual and Developmental Disabilities*, 3, 174–181.
- Sabornie, E.J. (1994). Social-affective characteristics in early adolescents identified as learning disabled and nondisabled. *Learning Disability Quarterly*, 17, 268–279.
- Sharp, S., & Smith, P.K., (1994). Understanding bullying. In S. Sharp & P.K. Smith (Eds.), *Tackling bullying in your school* (pp. 1–5). New York: Routledge.
- Sheard, C., Clegg, J., Standen, P., & Cromby, J. (2001). Bullying and people with severe intellectual disability. *Journal of Intellectual Disability Research*, 45, 407–415.
- Smith, P.K., Cowie, H., Olafsson, R.F., Liefoghe, A.P., Almeida, A., Araki, H., et al. (2002). Definitions of bullying: A comparison of terms used, and age and gender differences, in a fourteen-country international comparison. *Child Development*, 73, 1119–1133.
- Smith, P.K., Morita, Y., Junger-Tas, J., Olweus, D., Catalano, R., & Slee, P. (1999). (Eds.) *The nature of school bullying: A cross-national perspective*. London, UK: Routledge.
- Sullivan, K., Cleary, M., & Sullivan, G. (2004). *Bullying in secondary schools: What it looks like and how to manage it*. London: Paul Chapman Publishing.
- Swearer, S.M., Espelage, D.L., & Napolitano, S.A. (2009). *Bullying prevention and intervention: Realistic strategies for schools*. New York: Guilford Press, Inc.
- Thompson, D., Whitney, I., & Smith, P.K. (1994). Bullying of children with special needs in mainstream schools. *Support for Learning*, 9, 103–106.
- Van Cleave, J., & Davis, M.M. (2006). Bullying and peer victimization among children with special health care needs. *Pediatrics*, 118, 1212–1219.
- Walker, H.M., Colvin, G., & Ramsey, E. (1995). *Antisocial behavior in school: Strategies and best practices*. Pacific Grove, CA: Brooks/Cole.
- Whitney, I., Nabuzoka, D., & Smith, P.K. (1992). Bullying in schools: Mainstream and special needs. *Support for Learning*, 7, 3–7.
- Whitney, I., Smith, P.K., & Thompson, D. (1994). Bullying and children with special educational needs. In P.K. Smith & S. Sharp (Eds.), *School bullying: Insights and perspectives* (pp. 213–240). London: Routledge.
- Woods, S., & Wolke, D. (2004). Direct and relational bullying among primary school children and academic achievement. *Journal of School Psychology*, 42, 135–155.

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