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What are we measuring?  A content-analysis of measurements used in the study of the association
between adolescent bullying and suicide

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Abstract

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By Misty Wolfe

Two studies have reviewed the literature regarding the association between bullying and suicidality (Kim & Leventhal, 2008; Klomek, Sourander, & Gould, 2010).  Others have reviewed the methods and instruments that have been designed with the intent of measuring bullying phenomena (Crothers & Levinson, 2004), revealing the loss of accuracy that results from faulty measurement and analysis applications.  Research has revealed the varying definitions of bullying, and a functional summary of constructs has been proposed (Greene, 2000).  It has yet to be assessed, however, whether the bulk of the research being conducted regarding the association between bullying and suicidality reflects the most widely accepted definitions of bullying and the most appropriate instruments available.  It is also unclear how comprehensive and measurable those constructs are.

The current study involved a systematic review of the published literature for primary research regarding the association between bullying and suicidality.  The instruments or items from each of the studies selected for inclusion were assessed to quantify the number of bully instruments used and to determine how closely they reflect the current five bullying constructs summarized by Greene (2000).  In order to examine potential barriers to effectively synthesizing findings in this area, a comparison of the instruments and items used in studies that the author(s) have framed as bullying versus those framed as other forms of violence was also performed.

Findings:  Given the amount of overlap in measures of frequency and familial social groups between studies framed as bullying and those that were not, frequency may not be a factor that differentiates bullying from general peer aggression.  The construct of a power differential does appear to be perceived by researchers as a differentiating factor, as it is not present in studies that are not framed as bullying. The intention of the bully occurred fairly frequently in both groups.  Finally, a complete absence of the construct regarding a lack of victim provocation could indicate that this does not reflect the bullying dynamic or, more likely; it could simply be that it has yet to be included in instruments currently in use.

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**Introduction**

Childhood and adolescent bullying has long been thought to be a fairly innocuous feature of many children's lives (Stassen Berger, 2007) and is reported to occur at rates that range between five and seventy-five percent (Hunter & Boyle, 2002). Some students are bullies but are not victimized (bullies only), others are victimized but do not bully (victims only), while still others both participate in bullying others and are also victimized themselves (bully-victims) (Barker, Arseneault, Brendgen, Fontaine, & Maughan, 2008). Additionally, bullying takes place through a variety of behaviors and delivery methods, such as directly physically or verbally bullying others or indirectly engaging in activities intended to socially exclude the victim (Olweus, 1994).

Scientific interest in the association between bullying and suicidality began approximately thirty years ago after a small cluster of suicides in Norwegian youth were thought to have been motivated by bully victimization (Smith & Brain, 2000). Since that time a shift in public perception of the hazards associated with bullying has occurred. Incidents such as the Columbine high school massacre, the publicity of recent violent anti-gay adolescent bullying, and media focus on suicides associated with bullying have increased the attention placed on this phenomenon. Partially in response to increased attention from the general population the scientific community has become more engaged in the study of this association. The number of studies conducted has grown substantially and the field has benefited from an increasingly sophisticated understanding of this dynamic, yet persistent variations in reported prevalence and outcomes suggest that there is still much to be revealed (Griffin & Gross, 2004; Stassen Berger, 2007).

Evidence of the health and behavioral associations for victims of bullying, such as depression, low-self-esteem, substance use, and suicidality, has demonstrated that these events can be far from innocuous (Griffin & Gross, 2004; Klomek et al., 2008; Smokowski & Kopasz, 2005) and likely occur more often than thought (Stassen Berger, 2007). Other associations include somatic and psychiatric symptoms, deviance, nervousness, sleeping problems, psychological distress (Kumpulainen, 2008), internalizing disorders, poor academic performance, feelings of abandonment, physical injury (Griffin & Gross, 2004), poor communication, and poor problem-solving skills (Smokowski & Kopasz, 2005). In addition, studies of long-term outcomes of bully victimization suggest that being bullied could lead to psychological problems well into adulthood (Allison, Roeger, & Reinfeld-Kirkman, 2009). Moreover, particular subgroups (such as LGBTQ, gender-nonconforming, or special education students) appear to suffer from increased risk for depression and suicidality when bullied than do their heterosexual or typically-developing peers (Birkett, Espelage, & Koenig, 2009; M. Birkett, Espelage, D., & Koenig, B., 2009; Shtayermman, 2007). While victimization has been associated with multiple negative factors, suicide presents the most severe potential outcome for adolescents and its association with bullying remains poorly understood.

This study will review current understandings of general bullying related phenomena while describing the gaps that exist and why they persist in this field of study. This will be followed by a systematic review of the literature and a content-analysis of definitions and instruments currently used in publications examining the association between bullying and adolescent suicidality. These definitions and instruments will be examined in comparison with proposed constructs of bullying. The aim of this study is to

determine whether the bully measures and research methods currently employed in the study of the association between bullying and suicidality reflect features that are unique to the bullying dynamic as it is currently understood.  The findings from this project may serve to partially disentangle this field of study and inform future research directions.

**Current Research**

 *Bullying, Definitions, Language, and Measures*

Any study of the outcomes of bullying must start with a universal understanding of what defines bullying behavior and the ability to separate bullying from other similar appearing behaviors.  Unfortunately the body of literature is muddled with the practice of interchanging terms as though they were synonymous and a general poor understanding of how various terms are defined.  This problem is exacerbated by the fact that even when used appropriately, not all terms associated with bullying represent mutually exclusive categories.  A lack of standardized definitions of terms and language has led to much confusion in the interpretation of findings and inhibits the ability to target high-risk environments.  The following pages will provide an overview of definitions, the language used to describe methods of delivery, the types of bullying, as well as the measures currently available.

Olweus developed one of the first definitions of bullying, which currently is as follows:

> *"A person is bullied when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other persons, and he or she has difficulty defending himself or herself,"* (Olweus, 1993).

Rigby and Slee later expanded the component of a power differential by defining bullying as

*"deliberately hurting or frightening someone weaker than themselves for no good reason. This may be done in different ways: by hurtful teasing, threatening actions or gestures, name-calling or hitting or kicking. It is emphasized that it is not bullying when two people of about the same strength have the odd fight or quarrel"*(Peterson & Rigby, 1999).

The 'repetition' component was included in order to better distinguish bullying from more general peer victimization or random events and is considered by some to be a critical component in differentiating bullying from other behaviors (Kiriakidis & Kavoura, 2010). It is unclear however over what period of time repeated acts must take place in order for the exchange to be quantified as bullying. It is also unclear as to what contextual factors may delineate bullying from frequent incidences of violence that may occur in dangerous or high-crime areas.

Greene reviewed these and other similar definitions and summarized what appears to be the most widely accepted constructs of bullying (Greene, 2000):

*1. The bully intends to inflict harm or fear upon the victim.*
*2. Aggression toward the victim occurs repeatedly.*
*3. The victim does not provoke bullying behavior by using verbal or physical aggression.*
*4. Bullying occurs in familial social groups.*
*5. The bully is more powerful (either real or perceived power) than the victim* (pp 383).

Regrettably even these constructs may not sufficiently distinguish bullying from other more general forms of peer-aggression or adequately represent the full range of the bullying dynamic. For example, while the constructs of perpetrator intention and a lack of victim provocation may seem intuitive, a qualitative study of adolescent females revealed that the motives for bully-perpetration were also to alleviate boredom, to create excitement, to get attention, for self-protection, to win support, to get revenge, and some even reported that at times it was unintentional or automatic (Owens, Shute, & Slee,

2000). Sharp and colleagues likewise suggested that an individual may be a victim whether the person(s) perpetrating the aggressive behaviors intended to bully or not (Sharp, Thompson, & Arora, 2000). Regardless, questionnaires designed to assess victimization would require the victim to know the perpetrator's intention, which would clearly be a highly subjective interpretation.

Though these constructs may reflect the current general understanding of bullying, testing each of them would prove to be exceptionally difficult due to the way that it has been defined by Greene (Greene, 2000). Perhaps it is due to this that many measures currently used in studies of the association between bullying and suicidality neglect these constructs. Or it may be that there are other instruments that effectively measure these constructs yet are not being used in the study of this association. Finally, it must be considered that there are potentially other aspects of the bullying dynamic that are not reflected in this five-item list.

According to Griffin and Gross (2004), all of the generally accepted definitions of bullying and victimization are focused on the behavior dynamics and neglect the context and experience of the victim. They suggest that failing to account for the victim's perception may result in a quantification of good-natured teasing or other phenomena unrelated to bullying. Others point out that frequency may not be sufficient to differentiate bullying from other forms of aggression (Sharp, et al., 2000), nor is it easily measured, particularly in cases of cyber-bullying (Dooley, Pyżalski, & Cross, 2009).

Bullying represents a unique interplay of behaviors, intention, group dynamic, and response. It also involves the context within which bullying takes place and the specific aspect of the victim that the bully targets. It is possible that outcomes are

influenced by frequency, duration, pre-existing disorders in victims, social support, and many other variables. These issues will be discussed in depth in later sections. For now we will begin by differentiating bullying from more general forms of adolescent peer aggression.

*Peer Aggression versus Bullying*

There is a great deal of confusion involved in the interchange of the terms "peer aggression/violence" and "bullying". Sometimes studies framed as bullying use measures of general peer aggression (Adelmann, 2005) and, conversely, some studies make little or no mention of bullying but make use of items targeting bullying behaviors in their surveys (Heilbron & Prinstein, 2010; Peter, Roberts, & Buzdugan, 2008). Results sections may or may not then discuss findings in terms of bullying (Kaminski & Fang, 2009), lending to the difficulty in synthesizing findings in this field. The following two studies will demonstrate the difference in types of measures appropriately used in studies framed as general peer aggression or violence versus those framed as bullying behavior.

The first study was conducted in 1988-89 with eighth-grade students in schools in the western area of the United States (Arizona, Nevada, and Wyoming) (Evans, Marte, Betts, & Silliman, 2001). The survey consisted of a 142-item paper-and-pencil instrument, of which measures of violence and victimization were included. These items requested information regarding perpetration, including the number of times: the participant had initiated a fight; had threatened someone with a weapon; and whether they had ever used a weapon. Additional items for victimization measures included questions regarding how often they had been threatened, attacked, or harassed; how often they had been shot, cut, or stabbed; whether or not they had been mugged or threatened

with a weapon; and whether or not they had been the victim of a crime. Finally, the

authors assessed whether or not the participants had witnessed violence-related events.

Suicidality was assessed by combining responses to three questions regarding depression,

suicidal ideation (thoughts of suicide), and suicide attempt. Not only was this study

framed by the author to target general violence, but it also appears that the items within

the instrument are designed to capture instances of peer-violence, and not bullying

behavior.

In order to exemplify a rigorous approach to the study of bullying behavior, this

study was selected in spite of the fact that the outcome variables did not include

suicidality measures. Hunter and colleagues (Hunter, Boyle, & Warden, 2004) examined

the role of duration and frequency of bullying events in help-seeking behaviors among

bully victims. Participants included students attending school in Scotland between nine

and fourteen years of age.

The authors provided the following definition to students:

*"Below is a list of ways that kids can be nasty or unpleasant to other kids.
Have any kids been nasty to you, in any of these ways, in the past two
weeks? If they have, tick that box and say how upset you were when it
happened."*

This definition was followed by a list of behavioral measures targeting victims, including

name calling; stolen or damaged property; exclusion from games or groups; having been

hit or kicked; and general threats. Bully intention was measured through a single

question: "Do you think kids were <u>trying</u> to upset you?" Response options measured

frequency of events as "less than once a week; about once a week; several times a week;

every day; several times every day". Duration was accounted for by asking how long ago

these events began taking place and how often in the previous year these events occurred. These authors also measured the number of people responsible for perpetrating the events, their gender, and the location where the events took place. Finally, they asked participants how they felt when the events were taking place, how they chose to respond, and what victims thought would happen as a result of being victimized. Items measuring bully perpetration reflected the victim items listed above but were reworded in the context of perpetration rather than victimization.

This set of items provides useful information regarding several features not typically measured in bully instruments and reveals that there are nuanced metrics available. Duration is an important feature, as one would expect outcomes to differ for an individual who has only been bullied recently as opposed to one who has been bullied every year that he or she was in school. Likewise, Hunter measures the *perceived* intention of the bully (which may have a greater impact on victim outcomes than the *actual* intention of the bully). By including items asking respondents to indicate their feelings and how they respond to victimization, an instrument such as this could increase our understanding of what separates victims who commit suicide from those who do not.

Few have compared bullying- and peer-aggression-related behaviors in the same study, but those who have determined that there is a difference in behaviors and outcomes for each. The following studies examined the difference between bullying and general peer victimization. In the first study, the authors define bullying in the introduction as:

> *"Aggression which is repeated, where the aggressor tends to cause harm or distress, and in which there exists an imbalance of power between bully and victim"* (Hunter, Boyle, & Warden, 2007),

Participants were provided a very similar instrument to the one outlined above in Hunter et al. (2004). In order to differentiate between victims of bullying and victims of peer-victimization the authors classified participants as bully victims if they indicated that "their aggressors intended to upset them" and "there was at least one form of power imbalance between themselves and their aggressor". Participants were otherwise categorized as victims of general peer-victimization.

In this study it was found that pupils who were victims of general peer-victimization exhibited lower levels of depression than those who were victims of bullying. Participants whose responses indicated bully victimization also showed an increased perception of loss of control over the situation. The authors concluded that peer-victimization and bullying are two separate and unique events, and that bullying has a greater negative impact on victims.

The second study was conducted in South Africa among students in grades eight and eleven (Liang, Flisher, & Lombard, 2007). Investigators asked two yes/no questions of participants regarding their involvement in bullying (either as victim or perpetrator) and separately measured behaviors such as weapon carrying and fighting. It was revealed that although violent behaviors occurred at an increased rate among bullies, victims, and bully/victims, these behaviors may reflect self-defense or other protective behaviors in addition to aggressive behavior. This finding suggests that in studies where bullying is assumed to be present based on responses to questions of violent behaviors it remains unclear as to whether this reflects bullying or self-defense behaviors. Together these studies support the concept that bullying is a unique experience and should be measured as such.

*Language*

Initially thought to be primarily an act of physical aggression, bullying is now known to take many forms. To begin, bullying is sometimes described as being delivered through direct or indirect means. According to Olweus, direct bullying takes place directly between the bully and victim and can involve physical aggression but it can also include more subtle forms such as name calling or dirty looks as well. Indirect methods typically involve multiple participants and general methods of social exclusion (Olweus, 1994). It does not involve direct interaction between bully and victim and may include such behaviors as rumor spreading or forming alliances to socially exclude peers.

Differentiating these methods of delivery is important to the development of research tools, as each have been shown to differ by sex and age. Older individuals and females are more likely to engage in indirect bullying, while younger individuals and males have been found to be more likely to engage in direct bullying (Beaty & Alexeyev, 2008). Outcomes for each method of delivery appear to differ as well, as victims of indirect bullying experience greater degrees of internalizing symptoms while victims of direct bullying tend toward externalizing behaviors (Marini, Dane, & Bosacki, 2006), though this may be an artifact of the particular type of bullying involved.

Under the headings of direct and indirect, bullying can be divided into three types of behaviors: physical, verbal, and relational. Physical bullying can include various forms of physical assault, property damage, or threats of physical violence. Verbal bullying involves name-calling, racial slurs, and general put-downs that are delivered directly to the victim. Relational bullying is often indirect yet behaviors such as directly

telling the victim that they are not allowed to join a social group could be considered both relational and direct, and possibly even verbal.

Relational bullying also appears to have a more significant impact on victims. Late childhood and early adolescence is the period in life when children begin to withdraw from parental support and rely more heavily on peers for support and validation. Experiencing rejection by peers during this phase of development is particularly detrimental (Espelage & Holt, 2001). Furthermore, children who are consistently ostracized are less likely to have any peer-based social support and a paltry social-support network exacerbates negative psychological sequelae associated with bullying (Holt & Espelage, 2007).

Disentangling methods of delivery and types of bullying can be problematic, and the growing technology-culture of adolescence has further complicated matters. Cyber bullying is emerging as a new medium for peer harassment and introduces a complex dynamic prohibitive of simply tagging "and it occurs through technological delivery" onto the end of a bullying definition. There also persists an ongoing debate over whether to label these events as 'cyber bullying', 'electronic aggression', or some other as yet formulated label that does not make use of the word 'bullying' (S. K. Kiriakidis, A., 2010). For now, however, we will refer to it as cyber bullying.

Cyber bullying may be considered direct if it is a message delivered directly from bully to victim through text message, social network contact, or email. It could be indirect if pictures or stories are posted anonymously on blogs or web-pages, and in these cases measuring frequency is especially complex. Is it a one-time event because it is posted once, or an ongoing event based on the number of 'hits' a site receives (Dooley, et

al., 2009)? Anonymous bullying may also introduce a new component to the dynamic. If

a bully believes that he or she is at no risk of getting caught, or is shielded from the

victim's emotional response, then he or she may engage in more severe bullying

behaviors than they would otherwise in a face-to-face interaction. In addition, as

anonymous bullying creates a sense of amorphous and omnipresent danger, bully

anonymity may cause the victim to feel *more* threatened, rather than less (Dooley, et al.,

2009; Kiriakidis & Kavoura, 2010).

*Bully and Victim Profiles and Related Outcomes*

There are various factors that are known to be associated with each status of

bully. Unfortunately as most studies are cross-sectional it is not always clear which are

predictors and which are outcomes. The following section will describe occurrences that

are associated with the various bully statuses.

Contrary to popular notions, bullies typically "feel powerful" and have the benefit

of high social status (Stassen Berger, 2007) and peer nomination methods suggest that

they are perceived as equally popular with non-bullies (Espelage & Holt, 2001) in spite

of the fact that they tend to bully peers in their own grade (Stassen Berger, 2007). Bullies

exhibit more externalizing behaviors than non-bullies (Bollmer, Milich, Harris, & Maras,

2005; Cook, Williams, Guerra, Kim, & Sadek, 2010; Rothbaum & Weisz, 1994), but this

may be moderated if the bully has a close, "high quality" relationship with a peer

(Bollmer, et al., 2005) . Some have suggested that these students feel as though they

have greater control over their environments (Smith & Brain, 2000) while others have

found that they appear to lack in social competence and exhibit poor problem-solving

skills (Cook, et al., 2010). These negative attributes may be inherent or may be partially

attributed to the negative home environment and lack of parental support typically associated with students who bully others (Smokowski & Kopasz, 2005). In a meta-analysis published last year certain factors were revealed that appear to predict bullying behaviors in individuals. The strongest predictors were externalizing behavior and other similar cognitive features (Cook, et al., 2010).

In general, students who are victimized by bullying exhibit anxiety symptoms, are emotionally sensitive, passive (Stassen Berger, 2007), are more likely to internalize, or direct their negative experiences and feelings inward (Bollmer, et al., 2005). Victim status can be predicted by a student's social ranking with peers, social competence, and whether the environment at school is conducive to ongoing victimization. They tend to lack the level of social skills that are expected at their age, to have poor self-perception, and to experience visible peer-rejection (Cook, et al., 2010). Finally, bully-victims represent a special category of bullying behavior. Not only do these individuals both bully and experience victimization by bullies, but they are also at increased risk for the negative (and more severe) outcomes than do either bullies or victims (Rivers, 2010).

*Prevalence and Outcomes*

Prevalence of bully victimization in schools has been reported to range from five percent to seventy-five percent (Hunter & Boyle, 2002). This may be due to differences in the frequency or severity of bullying incidents, as one study revealed that ten percent of their participants reported severe victimization while up to seventy-five percent reported being bullied only one or more times while they were in school (Swearer & Doll, 2001).

There are variations for victims vary as well, both by the rate at which they experience negative associations and the severity of these associations. Victimization has been associated with a range of factors, yet due to inconsistencies in definitions, measures, methods, populations studied, and contextual factors, it is impossible to determine the exact source of discrepancies (Griffin & Gross, 2004). It does appear however that prevalence and outcomes are at least partially explained by victim sub-groups. The following studies review variations in prevalence and outcomes by sex and LGBTQ status.

<u>Sex differences</u>

Many studies report that males are more involved in bullying than females (Beaty & Alexeyev, 2008; Stassen Berger, 2007) while others found that sex differences did not emerge (Cheng et al.; Klomek, et al., 2008). This discrepancy is not surprising as recent inquiries into differences in how males and females bully have revealed that female bullying styles have often been neglected in survey research. Boys tend to bully more physically while girls are more prone to relational bullying (Wang, Iannotti, & Nansel, 2009), with behaviors such as rumor spreading and social exclusion (Baldry & Winkel, 2003; Craig, 1998) yet until recently most studies have focused almost exclusively on physical bullying.

In addition to the type of bullying experienced, findings from several studies suggest sex differences in suicidality. In one study of the association between bully victimization and suicide, older and female victims were found to be more likely to experience suicidal cognition than the other younger or male victims (Baldry & Winkel, 2003). In another, 8th grade female participants were found to score higher on the

association between victimization and having suicidal thoughts than were boys (Roland, 2002). These findings were supported by still another study which also revealed that females tend to cope with victimization by internalizing while males tend to cope through externalizing behaviors (Delfabbro et al., 2006a). This may also be a byproduct of bullying styles, as girls are more prone to relational bullying which is more strongly associated with suicidality (Burgess, Garbarino, & Carlson, 2006; Marini, et al., 2006)

Though all of the factors and associations described thus far reflect an already muddled field of study, additional confounders are introduced when the study of special populations are brought in. Groups such as lesbian, gay, bisexual, transgendered, questioning (LGBTQ), gender non-conforming or incarcerated youth warrant examination independently of the general population.

LGBTQ Students

While different sub-groups frequently report greater numbers of incidences of bully-victimization than the general population their experiences are often masked by more generalized data collection methods. Gay, lesbian, bisexual, questioning, and gender non-conforming students experience more victimization than heterosexual students, and negative health outcomes appear to be more pronounced among these students (Birkett, et al., 2009; Gruber & Fineran, 2008). In addition to the more typically reported forms of bully victimization, LGBTQ students are also subjected to increased sexual harassment, sexual abuse/assault, and anti-gay harassment (physical, verbal, and relational) (Birkett, et al., 2009; Gruber & Fineran, 2008).

Birkett, and colleagues (Birkett, et al., 2009) explored the negative effects of homophobic harassment of lesbian, gay, and bisexual students. They compared survey

responses between LGBQ students and heterosexual students and found that questioning

students were bullied more than either gay/lesbian or heterosexual students.  Questioning

students also reported the most depression, substance use, truancy, and suicidality, but

gay/lesbian students still reported levels that were higher than those among heterosexual

students.

Similarly, a separate study explored the mediating role of bullying on gender-

nonconformity among gay males between the ages of 18 and 25 recruited from gay or

university related community organizations (n=96).  Those who reported higher levels of

suicidality also reported higher levels of femininity in middle school, and this

relationship was significantly mediated by bullying (Friedman, Koeske, Silvestre, Korr,

& Sites, 2006).

In an examination of contextual factors that influence these outcomes, Warwick

and colleagues (Warwick, Aggleton, & Douglas, 2001) explored teachers' perceptions of

bullying that takes place within the school. They surveyed 307 schools in England and

found that 97% of teachers were aware of instances of bullying, 82% were aware of

homophobic bullying, and 26% were aware of homophobic physical bullying.  The

anecdotal evidence drawn from follow-up telephone interviews revealed a general lack of

understanding regarding how these incidents should be handled due to many factors

ranging from a teacher's discomfort to a lack of school protocol.

A lack of intervention by faculty is unfortunate, as while homophobic bullying

has been associated with an increase in suicidality and depression, a positive school

environment that is supportive of LGTBQ adolescents significantly reduces these suicidal

feelings for all students (Birkett, et al., 2009; Goodenow, Szalacha, & Westheimer, 2006).

Instruments

There is a great deal of variability in the types of instruments used to measuring bullying; each at times addressing, neglecting, or contradicting the constructs summarized by Greene (Greene, 2000). According to the Compendium of Assessment Tools Measuring Bullying, Victimization, Perpetration and Bystander Experiences compiled by the Centers for Disease Control and Prevention (in press, 2011), there are more than thirty-three validated instruments designed to measure bullying phenomena. The instruments selected for inclusion in the Compendium contain measures for bullying (aggression), bully victimization, and bully-victims drawn from the literature since 1990, and together they characterize a fairly representative sample of what is available in terms of instruments measuring bullying phenomena.

Some instruments in the compendium provide participants with a definition of bullying, such as:

> "*bullying is intentional hurtful behavior. It can be physical or psychological. It is often repeated and characterized by an inequality of power so that it is difficult for the victim to defend him/herself*" (Parada 2000).

Other definitions are more comprehensive and descriptive, as is the one written by

Olweus and adapted by Tarshis and Huffman (2007) which is as follows:

*"Here are some questions about being bullied by other students. First, we define or explain the word bullying. We say a student is being bullied when another student or several other students: Say mean or hurtful things or make fun of him or her or call him or her mean and hurtful names; Completely ignore or exclude him or her from their group of friends or leave him or her out of things on purpose; Hit, kick, push, shove around, or lock him or her inside a room; Tell lies or spread false rumors about him or*

*her or send mean notes and try to make other students dislike him or her, and other hurtful things like that. When we talk about bullying, these things happen repeatedly and it is difficult for the student being bullied to defend him or herself. We also call it bullying, when a student is teased repeatedly in a mean and hurtful way. But we don't call it bullying when the teasing is done in a friendly and playful way. Also, it is not bullying when two students of about equal strength or power argue or fight.*"

These definitions are then followed by questions inquiring into frequency of bullying events, questions inquiring whether or not bullying has occurred during a specific time frame, or of questions with specific behavioral measures. Examples of behavioral measure items include the following: physical injury/attempts at physical injury: picking on other children; being unkind; name-calling; sexual harassment; taken/stolen/damaged property; threats; someone teased you or called you names recently; you were deliberately excluded; and making fun of people. Still other instruments in the compendium do not provide a definition and simply ask students to recall how often during a specified time period they have been bullied using either behavioral measures or through the use of the term "bullying" itself.

Unfortunately, these instruments are not typically the measures used in study of the association between bullying and suicide, and this practice makes it difficult to produce robust findings or make generalizations.

*Methods of report*

Debate over reliability of various methods of reporting bullying and victimization persist as well. The most commonly used methods include self-report, peer nomination, clinician nomination, teacher nomination, and parental nomination. Concerns with self-report include recall bias, a lack of desire to report behaviors that reflect poorly on the participant, and co-variance if the participant is also self-reporting outcomes. Peer report may not accurately reflect the rate at which the individual is victimized, nor can it fully

capture the quality of the experience for the victim (Stassen Berger, 2007). Reports

delivered through teachers have been shown time and again to be unreliable due to

differences in how teachers versus students define bullying (O'Brien, 2009), particularly

when subverted behaviors associated with relational bullying are to be measured (Stassen

Berger, 2007). Likewise, clinicians are often relying on second-hand self-report of the

victims themselves and while they may be uniquely qualified to identify psychological

risk factors for suicidality, this dynamic may introduce an additional barrier to honest and

accurate self-report.

**Summary Definitions and Measurements**

In summary, there persists a lack of a standardized definition of bullying or even a

common and general understanding of how to recognize it when it is taking place.

Survey instruments used to measure bullying phenomena vary widely and do not always

reflect what is known about this dynamic. There is a lack or in some cases an absence (in

instruments and understanding) of the perception of the victim, measures of frequency

and duration, or the inclusion of a variety of potential mediators, moderators, and

confounders that could explain variations in outcomes.

The debate over "frequency" as an indicator of 'true' bullying is ongoing, with

both sides presenting compelling support for their position. A single event that is

significantly traumatic may be more likely to be perceived by the victim as bullying than

several incidents of lesser quality. In fact, several researchers have suggested that

victimization and potential outcomes are directly related to the perception of the victim

(Mills & Carwile, 2009; O'Brien, 2009; Stassen Berger, 2007), and others have found that

even infrequent events have been associated with suicidality (Kumpulainen, 2008).

These findings suggest that outcomes may be more related to the *quality* of the event(s), and that quality may be measured through some combination of repetition and the perceived severity by the victim. In fact, examining the appropriate contextual factors may provide the insight needed to determine why some students who are bullied resort to suicide while others may seem relatively unaffected.

Authors of one review suggested that one facet of perceived quality may be related to ongoing victimization when the aspects being targeted are static and beyond the control of the victim, such as race, sexuality, or religion (Nishina & Bellmore, 2006). Others support this notion of the victim's perspective, citing the complication of sorting participants into victim or bully status categories if the events being perpetrated are disparate for bullies and victims. They state,

> *"If a student had been attacked on a number of occasions by different people, then would she or he be seen as being bullied, but the perpetrators not as bullies? Or if different students are attacked by one person, is that person bullying, but the victims are not being bullied?"*
> (Sharp, et al., 2000).

While this type of delineation may seem like academic pedantry, the repercussions for data collection and analysis may have a substantial impact on outcome measures of effect.

This is not to dispute the potentially cumulative impact of frequent and/or long-term victimization, as the few studies that have retained measures of frequency in the analysis have demonstrated an increase in the odds of negative outcomes (Ken Rigby & Phillip Slee, 1999; van der Wal, 2003). It is just to reinforce the idea that the quality of the event cannot likely be measured by one simple quantified component, but should rather be considered an amalgamation of multiple factors. This more holistic approach

could clarify the distinction between bullying and other instances of more general peer aggression.

Finally, a gap present but not often addressed in this review involves the way that surveys are structured and how that affects the information that they produce. In most articles, questionnaires incorporate one or more standardized surveys to assess the covariates and then the findings are compared by assessing the statistical significance of the association of an assortment of variables. This approach has been useful in determining which variables are likely to occur in proximity to each other but has done little to demonstrate causality or address the victims' perspective. More longitudinal studies and qualitative research in this area could assist in revealing potential causality and coping mechanisms employed by bully-victims.

**Purpose**

Two studies have reviewed the literature regarding the association between bullying and suicidality (Kim & Leventhal, 2008; Klomek, Sourander, & Gould, 2010). Others have reviewed the methods and instruments that have been designed with the intent of measuring bullying phenomena (Crothers & Levinson, 2004), revealing the loss of accuracy that results from faulty measurement and analysis applications. Much research (as has been outlined in the pages above) have revealed the varying definitions of bullying, and a functional summary of constructs has been proposed (Greene, 2000). It has yet to be assessed, however, whether the bulk of the research being conducted regarding the association between bullying and suicidality reflects the most widely accepted definitions of bullying and the most appropriate instruments available. It is also unclear how comprehensive and measurable those constructs are.

The current study will systematically review the published literature for primary research regarding the association between bullying and suicidality. The instruments or items from each of the studies selected for inclusion will then be assessed to quantify the number of bully instruments used and to determine how closely they reflect the constructs identified by Greene (2000). In addition, a comparison of the instruments and items used in studies that the author(s) have framed as bullying versus those framed as other forms of violence and aggression may demonstrate any barriers to effectively synthesizing findings in this area. This will contribute to the literature by elucidating the overlap in instruments and potentially informing the direction of future research in the field of adolescent bullying.

**Methods**

*Sources*

There were two data sources utilized in the course of this study. To begin, all articles reported in either published review (Kim & Leventhal, 2008; Klomek, et al., 2010) were examined for inclusion. Additionally, in order to ensure that all appropriate currently published material was included, a systematic literature review of the association between bullying and suicidality was conducted.

Previous Reviews and Inclusion Criteria

Kim and Leventhal published a systematic review of the literature in 2008. Six databases were searched (Web of Science, SCOPUS, EMBASE, PubMed, PsychINFO, and Ovid Medline) with the goal of examining the association between bullying and suicidality. The following terms were used: bully*, peer victimization, peer aggression, relational aggression, peer relation, school violence, school aggression, social dominant*,

social hierarchy*, or peer abuse. These terms were used in combination with suicide, suicide attempt, suicide ideation, suicide behavior, self-harm, or self-injurious behavior. They included studies if: age of participants was equal to or younger than high school age (including all special populations); the statistical methods were described; the research was quantitative and provided numerical data; measures for bullying/peer victimization were described; and, measures of suicidality or self-harm were described. Studies were excluded from their review if no quantitative data were provided or if suicidal risks were not compared between bullying and non-bullying groups. After initial examination, 37 articles were included in their review.

Klomek, Sourander, and Gould (2010) likewise reviewed the research addressing the association between bullying and suicidality. PsycNet and Medline were examined using the following terms: bullying; peer victimization; harassment; and, suicide. Articles were excluded if they focused on special populations (e.g., homosexuals or prisoners) or adults. Additional studies were drawn from reference lists of relevant articles. After the application of appropriate exclusion criteria this study retained 31 articles. However, due to the way in which the article was formatted it was not possible to determine which articles were considered to be 'reviewed' by the authors. Therefore only articles listed in their references that potentially examined the association between bullying and suicidality were considered for inclusion.

All articles from these two reviews were included unless there was no measure of suicidality included in the study. For the purpose of this study suicidality is defined as suicidal thoughts, feelings, or ideas; making a plan for suicide; making a suicide attempt; or completed suicide. It does not include behaviors such as deliberate self-harm (e.g.,

"cutting") or other self-injurious behaviors.   As this study is focused on the association between child or adolescent bullying and suicide, articles were excluded if it was unclear whether the bullying events associated with suicidality took place before the age of eighteen.

<u>Current Systematic Literature Review and Inclusion Criteria</u>

A systematic search of PubMed, PsycINFO , CINAHL, ERIC, and Google Scholar was conducted between January 2010 and March 2011 with following search terms:  bully*, peer victim*, peer harassment/aggression/victimization, cyber/electronic bullying, cyber/electronic harassment, cyber/electronic aggression, adolescent*, teen*, youth, adolescent, suicidality, suicidal ideation, suicide attempt, and suicidal behavior. To our knowledge, all searches were exhaustive.  Academic databases were searched until new articles no longer appeared.  Through Google Scholar titles and abstracts were examined until no relevant articles were found in over 300 sequential hits, and references of selected articles were screened for potential inclusion.

In order to be considered for inclusion, articles were required to measure a direct association between suicidality and bullying.  Studies measuring deliberate self-harm or other risk factors associated with suicidality were not included.  Articles were excluded from the current review if the intent of the study was not framed by the author to be measuring bullying (i.e., framed as general peer victimization or dating violence). 'Framing' was determined by the term 'bullying' being present in either the title, the abstract, the purpose statement, or the introduction to the methods section.

Four articles escaped exclusion based on framing.  One was framed as "childhood harassment" but it was not possible to be sure that the author wasn't using that as a

synonym for bully victimization.  Though other studies were excluded for not being

framed as bullying, the instrument used in this particular article specifically addressed

bullying-related phenomena very similar to validated instruments (e.g., 'nonverbal signs

of exclusion/rejection', 'being ignored', and 'being threatened with physical violence)

and measured frequency.  Another study was framed as "peer rejection" which is of itself

a potential element of relational bullying.  As in the prior study, the instrument proved to

include bullying-related items even so far as to categorize them as 'confrontive [direct]

verbal aggression', 'confrontive [direct] physical aggression', and 'ostracism

[relational]'.  Likewise the specific items were very similarly worded to those in

validated instruments.  The circumstances in the other articles were comparable to those

mentioned above.  However, as it cannot be determined whether the authors' intentions

were to measure bullying and for the sake of purity in the 'framed-as-bullying' group,

they will be included in the analysis with other studies not framed as measuring bullying.

Studies were excluded if it was not possible to determine that the participants

were under the age of 18 when the bully events took place.  Furthermore, as this is a

review of the material in publication, only articles published in peer-review journals were

included.  Articles were included regardless of sample size or type of statistical analysis

as the purpose of this study is to critique the definitions and measurements used, and not

specifically to examine the statistical methods performed.

Finally, articles utilizing exclusively qualitative research were excluded unless

they provided the participants with a definition of bullying prior to the interview.  The

purpose of this review was not to reveal how participants define bullying but rather to

reveal how it is defined and/or measured by researchers.

*Data*

Once articles were selected, instruments were identified and extracted.  In some instances the instrument was fully described by the author within the context of the publication.  When this was not the case instruments were identified and located through the use of internet searches and contact with the primary author.  Studies for which it was not possible to locate the exact instrument or the authors failed to respond or could not share the instrument were excluded from analysis but will still be discussed in the text.

An SPSS data file (v.18) was created to manage data.  Variables included study framing, bully or victim status, special populations, definition components that matched the constructs (if provided to participants prior to survey administration), items, method of report, bully-intention, and victim-response.

*Coding*

Of necessity most variables were dichotomous, as quantifying the wide range of items and factors present in this body of literature required a checklist rather than nominal scales.  Framing, again, was determined by the presence of the word 'bullying' (or other aggression/violence-related term) in the title, abstract, or purpose/introduction to the methods section of the article.  In instances where it was framed as something other than a measure of violence or aggression-related behavior it was coded as 'not framed but contains measure of violence or aggression'.  This occurred twice, with the primary focus of one article on residential mobility and the other on general associations of suicide.

Suicidality was coded as 'ideation' if the item measured thoughts, feelings, or ideas of suicide; 'suicide plan' meant that the participant reported have at some time made a plan to commit suicide; 'attempt' included all items regarding suicide attempt,

serious suicide attempt, multiple attempts, or an attempt that resulted in medical treatment.

Bully and victim status was stated explicitly by the author in studies framed as measuring bullying behavior. For studies not framed as bullying it was not always clear who the intended status group was. In these instances perpetrator status was assigned if the instrument asked about prior or current involvement in violent/aggressive behaviors and victim status was assigned if the instrument asked about prior or current victimization. Bully-victim status was only applied in instances where the investigator was using combinations of scales or items that would indicate that the participant was being victimized as well as perpetrating aggression on others.

There were two separate variables for special populations: LGBTQ / gender non-conforming and 'other'. Studies which include LGBTQ or gender non-conforming participants separately in the analysis were labeled as such. The 'other' variable was used to code studies focused on special needs children and incarcerated youth.

For studies that provided participants with definitions prior to taking the survey, the definition was coded for five potential components and reflected Greene's constructs. This was done to control for the instances where an instrument provided definition but only asked the participant whether they 'had been bullied'. Though the respondent was not indicating specific behaviors it was determined that the priming influence of a definition would influence a positive or negative response. Each component was coded individually as a yes/no variable in anticipation of variations in definitions.

The definition was determined to have a 'bully intention of inflicting harm or fear' component if it included a phrase such as "intentionally" or "on purpose". It was

also coded as 'intent' if the participant was asked if they thought that the bully was trying to hurt or scare them. 'Threats' were also determined to indicate intent as there is no purpose to threaten someone that does not include inducing fear.

A definition included the construct of a 'power differential' if it mentioned or described a difference in power, an inability to defend one's self, or being forced to do something against your will. Repetition was included if it was stated that bullying was something that happened frequently or in an ongoing manner. It was coded 'yes' for the construct that states that the behavior must be unprovoked by the victim if the definition stated that it was unprovoked. Finally, a familial environment was determined through the use of words such as 'at school', 'pupil' or any other term that reflected an environment where it could be expected that the participant would have ongoing interactions with the same group of individuals. It was also determined to be familial in all cases of peer-nomination as it could not be expected that one would be able to nominate another for bullying or victimization if it were not in an environment of familiarity.

Because many individual instrument items include multiple components, each component was coded separately. For instance, a question may ask if you have ever been physically assaulted or threatened with a weapon, while another may ask only if you have been physically assaulted. Due to rare occurrence and similarity, and in order to save time and space in the analysis later, a few components were coded together. 'Initiating a fight' and 'bragging about wanting to fight' were grouped together, as were being 'shoved against a wall' and 'having things thrown at you'. Other items grouped included 'being treated unfairly' and 'having tricks played on you'; 'being teased', 'getting made

fun of', and 'getting picked on'; 'no one would talk' and 'being ignored'; 'peer pressure' and 'being pressured to do something'; and finally, 'nonverbal bullying' and 'intimidating stare'.

'Method of report' was reported exactly as stated by the author. A single item labeled 'bully-intention' if either the definition or any of the items reflected intention as was outlined above in the definition-coding explanation. 'Victim-response' was coded 'yes' if the response options included an opportunity for the victim to describe how they felt about the victimization event(s) or what they did in response to them.

**Results**

*Summary of Findings*

The initial set included 86 articles, 53 of which were drawn from the two previous reviews and the remaining 33 resulted from the current review. Of these 86 articles, 42 were eliminated based on the aforementioned exclusion criteria.

From the two previous reviews (Kim & Leventhal, 2008; Klomek, et al., 2010) 25 articles were eliminated from analysis: 10 did not report a direct association between bullying and suicidality; for 9 the instrument was not retrievable; in 3 cases it couldn't be determined if the bully events took place before the age of 18; and 2 were reviews or summaries of other research.

In the current review 17 articles were eliminated from further analysis: 7 did not measure a direct association between bullying and suicidality; for 5 the instrument was not retrievable; in 3 articles it was unclear if bully events took place before the age of 18; 2 were reviews of other research; and 1 article was purely qualitative and did not provide

a definition for participants.  This left a total of 44 articles to be included in the current analysis.

Twenty-seven studies were framed as bullying (61%); the remainder categories of framing included 'peer victimization (4), 'at-school victimization' (3), 'peer violence' (2), 'social or environmental risk' (2), 'peer rejection' (1), 'childhood harassment', 'victimization' (1), 'teasing' (1) and 'other' (1).  These latter categories occurred at rates of between 2% - 9%.  Regarding targeted status groups or populations: 18 (59%) targeted perpetrators; 43 (97%) targeted victims; 12 (27%) targeted individuals who are both bullies and victims; 1 (2%) targeted bystanders; and 9 (21%) compared a bully-status group with uninvolved youth.  LGBTQ or gender non-conforming youth were represented in 6 (14%) of the articles, and 3 (7%) targeted other special populations (incarcerated adolescents and adult drug addicts).

A total of 29 (70%) reported using an instrument or items already in circulation, and the remainder either designed their own or did not report the source of the instrument used.  Named instruments included the Youth Risk Behavior Survey; WHO youth health studies; Add Health; Linkages; the Korean Peer Nomination Inventory; the 'From a Boy to a Man' longitudinal study; a revised version of Olweus' instrument; the Minnesota Student survey; K-SADS-PL; and the Peer Rejection Questionnaire.

*Instrument Summary*

**Instrument Summary 1**

|  | Named Instrument | Definition Provided | Constructs in Definitions | Constructs in Items | Maintained Frequency |
|---|---|---|---|---|---|
| Framed as Bullying | 12 | 5 | 15 | 38 | 6 |
| Not Framed as Bullying | 15 | 0 | 0 | 30 | 1 |
| TOTAL | 27 | 5 | 15 | 68 | 7 |

In practice, most studies controlling for frequency use similar items and response options. The student is typically asked either whether they have been bullied or victimized in general (Bonanno & Hymel, 2010; Cui, 2010; Eisenberg, Neumark-sztainer, & Story, 2003; Herba et al., 2008; Ivarsson, Broberg, Arvidsson, & Gillberg, 2005; Jacobsen, 2009b; Kaltiala-Heino, Rimpela, Marttunen, Rimpela, & Rantanen, 1999; Klomek, Marrocco, Kleinman, Schonfeld, & Gould, 2007; Klomek et al., 2009; Laukkanen, Honkalampi, Hintikka, Hintikka, & Lehtonen, 2005; Liang, et al., 2007; Rossow & Lauritzen, 2001) or whether they have experienced a specific aggressive behavior, to which they may respond "never, less than once a week, about once a week, several times a week, once a day, or several times a day", or with the number of times it occurred within a specific time frame (a. Baldry & Winkel, 2002; Delfabbro et al., 2006b; Fartacek, 2009; Fleming & Jacobsen, 2009; Hunter, et al., 2004). Nearly all of the studies with frequency measures eventually dichotomize responses into yes/no categories (Delfabbro, et al., 2006b; Fleming & Jacobsen, 2009; Garofalo, Wolf, Wissow, Woods, & Goodman, 1999; Prinstein, Boergers, Spirito, Little, & Grapentine, 2000; Schäfer et al., 2004), potentially losing valuable information and arguably defeating the purpose of measuring frequency. However, the few studies that do retain the original measures in the analysis have revealed what appears to be a dose-response relationship between frequency and the odds of negative outcomes (Cui, 2010; Klomek, et al., 2008). Other times bullying is measured through a simple "yes" or "no" response to a question such as, "Have you ever experienced being bullied by your peers?", where the investigator has determined that defining bullying is best left to the victim (Bonanno & Hymel, 2010; Herba, et al., 2008; Ivarsson, et al., 2005). Unfortunately it is unclear in these cases if the

student has reported behaviors that match the investigator's intended definition of bullying and therefore does not further inform our understanding of what is bullying.

Some make use of readily available data by conducting secondary data analysis with findings from the Youth Risk Behavior Survey or items similar to those found in national studies (Bae, Ye, Chen, Rivers, & Singh, 2005; Haynie, South, & Bose, 2006). The items typically drawn upon for these studies include the number of times that the victim was threatened or injured with a weapon at school or the number of times they had their property stolen or damaged (Bontempo & D'Augelli, 2002; Cleary, 2000; Garofalo, et al., 1999; Goodenow, et al., 2006; Russell & Joyner, 2001; Woods & Lin, 1997). In the right context these particular behaviors may represent instances of bullying, but with the information provided it is impossible to discern whether respondents are referring to bully-victimization or general peer victimization.

*Outcomes*

The purpose of this study was to determine if the instruments or items used in the currently published literature regarding the association between adolescent bullying and suicidality reflect a set of five constructs proposed by Greene (2000). To reiterate, these are:

> *1. The bully intends to inflict harm or fear upon the victim.*
> *2. Aggression toward the victim occurs repeatedly.*
> *3. The victim does not provoke bullying behavior by using verbal or physical aggression.*
> *4. Bullying occurs in familial social groups.*
> *5. The bully is more powerful (either real or perceived power) than the victim* (pp 383).

These constructs were compared with components included in the definitions provided to participants as well as those present in the scales or items. In order to explore potential

differences in construct frequency associated with how the study was framed, the articles

were divided into two groups:  those where the author(s) framed the research as bullying,

and those where the author(s) did not.  The tables provided in the appendix provide a full

comparison of the targeted variables but the following pages will provide a narrative

summary.

**Frequency of Constructs in All Studies 1**

|  | Intention | Repetition | Familial | Power | Unprovoked | Frequency Retained |
|---|---|---|---|---|---|---|
| Framed as bullying | 13 | 22 | 10 | 5 | 0 | 6 |
| Not Framed as bullying | 5 | 13 | 11 | 1 | 0 | 1 |
| TOTAL | 18 | 35 | 21 | 5 | 0 | 7 |

*Constructs:  Not Framed as Bullying*

The studies that were not framed as bullying provided no definitions, so there

were clearly no constructs present for definitions.  In the scales and items, however, four

of the constructs were represented.  The intention of the perpetrator to inflict harm or fear

appeared in 5 studies; repetition of aggression appeared in 13; familial social settings

appeared in 11 studies, and a demonstration of greater power for the perpetrator appeared

only once.  The construct of provocation was not present in any of the scales or items.

Furthermore, the inclusion repetition or frequency in the analysis and discussion

was present only in one study (A. B. Klomek, Marrocco, F., Kleinman, M., Schonfeld, I.

S., & Gould, M. S., 2008).  This isn't surprising, as while this study was framed as peer

victimization, its use of items specifically designed to measure bullying (e.g., 'How often

do you bully others?') and its inclusion of bullying literature in the review and discussion

would lead one to believe that the author's intention was to measure bullying. This was

likely an instance when the terms 'bullying' and 'peer victimization' were used

interchangeably. In fact, Klomek and colleagues conducted another study entitled

"Childhood bullying behaviors as a risk for later depression and suicidal ideation among

Finnish males" (A. B. Klomek et al., 2008) using the same data set as was used in the

study framed as peer victimization.

*Constructs: Framed as Bullying*

Five of the twenty-five studies that were framed as bullying provided participants

with a definition of bullying. From these definitions the following constructs were

identified: bully's intention (twice); repetition (four times); a familial environment (four

times); and a difference in power (five times). A lack of provocation on the part of the

victim was never mentioned or described. From the scales and items in this group 'bully

intention' was identified 11 times; 'repetition' was present 18 times; a 'familial

environment' appeared 6 times; and a 'difference in power' was present 3 times. Again,

lack of victim provocation was not represented in any of these scales or items. Although

it appears to be quite important given the number of times it emerged, frequency or

repetition measures were only maintained and discussed in six of the articles.

One finding that was particularly surprising was the number of studies that were

coded as measuring the perpetrator's intention. Granted, for victim measures in all but

two cases where the item included the phrase "on purpose" intention was measured as

threatening words or behaviors. Still it could be argued that these do in fact measure the

victims' perception of intent. Perpetrator intention was more easily coded when the

instrument was asking the perpetrator rather than the victim. Victim-directed questions require the victim to know the perpetrators intention or else must ask the victim what they *thought* the intention of the perpetrator was. As the victim's perception of the event likely influences how he or she copes with victimization, what he or she thinks the intention was may actually be a more valid measure.

It is clear from these findings that there is a great deal of overlap in instruments and items used to study bullying and those more geared toward generalized aggression or violence. This is true both for the items themselves as well as for how they are reflected in the constructs proposed by Greene (Greene, 2000). There were, however, certain items used for measuring aggression/victimization in studies framed as bullying that were never used for measuring studies not framed as bullying. These included: 'personal attack'; 'being excluded'; 'being pressured to do something'; 'bullying in groups'; 'getting others into trouble'; and all measures for online bullying.

Conversely there were specific items used to measure aggression/violence in studies that were not framed as bullying that were never used in studies framed as bullying. These were: 'having been cut, shot, or stabbed'; 'assaulted with a weapon'; 'carry a weapon'; 'having been jumped'; 'being assaulted by a romantic partner'; 'being involved in a fight'; 'being involved in a fight that required medical attention'; 'being chased'; 'being treated unfairly'; 'being rejected'; 'nonverbal intimidation/aggression'; 'intimidating stare'; 'being insulted'; 'skipped school because it felt unsafe'; 'sexual coercion' (but not sexual assault); 'sexually harassed'; or 'witnessed violence'. While this may be partially due to the fact that fourteen articles were excluded because the instrument was unavailable (approximately 25% of the total target articles) it is possible

that these behaviors are perceived as different from each other.  Certain items in the 'not framed as bullying' category do appear to reflect what could be bullying behavior when taken on their own, however.  More investigation into this area is certainly warranted.

Finally, though LGBTQ students are at increased risk for victimization and negative sequelae associated with victimization (cite), there is a distinct lack of work being conducted in this area.  Unfortunately the question of instrument construct validity may be more confounded for this group than for others.  LGBTQ students are more likely to be victimized in general and the forms of victimization that they are subject to often include violence and aggression measures that may be represented in YRBS items or other instruments not intended to measure bullying.  However, as the probable cause for this increase in violence victimization is due to their sexual orientation status (a static condition) their perception of these events as bully is to be expected.

**Discussion**

Given the amount of overlap in measures of frequency between studies framed as bullying and those that were not, frequency may not be the single factor that differentiates bullying from general peer aggression.  If, however, it is construct that is fundamental in delineating the two then it should be included in the analysis and discussion whenever possible.  Regardless, maintaining frequency measures in the outcomes can aid in the general understanding of when 'how many' becomes 'too many'.  This applies to studies of general victimization as well, as it seems intuitive that the recurrence of any negative event would have an equally negative impact on the recipient, but unfortunately that is not in and of itself a defining measure of bullying.  We must

continue to explore what separates bullying from other behaviors if we are to determine how to measure this experience.

The construct of a power differential does appear to be perceived by researchers as a differentiating factor, as it does not appear in studies that are not framed as bullying (with the exception of Klomek et al., 2008).

Similar to the construct of frequency, the construct of a familial environment was not an exclusively 'bullying' feature. In fact, it appeared more frequently in studies that were not framed as bullying. This could be an artifact of the fact that studies framed as bullying often ask general questions of bullying experience (which may be assumed to place it in the context of a familial social group), and studies not framed as bullying often pose questions in the context of the school environment (coded as a familial social environment). The intention of the bully, though coded if the item included the term 'threaten' and therefore occurred fairly frequently, was not otherwise posed to the victim in terms of *their* perception. Finally, a complete absence of the construct regarding a lack of victim provocation could indicate that this does not reflect the bullying dynamic or, more likely, it could simply be that it has yet to be included in instruments currently in use.

Bullying should be differentiated from other more general forms of violence and aggression by thinking of it as systematic and ongoing physical, psychological, and emotional abuse. It is more than isolated or even repeated acts of violence (although these can be detrimental to the physical and psychological well-being of an individual as well). It is a dynamic that involves subjugating another individual and devaluing their worth as a person. It diminishes one's sense of control over their own life in a way that

random instances of violence cannot.  Although there is a distinct overlap in instrument

items between studies that have been framed as bullying and those that have not, this

does not suggest that the two phenomena are one and the same.  It only suggests that as

yet a perfect method for measuring bullying in relation to suicide has not been

implemented.

*Conclusion*

There are at least two purposes to having the ability to measure bullying

accurately:  1) to assess prevalence and identify high-risk groups and 2) to understand

better what increases risk for the outcome of interest.  While some studies include the

moderator of social support (Davidson & Demaray, 2007), and peer status (Espelage &

Holt, 2001), a synthesis of these and multiple other potentially contributing factors has

yet to be undertaken.

Most students who are bullied do not go on to commit suicide.  Though this is a

relatively infrequent (but disastrous) outcome it is necessary to understand the

commonalities among those particular victims.  Even as Greene's constructs (Greene,

2000) represents current general understanding and definitions (Olweus, 1994; K. Rigby

& P. Slee, 1999), they may or may not capture all features of bullying and do not

necessarily address contextual factors that may mediate, moderate, or confound the

association.

It is proposed here that the victim's perception of events as it is experienced

through the lens of various contextual factors is a critical component to understanding

what puts one at risk.

These contextual factors may include:

1) Multiple environments of abuse
2) Frequency and duration of abuse
3) Abuse that targets features over which the victim has no control (race, sexual orientation, poverty, or disability)
4) Inescapability (school as an environment of compulsory attendance; also may extend to the rest of their world if victimized in multiple environments)
5) Victim's belief that there is nothing that can be done to alter the situation (control)
6) A victim's lack of social support
7) Whether a victim is one bullied by many, or one of many bullied by one
8) The level of authority (social or otherwise) assigned to the perpetrator

If a child or adolescent is exposed to repeated events that entail exclusion and abuse in multiple environments, and these events take place over an extended period of time, it can be expected that the outcomes will be more severe than those associated with an individual who experiences an event of general violence. Targeting features over which the victim has no control (such as race, sexual orientation, or disability) would also lend to a sense of helplessness. An interactive combination of these factors could lead one, especially a minor, to a place where they feel that there is no recourse; no escape. It is in this circumstance that one may feel that suicide is the only way out.

One theory in particular may be quite effective if applied to the study of the association between bullying and suicide, namely the Quality and Ecology of Adversity as Common Mechanisms of Risk and Resilience (Sandler, 2001). This model suggests that the cumulative effects of adverse events are pertinent in understand poor mental health outcomes. Additionally, if an individual lacks the primary control to directly change their environment, they will employ secondary methods of control. These secondary control methods include: making sense of the situation, allying one's self with authority figures who can reinstate control, attributing the event to fate (or as the author's describe it, "luck"), and predicting the outcomes of these events. If event these

secondary control mechanics are not satisfied, then an individual would be predisposed to escapism (as literal escape is not possible). Escape may be through the form of substance abuse, or in the case of the current proposal, suicidality.

Even if theory is not incorporated into the research, it is critical to ensure that there is construct validity in the instrument used to measure bullying. Without accurate measures, prevalence rates and associations lack precision. If we are to develop interventions to improve the quality of life for adolescents who are subjected to systematic victimization in the form of bullying, we must first have the ability to identify high risk groups and understand the contextual factors that work in tandem with bully-victimization to increase their risk of suicidality. The findings represented in the current review and content-analysis demonstrate that there is still much to be done to increase our understanding and measurement of the bullying dynamic.

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APPENDIX A: STUDIES FRAMED AS BULLYING

| Citation | Framed | Greene's Constructs addressed in definition | Items | Greene's Constructs Addressed In items |
|---|---|---|---|---|
| Bonnano & Hymel (2010) | Bullying | None | Overall, how often have you been bullied this year? | Repetition |
| Cui et al. (2010) | Bullying | None | During the past 30 days, on how many days were you bullied? | Repetition |
| Herba et al. (2008) | Bullying | None | 1) By whom are you bullied/ 2) Whom do you bully? | None |
| Ivarson et al. (2005) | Bullying | | 1) Have you ever been bullied? 2) Have you ever bullied others? | |
| Klomek (2009) | Bullying | None | Inquiring about bullying at age 8: 1) Self report (bullies): I do not usually bully children; I sometimes bully other children; I bully children every day 2) Self report (victims): I am not usually bullied, I am sometimes bullied, I am bullied ever day 3) Nomination: The child bullies other children: does not apply, applies somewhat, certainly applies | Repetition |
| Laukkanen et al. (2005) | Bullying | None | 1) Have you bullied other pupils at school? 2) Have you been bullied at school? | None |
| Liang et al (2007) | Bullying | None | 1) During the past twelve months, have you bullied anyone at school? 2) During the past twelve months, have you ever been bullied at school? | None |
| Rossow & Lauritzen (2001) | Bullying | None | Have you been subject to bullying before the age of 18? | None |
| Kaltiala-Heino et al. (1999) | Bullying | Power differential Familial environment Repetitive | 1) How frequently have you been bullied during the current school term? 2) How frequently have you bullied others during the current school term? | Repetition |
| Klomek et al. (2007) | Bullying | Power differential Familial environment Repetitive | 1) How often have you been bullied in school in the past four weeks? 2) How often have you been bullied away from school in the past four weeks? 3) How often have you bullied others in school in the past four weeks? 4) How often have you bullied others away from school in the past four weeks? | Repetition |
| Schafer et al. (2004) | Bullying | Intention Power differential Repetitive | See Appendix 1A. | Repetition |
| Adelmann (2005) | Bullying | None | 1) Student has pushed, shoved, grabbed you 2) Student has kicked, bitten, hit you 3) Student has insulted you 4) Student has threatened you | Familial |

| | | | | |
|---|---|---|---|---|
| Birkett et al. (2009) | Bullying | None | In the past 12 months, have you ever been teased, threatened, or harassed about being gay, lesbian, or bisexual? (yes/no) | Intention |
| Delfabbro et al. (2006) | Bullying | None | Participants were asked to report their experiences of being bullied by students and teachers at school and outside of school:<br>1) I get picked on by other kids<br>2) I get picked on by some teachers<br>3) I get hit and pushed around by other kids<br>4) Other kids make fun of me<br>5) I get called names by other kids | Repetition Familial |
| Fleming & Jacobsen (2009) Health Pro Int | Bullying | None | 1) During the past thirty days, how many days were you bullied?<br>2) During the past thirty days, how were you bullied most often?<br>I was not bullied during the past 30 days; I was hit, kicked, pushed, shoved around, or locked indoors; I was made fun of because of my race or color; I was made fun of because of my religion; I was made fun of with sexual jokes, comments, or gestures; I was left out of activities on purpose or completely ignored; I was made fun of because of how my body or face looks; I was bullied in some other way | Intention Repetition |
| Fleming & Jacobsen (2009) J School Health | Bullying | None | 3) During the past thirty days, how many days were you bullied?<br>4) During the past thirty days, how were you bullied most often?<br>I was not bullied during the past 30 days; I was hit, kicked, pushed, shoved around, or locked indoors; I was made fun of because of my race or color; I was made fun of because of my religion; I was made fun of with sexual jokes, comments, or gestures; I was left out of activities on purpose or completely ignored; I was made fun of because of how my body or face looks; I was bullied in some other way | Intention Repetition |
| Hay & Meldrum (2010) | Bullying | None | How frequently during the prior 12 months were you:<br>1) The target of lies or rumors<br>2) The target of attempts to get others to dislike them<br>3) Called names, made fun of, or teased in a hurtful way<br>4) Hit, kicked, or pushed by another student<br>5) Physically threatened by other students<br>6) Picked on by others.<br>7) The target of mean text messages<br>8) Sent threatening or hurtful statements or pictures in an email or text message<br>9) Was made fun of on the internet | Intention Repetition |

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|---|---|---|---|---|
| Hinduja & Patchin (2010) | Bullying | None | See Appendix 1B | Intention<br>Familial<br>Power differential |
| Kim et al. (2005) | Bullying | None | See Appendix 1C | Intention<br>Repetition<br>Familial<br>Power differential |
| Kim et al. (2009) | Bullying | None | See Appendix 1D | Intention<br>Repetition<br>Familial<br>Power differential |
| Luukonena et al. (2007) | Bullying | None | 1) Have you been bullied?<br>2) Has there ever been a time when any kids really got on your nerves? Did you sometimes do things to get back at them? Like what? Call them names? Threaten to beat them up? Push them? Trip them? Knock their books out of their hands? Come up from behind and slap them in the face? How often did you do these things? | Intention<br>Repetition |
| Rigby & Slee (1999)a | Bullying | None | See Appendix 1E | Intention<br>Repetition |
| Rigby & Slee (1999)b | Bullying | None | See Appendix 1F | Intention<br>Repetition<br>Familial |
| Roeger et al. (2010) | Bullying | None | When you were at school did you experience traumatic bullying by peers that was particularly severe, for example, being frequently or routinely targeted? | Repetition<br>Familial |
| Viljoen et al. (2005) | Bullying | None | 1) While in custody, have you been bullied by other people saying mean and unpleasant things to you?<br>2) By being threatened, pressured, or intimidated?<br>3) By having unwanted sexual comments or jokes directed at you?<br>4) While in custody have you been bullied by being punched, hit, or beaten up?<br>5) Being touched or grabbed in a sexual way?<br>6) By having things take by threat or force?)<br>7) Have you been bullied in any other way? Please describe.<br>Have you bullied others? | Intention<br>Power differential<br>Familial |

| | | | | |
|---|---|---|---|---|
| Cheng et al. (2010) | Bullying | Intention<br>Power differential<br>Familial environment<br>Repetitive | 1) During the past 30 days, on how many days were you bullied?<br>2) During the past 30 days, how were you bullied most often?<br>Response options for type of bullying: I was not bullied during the past 30 days; I was hit, kicked, pushed, shoved around, or locked indoors; I was made fun of because of my race or color; I was made fun of because of my religion; I was made fun of with sexual jokes, comments, or gestures; I was left out of activities on purpose or completely ignored; I was made fun of because of how my body or face looks; I was bullied in some other way | Intention<br>Repetition |
| Klomek et al. (2008)<br>Suic Life Threat Beh | Bullying | Power differential<br>Familial environment | 1) Made fun of you because of your religion or race<br>2) Made fun of you because of your looks or speech<br>3) Hit, slapped, or punched you<br>4) Spread rumors or mean lies about you<br>5) Made sexual jokes, comments or gestures to you<br>6) Used email or internet to be mean to you | Repetition |

APPENDIX B: STUDIES NOT FRAMED AS BULLYING

| Citation | Framed | Greene's Constructs addressed in definition | Items | Greene's Constructs addressed in items |
|---|---|---|---|---|
| Klomek et al. (2008) | Peer-victimization | None | 1) Self-report (bullies): I do not usually bully children; I sometimes bully children; I bully children nearly every day<br>2) Self-report (victims): Other children do not usually bully me, Other children sometimes bully me, Other children bully me nearly every day<br>3) Parent/teacher nomination: The child does/does not bully or get bullied by other children | Repetition |
| Bae et al. (2005) | Social or environmental Risk factors | None | 1) During the past 12 months, how many times has someone threatened you with a weapon such as a gun, knife, or club on school property?<br>2) During the past thirty days, how many times did you carry a weapon, such as a gun, knife, or club?<br>3) During the past 12 months, did your boyfriend or girlfriend ever hit, slap, or physically hurt you on purpose?<br>4) During the past 12 months, how many times were you in a physical fight? | Intention<br>Familial<br>Repetition |
| Baldry & Winkel (2003) | At-school victimization | None | 1) Called nasty names<br>2) Physically hurt<br>3) Belongings taken away<br>4) Threatened<br>5) Being rejected<br>6) Rumors spread<br>7) No one would talk | Intention<br>Repetition<br>Familial |

| Bontempo & D'Augelli (2002) | At-school victimization | None | 1) During the past 12 months, how many times has someone threatened or injured you with a weapon such as a gun, knife, or club on school property? 2) During the past 12 months, how many times has someone deliberately damaged your property such as your car, clothing, or books on school property? | Intention Repetition Familial |
|---|---|---|---|---|
| Cleary (2000) | Peer-victimization | None | 1) During the past 30 days, how many days did you not go to school b/c you felt you would be unsafe at school or on your way to or from school? 2) During the past 12 months, how many times has someone threatened or injured you with a weapon such as a gun, knife, or club on school property? 3) During the past 12 months how many times has someone stolen or deliberately damaged your property such as your car, clothing, or books on school property? | Intention Repetition Familial |
| Eisenberg et al. (2003) | Teasing | None | 1) Have you ever been teased or made fun of by other kids because of your weight? 2) Have you ever been teased or made fun of by family members because of your weight? | Familial |
| Evans et al. (2001) | Peer violence | None | Have you been threatened, attacked or harassed by other teens? | Intention Repetition |

| | | | | |
|---|---|---|---|---|
| Garofalo et al (1999) | Peer violence | None | 1) During the past 12 months, how many times were you in a physical fight?<br>2) During the past 12 months, how many times do you fail to attend school because you felt unsafe?<br>3) During the past 12 months, how many times did you carry a weapon<br>4) During the past 12 months, how many times were you injured or threatened with a weapon<br>5) Have you ever had sexual contact against your will? | Intention<br>Repetition |
| Goodenow et al. (2006) | At-school victimization | None | 1) How often in the past year have you been threatened or injured with a weapon on school property?<br>2) How often in the past month have you not gone to school because you felt you would be unsafe | Intention<br>Repetition<br>Familial |
| Haynie et al. (2006) | Not framed | None | In the past 12 months, how often have you:<br>1) Had a knife or gun pulled on you?<br>2) Been shot?<br>3) Been cut or stabbed?<br>4) Been jumped? | Repetition |
| Heilbron & Prinstein (2010) | Peer-victimization | None | 1) Who gets threatened or hit by others or has mean things said about them?<br>2) Who gets gossiped about or has rumors told about them behind their backs? | Intention<br>Familial |

| Kaminski & Fang (2009) | Peer-victimization | None | How many times: <br>1) Were you jumped? <br>2) Somebody pulled a knife or gun on you ? <br>3) Someone cut or stabbed you? <br>4) Someone shot you? <br><br>How many times were you threatened or injured on school property in the past 12 months? <br><br>How often did a peer (stranger, friend, or other) <br>1) scratched you <br>2) hit or slapped you <br>3) threw something at you that could hurt <br>4) slammed or held you against the wall <br>5) kicked you <br>6) pushed, grabbed, or shoved you <br>7) punched or hit you with something that could hurt <br>8) threatened or injured you with a knife or gun <br>9) forced you to have sex or do something sexual | Intention <br>Repetition <br>Familial <br>Power differential |
|---|---|---|---|---|
| Peter et al. (2008) | Childhood harassment | None | Have you been verbally threatened (taunted) or physically abused (bullied) at school or elsewhere in the past 12 months? | Intention <br>Familial |
| Ploderl & Fartacek (2009) | Childhood harassment | None | 1) Verbal insult <br>2) Being threatened with physical violence <br>3) Having objects thrown <br>4) Being chased <br>5) Spat upon <br>6) Kicked/beaten <br>7) Threatened with a weapon <br>8) Sexually harassed with or without assault <br>9) School absence because of fear <br>10) Being ignored <br>11) Nonverbal signaling of exclusion/rejection <br>12) Being mocked <br>13) Being the subject of lies or rumors <br>14) Experiencing unfair treatment | Intention <br>Repetition <br>Familial |

| | | | | |
|---|---|---|---|---|
| Prinstein et al (2000) | Peer rejection | None | Three categories, 9 items:<br>1) Confrontive verbal aggression (threats, taunts, intimidation)<br>2) Confrontive physical aggression (hitting, grabbing or touching, chasing)<br>3) Ostracism (excluding someone from an activity, spreading rumors, playing cruel tricks) | Intention<br>Repetition |
| Russel & Joyner (2001) | Victimization | None | 1) Someone pulled a knife or gun on you<br>2) You were jumped<br>3) Someone shot you<br>4) Someone cut or stabbed you | None |
| Woods et al. (1997) | Not framed | None | 1) How many times been in a fight<br>2) How many times a fight resulted in medical attention<br>3) How many times carried a gun<br>4) How many times carried a weapon | Repetition |

APPENDIX C: Schafer et al. Instrument

Schafer et al, (2004)
Definition provided: "The following questions are about bullying. BULLYING IS INTENTIONAL HURTFUL BEHAVIOR. IT CAN BE PHYSICAL OR PSYCHOLOGICAL. IT IS OFTEN REPEATED AND CHARACTERIZED BY AN INEQUALITY OF POWER SO THAT IT IS DIFFICULT FOR THE VICTIM TO DEFEND HIM/HERSELF"

Please think back to your school days. You may have seen some bullying at school, and you may have been involved in some way. Tick the choice which best describes your own experiences at school.
1) I was not involved at all, and I never saw it happen
2) I was not involved at hall, but I saw it happen sometimes
3) I would sometimes join in bullying others
4) I would sometimes get bullied by others
5) At various times, I was both a bully and a victim

Can you briefly describe an incident in which you observed someone else being bullied or an incident in which you felt you were bullied?
Primary School
"The next questions are about physical forms of bullying – hitting and kicking, and having things stolen from you"
1) Were you physically bullied at primary school?
Response options: Hit/punched (yes/no); Stolen from (yes/no).
2) Did this happen: never, rarely, sometimes, frequently, or constantly?
3) How serious did you consider these bullying-attacks to be? Options: I wasn't bullied, not at all, only a bit, quite serious, extremely serious

The next questions are about verbal forms of bullying – being called nasty names, and being threatened
1) Were you verbally bullied at primary school?
Response options: called names (yes/no); threatened (yes/no)
2) Did this happen: never, rarely, sometimes, frequently, or constantly?
3) How serious did you consider these bullying-attacks to be? Options: I wasn't bullied, not at all, only a bit, quite serious, extremely serious

The next questions are about indirect forms of bullying – having lies or nasty rumors told about you behind your back, or being deliberately excluded from social groups.
1) Were you indirectly bullied at school?
Response options: Had lies told about you (yes/no); excluded (yes/no)
2) Did this happen: never, rarely, sometimes, frequently, or constantly?
3) How serious did you consider these bullying-attacks to be? Options: I wasn't bullied, not at all, only a bit, quite serious, extremely serious

The next questions are about bullying in general.
1) How long did the bullying-attacks usually last?
Response options: I wasn't bullied, just a few days, weeks, months, or a year or more
2) How many pupils bullied you in secondary school?
Response options: I wasn't bullied, mainly by one boy, by several boys, mainly by one girl, by several girls, or by both boys and girls
3) If you were bullied, why do you think this happened? (open-ended)

Which were the main ways you used to cope with the bullying (please tick one or more options)
- I wasn't bullied at school
- I tried to make fun of it
- I tried to avoid the situation
- I tried to ignore it
- I fought back

- I got help from friends
- I got help from a teacher
- I got help from family / parents
- I tried to handle it myself
- I did not really cope
- Other

Did you ever take part in bullying anyone while you were at school (please tick one or more options)
- hit / punched
- stolen from
- called names
- threatened
- told lies about
- excluded

Did this happen:  never, rarely, sometimes, frequently, or constantly

How often did you try to avoid school by pretending to be sick or by playing truant because you were being bullied?
- I wasn't bullied at school
- Never
- Only once or twice
- Sometimes
- Maybe once a week
- Several times a week

When you were being bullied, did you ever, even for a second, think about hurting yourself or taking your own life?
- I wasn't bullied at school
- No, never
- Yes, once
- Yes, more than once

Have you been bullied since leaving school?
- I haven't been bullied since leaving school
- I have been bullied by my family
- I have been bullied by others (please specify)

Recollections of being bullied at school
1) Do you have vivid memories of the bullying event(s) which keep coming back causing you distress?
2) Do you have dreams or nightmares about the bullying event(s)
3) Do you ever feel like you are re-living the bullying event(s) again?
4) Do you ever have sudden vivid recollections or 'flashbacks' to the bullying events?
5) Do you ever feel distressed in situations which remind you of the bullying event(s)?
Response options:  No never, not often, sometimes, often, or always

If you were bullied, do you feel it had any long-term effects?  If so, please describe below.

APPENDIX C: Hinduja & Patchin Instrument

Hinduja & Patchin, 2010
Within the past thirty days, have you:
Traditional bullying offending
1) I called another student mean names, made fun of or teased him or her in a hurtful way
2) I have taken part in bullying another student or students at school
3) I kept another student out of things on purpose, excluded him/her from my group of friends or completely ignored him/her
4) I hit, kicked, pushed, or shoved another student around or locked another student indoors
5) I spread false rumors about another student and tried to make others dislike him or her
6) I bullied another student with mean names, comments, or gestures with a sexual meaning
7) I bullied another student with mean names or comments about his or her race or color
8) I took money or other things from another student or damaged another student's belongings
9) I threatened or forced another student to do things he or she didn't want to do
10) I bullied another student in another way

Traditional bullying victimization
1) Other students told lies or spread false rumors about me and tried to make others dislike me
2) I was called mean names, was made fun of, or teased in a hurtful way
3) Other students left me out of things on purpose, excluding me from their group of friends, or completely ignored me
4) I was bullied at school
5) I was bullied with mean names, comments, or gestures with a sexual meaning
6) I was hit, kicked, pushed, shoved around or locked indoors
7) I was bullied with mean names or comments about my race or color
8) I had money or other things taken away from me or damaged
9) I was bullied in other ways at school
10) I was threatened or forced to do things I didn't want to do

Response options traditional: Never, once or twice, a few times, many times, every day. Coded as yes if one or more of the above, two or more times

Cyberbullying offending
1) Posted something online about another person to make others laugh
2) Sent someone a computer text message to make them angry or to make fun of them
3) Took a picture of someone and posted it online without their permission
4) Posted something on MySpace or similar site to make them angry or to make fun of them
5) Sent someone an email to make them angry or to make fun of them

Cyberbullying victimization
1) Received an upsetting email from someone you know
2) Received an instant message that made you upset
3) Had something posted on you MySpace that made you upset
4) Been made fun of in a chat room
5) Received an upsetting email from someone you didn't know (not spam)
6) Had something posted about you online that you didn't want others to see
7) Been picked on or bullied online
8) Been afraid to go on the computer

Response options traditional: Never, once or twice, a few times, many times, every day. Coded as yes if one or more of the above, two or more times

APPENDIX D:  Kim et al Instrument

Kim et al, (2005 & 2009)

Exclusion victim
1) Persons who are left out during recess or lunchtime
2) Persons who are ignored by others
3) Persons to who others do not talk or answer

Verbal abuse victim
1) Persons who are called names all the time
2) Persons of whom others speak ill
3) Persons who are threatened by phrases such as "Don't come to school" or "I'll hurt you"

Physical abuse victim
1) Persons who get beat up often
2) Persons whose money is often taken by others

Coercion victim
1) Persons who are coerced to do work for other students, such as homework or carrying bags for them
2) Persons whose school supplies and snacks are taken by others
3) Persons whose belongings are often damaged by others

Perpetrator
1) Persons who hit and push others
2) Persons who make fun of others
3) Persons who try to pick fights with others
4) Persons who say that they can beat up everybody
5) Persons who get others into trouble
6) Persons who shove and provoke others

APPENDIX E:  Rigby & Slee Instruments
Rigby & Slee (1999a & 1999b)


Study 1: Self report
 Bully (6 items)
    1)  I give soft kids a hard time
    2)  I am part of a group that goes around teasing others
    3)  I like to make others scared of me
    4)  I like to show others that I'm the boss
    5)  I enjoy upsetting wimps
    6)  I like to get into a fight with someone I can easily beat
Victim (5 items)
    1)  I get called names by others
    2)  I get picked on by others
    3)  Others leave me out of things on purpose
    4)  Others make fun of me
    5)  I get hit and pushed around by others

Response options:  Never, once in a while, pretty often, very often

Study 2:  Peer nomination
Bully
    1)  Enjoys upsetting others
    2)  Always teasing others
    3)  Shows others he's (or she's) the boss
    4)  Likes to scare others.
Victim
    1)  Gets picked on a lot
    2)  Kids make fun of him or her
    3)  Gets hit and pushed around
    4)  Gets left out by others.

(also included 8 filler items not listed)

Second study also used self-report measures listed above

Response options:  Provided with a list of names of students in each group – participant fills in the blank.
Scores were added together to provide scales