Risk and Protective Factors for Patterns of Bullying Involvement in Middle School
Students

A dissertation presented to
the faculty of
the College of Arts and Sciences of Ohio University

In partial fulfillment
of the requirements for the degree
Doctor of Philosophy

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August 2020

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This dissertation titled
Risk and Protective Factors for Patterns of Bullying Involvement in Middle School
Students

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Abstract

MONOPOLI, W. JOHN, Ph.D., August 2020, Psychology

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Students

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Bullying and victimization are major problems in adolescence (see Troop-Gordon, 2017, for a review). Accordingly, several universal-based intervention programs have been developed. However, evidence for the efficacy of these programs is mixed. One reason for this may be that there is considerable heterogeneity among youth involved in bullying (i.e., involved youth may be bullies, bully-victims, or victims). As such, researchers have argued that these youth may be best served by targeted approaches that address their disparate needs (e.g., Farrell & Vulin-Reynolds, 2007). However, in order to understand how to best meet the needs of these youth, an understanding of the factors that may place youth at risk for, and protect them from, involvement in bullying is necessary. The goal of the present study was to examine risk and protective factors for different patterns of bullying involvement. Support for a three-class solution (i.e., uninvolved, bully-victim, and predominant victim) was found. Emotion dysregulation and beliefs in support of aggression were associated with bully-victim status, whereas internalizing problems were associated with predominant victim status. Willingness to seek help (i.e., greater trust in staff and peers to manage bullying effectively) buffered risk for bully-victim status, and moderated the relation between emotion dysregulation and membership in this group. Implications for future research and practice are discussed.

Dedication

I dedicate this work to the students and staff that work tirelessly every day to make their schools a safer place.

Acknowledgments

I am grateful for the invaluable support that I received from my mentor, Steven Evans, and from my committee members. I am also grateful for the support I received from the educators that helped facilitate this study. I am also grateful for the team of dedicated students that assisted with data collection and management. On a personal level, I will forever be thankful to my partner, Ashley Grant, for supporting me in my early morning writing endeavors; to our cat, Maggie, for often sitting with me during those early mornings; and to my parents, Mary and Bill Monopoli, for their support of my education.

Table of Contents

	Page
Abstract	3
Acknowledgments.....	5
List of Tables	8
List of Figures	9
Page.....	9
Risk and Protective Factors for Patterns of Bullying Involvement in Middle School Students.....	10
Heterogeneity in Bullying Involvement.....	12
Bullies	13
Bully-victims.....	13
Predominant Victims	14
Risk Factors for Bullying Involvement.....	14
Risk Factors	16
Protective Factors.....	19
Summary	23
Current Study	23
Method	25
Participants.....	25
Procedures	25
Measures	26
Analytic Plan.....	31
Results.....	34
Discussion	52
Risk Factors Associated With Membership In 'Bully-Involved' Groups.....	58
Protective Factors That Buffered Risk for 'Bully-Involved Status'	62
Implications.....	65
Limitations and Future Directions	68
References.....	70
Appendix A.....	94
Appendix B	96
Appendix C	98

Appendix D.....	99
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List of Tables

	Page
Table 1 Descriptive Statistics.....	35
Table 2 Correlations Among Risk/Protective Factors and Bullying/Victimization.....	36
Table 3 Fit Indices for Latent Profile Analysis.....	40
Table 4 Class Descriptive Statistics on Indicators Included in LPA.....	41
Table 5 Number and Percentage of Students in Each Class by Grade and Gender.....	42
Table 6 Risk Factors for Bullying Involvement.....	46
Table 7 Risk and Protective Factors for Bullying Involvement.....	49
Table 8 Protective Effect of Willingness to Seek Help at Low Levels of Emotion Regulation.....	50
Table 9 Protective Effect of Willingness to Seek Help at High Levels of Emotion Regulation.....	51

List of Figures

	Page
Figure 1. Percentage of Youth Involved in Bullying, By Grade.....	43

Risk and Protective Factors for Patterns of Bullying Involvement in Middle School Students

Bullying and victimization are critically important to study in adolescence as they are associated with unique maladaptive outcomes in this stage relative to childhood (e.g., suicidal ideation and behavior; Van Geel, Vedder, & Tanilon, 2014; deviant peer affiliation; Rudolph et al., 2014). Bullying is defined as repetitive, aggressive behavior that involves a power imbalance (Centers for Disease Control and Prevention, 2017). There are three main patterns of direct involvement in this dynamic: bullies, who engage in the repetitive, aggressive behavior while experiencing little, if any, victimization; bully-victims, who may engage in some bullying behavior but also experience victimization; and predominant victims, who experience victimization but do not engage in bullying behavior. Throughout this manuscript, 'involvement in bullying' or 'bullying involvement' will be used to refer to membership in one of these groups.¹

Although several universal (i.e., class- or schoolwide) anti-bullying programs have been developed, they have typically shown small effects in reductions of rates of bullying and victimization (e.g., Cohen's *d*'s at 0.2 or below; see Gaffney, Ttofi, & Farrington, 2019; Lee, Kim, & Kim, 2015; Smith, Schneider, Smith, & Ananiadou, 2004;

¹ Although bullying is the focus of this manuscript, many researchers have documented the existence of similar groups using measures of aggression, and thus refer to them as aggressors, aggressive-victims, and predominant victims. Thus, these terms will be used when describing studies that used measures of aggression, and 'aggression-involvement' will be used to refer to membership in one of those groups. Aggression is harassing behavior that is directed at someone else, but is not necessarily repeated and may not involve a power differential. All bullying behavior is aggression, but not all aggression is bullying behavior (Ostrov & Kamper, 2015).

Ttofi & Farrington, 2011, for reviews). One reason for this may be the aforementioned heterogeneity of involvement in bullying, as the ‘one-size-fits-all’ approach of a universal program may hinder its ability to reach at-risk youth. In order to best tailor approaches for at-risk youth, a comprehensive understanding of risk (i.e., variables that increase the likelihood of occurrence of a negative outcome; Rose, Holmbeck, & Franks, 2004) and protective (i.e., variables that increase the likelihood of a state of resilience or adaptive functioning despite exposure to adversity; Rose et al., 2004) factors is necessary. As such, the goal of this study was to examine risk and protective factors for different patterns of involvement in bullying.

Although the appeal of universal, school-wide programs is obvious (e.g., they demonstrate feasibility; Sullivan, Sutherland, Farrell, & Taylor, 2016), they may not produce the desired impacts on actual rates of bullying and/or victimization, which, as the target constructs, are critical to examine in program evaluations (see Gottfredson et al., 2015; U.S. Department of Health and Human Services, 1999). Nine reviews of program effectiveness have been published since 2004 (Baldry & Farrington, 2007; Evans, Fraser, & Cotter, 2014; Ferguson, Miguel, Kilburn, & Sanchez, 2007; Gaffney et al., 2019; Lee et al., 2015; Merrell, Gueldner, Ross, & Isava, 2008; Smith et al., 2004; Ttofi & Farrington, 2011; Vreeman & Carroll, 2007). In each of these reviews, decreases in bullying behavior and/or victimization were conceptualized as outcomes. The authors of these reviews have concluded that, overall, programs have little impact on rates of bullying and victimization, that research is mixed, or that they produce small effects. Among the most comprehensive reviews, Ttofi and Farrington (2011) and Gaffney et al. (2019) reported mean odds ratios ranging from 1.31 to 1.36 for bullying reduction

(relative to control groups) and 1.24 to 1.29 for victimization reduction. These odds ratios convert to effect sizes of 0.18 and 0.17 (as measured by Cohen's *d*), respectively, and thus qualify as marginal effects (Chen, Cohen, & Chen, 2010).

Although there may be many reasons why bullying intervention programs may not produce bigger effects (e.g., time constraints to effectively implement curricula; poor delivery of curricula; Cunningham, Mapp, et al., 2016; Cunningham, Rimas, et al., 2016), one reason that has received attention is the aforementioned heterogeneity in bullying involvement (Bettencourt et al., 2013; Ettekal & Ladd, 2017). Many programs were developed based on research that compared aggressive and non-aggressive youth (e.g., Crick & Dodge, 1994), and thus may not capture the full extent of heterogeneity in bullying involvement. Because the effectiveness of an intervention is contingent upon the degree to which pertinent risk and protective factors for *specific populations* are addressed (Farrell & Vulin-Reynolds, 2007), it is critical to gain an understanding of these factors as they pertain to bullies, bully-victims, and predominant victims.

Heterogeneity in Bullying Involvement

Findings regarding the makeup of these three subgroups are remarkably consistent, as researchers have documented their existence while conceptualizing youth as 'bully-involved' (e.g., Kochel, Ladd, Bagwell, & Yabko, 2015; Lovegrove, Henry, & Slater, 2012) or 'aggression-involved' (e.g., Bettencourt & Farrell, 2013; Bettencourt, Farrell, Liu, & Sullivan, 2013; Schwartz, 2000). A 4-class solution (including an uninvolved group) was reported in several studies (e.g., Bettencourt & Farrell, 2013; Bettencourt et al., 2013; Kochel et al., 2015; Lovegrove et al., 2012; Toblin et al., 2005), although two reported five class solutions (i.e., finding a second aggressive-victim class

that demonstrated primarily relational aggression; Ettekal & Ladd, 2017; and splitting the aggressive-victim class into highly aggressive aggressive-victims, and highly victimized aggressive-victims; Giang & Graham, 2008). These findings are important to consider because there are substantive differences between these groups, suggesting that they may have disparate needs.

Bullies

The first class of involvement in bullying consists of youth who engage in bullying but do not experience much, if any, victimization. Youth who are classified as bullies may use bullying in a goal-oriented fashion in seeking to achieve social dominance (Olthof, Goossens, Vermande, Aleva, & van der Meulen, 2011; Reijntjes et al., 2013). Many youth who are classified as bullies demonstrate social cognitive capabilities that enable them to select the most effective means of employing their aggression, and enable them to justify their behavior in a self-protective way (e.g., Ziv, Leibovich, & Shechtman, 2013). This may enable them to use aggression in a way that maximizes others' distress to their advantage.

Bully-victims

The second group of youth involved in bullying is frequently referred to as the bully-victim class. As suggested by the name, youth who are classified as bully-victims may demonstrate bullying and aggression but are also victimized by their peers. In contrast to bullies, youth who are bully-victims may demonstrate behavior that is “driven by powerful underlying states of anger and emotional distress, poorly regulated internal impulses, or short-term reinforcers in the environment...[including] angry, retaliatory forms of aggression, hyperactivity, and off-task behaviors” (Schwartz et al., 2001, p.147).

These behaviors – when demonstrated in response to a provocation – may reinforce the aggressor, fueling a transactional cycle between perpetration of bullying behavior and receipt of victimization (see Reijntjes et al., 2011, for a review).

Predominant Victims

The third class of youth involved in bullying is frequently referred to as the predominant victim class. Youth in this class demonstrate considerably less bullying and aggression than youth in the bully-victim and bully classes (e.g., see Bettencourt et al., 2013; Ettekal & Ladd, 2017; Toblin et al., 2005). Unlike bully-victims, whose response to teasing may be driven by impulsivity, a non-aggressive victim may respond to harassment by demonstrating sadness and anxiety (see Juvonen & Graham, 2014, for a review). This is problematic because internalizing problems have been associated with future victimization (Kochel, Ladd, & Rudolph, 2012), suggesting that this internal distress contributes to a cycle in which a child is victimized, which harms their social confidence, and results in further victimization (Reijntjes, Kamphuis, Prinzie, & Telch, 2010).

Risk Factors for Bullying Involvement

There are numerous risk factors for bullying, aggression, and victimization (for reviews, see Hawker & Boulton, 2000; Juvonen & Graham, 2014; Troop-Gordon, 2017). Because it is outside the scope of this study to examine all of them, I selected for study those that have been consistently related to these constructs in theory or empirical research. In some cases, there is more work linking risk factors to aggression rather than to bullying specifically. In those cases, I draw on that work to guide the selection of risk factors for the present study. This is relevant because bullying is a subtype of aggression

(Ostrov & Kamper, 2015), and mechanisms linking some of the risk factors in question (e.g., beliefs in support of aggression, emotion dysregulation) with aggression may be similar to the ones that link them to bullying (Schwartz, Proctor, & Chien, 2001).

Risk factors that may be the driving forces of membership *for a specific class* were selected in the present study. Selection of risk factors *for specific classes* is largely based on theory, as the first of two major limitations pertaining to previous work on risk factors is relevant here. The first limitation is that, in many studies of bully- or aggressor-involved groups (e.g., Bettencourt & Farrell, 2013; Giang & Graham, 2008; Toblin et al., 2005) group differences (i.e., means on assessments of risk factors) were examined, but the relative strength of the associations between risk factors and outcomes was not tested (i.e., risk factors were not entered together in a model predicting the outcome, and thus, controlled for). This is a weakness because it hinders our ability to conclude which risk factors may be *most important* for predicting membership in a specific group. Thus, researchers and practitioners are left unsure of which risk factors should be prioritized when developing interventions. The first limitation is addressed in the current study through use of multivariate models to predict group membership.

The second limitation in this area pertains to measurement. In many studies (e.g., Bettencourt & Farrell, 2013; Bettencourt et al., 2013; Lovegrove et al., 2012; Schwartz, 2000) youth were classified in groups on the basis of brief measures that omitted one or multiple forms of bullying, aggression, or victimization. This is a weakness because, in adolescence, individuals can demonstrate high levels of one form of aggression – or victimization – while showing lower levels of other forms (Bradshaw, Waasdorp, & Lindstrom-Johnson, 2015; Ettekal & Ladd, 2017; Underwood, Beron, & Rosen, 2009).

Consequently, classifying youth on the basis of non-comprehensive measures increases the possibility than an individual can be misclassified. As such, if interventions were tailored to apply to specific groups, this increases the possibility of an individual being omitted or missing material relevant for their group. The second limitation is addressed through use of a comprehensive measure of bullying and victimization that includes multiple forms of each.

Risk Factors

The first hypothesized risk factor in the present study is beliefs in support of aggression. Bullying has most often been understood in the context of social dominance theory (see Juvonen & Graham, 2014, and Pellegrini, 2004, for reviews), and has been associated with an increased desire to appear self-confident and to be respected and admired relative to other youth (Sijtsema, Veenstra, Lindenberg, & Salmivalli, 2009). If some youth use bullying as a means to develop and maintain social status, it follows that they believe to some degree that the use of it is acceptable. Although I am not aware of work in which beliefs supporting aggression have been linked to bullying behavior specifically, those beliefs have been associated with current as well as future aggressive behavior (e.g., see Elsaesser, Gorman-Smith, & Henry, 2013; Huesmann & Guerra, 1997; Lim & Ang, 2009) in late elementary school and middle-school aged students.

There is very limited work on beliefs supporting aggression and bully-involved groups, or aggression-involved groups (Bettencourt & Farrell, 2013; Toblin et al., 2005). Further, limitations of the work that does exist limit the conclusions we can draw. Bettencourt and Farrell (2013) reported that aggressors and aggressive-victims had higher beliefs in support of aggression than predominant victims and uninvolved youth, whereas

Toblin et al. (2005) reported that beliefs in support of aggression differentiated bullies from all other groups (including bully-victims). However, authors of both these studies compared means across groups, and as such, we cannot establish a conclusion regarding how inclusion of other correlates measured would have affected strength of the associations. Additionally, Bettencourt and Farrell (2013) categorized youth almost entirely on the basis of experiencing physical victimization and/or using physical aggression. Thus, there may have been ‘aggressors’ who, if given the chance to report relational victimization, for example, might have been classified as aggressive-victims. This may have limited Bettencourt and Farrell’s (2013) ability to differentiate aggressors and aggressive-victims, and contributed to the mixed findings described above.

The second hypothesized risk factor in the present study is emotion dysregulation (ED), which has often been conceptualized in studies of bullying, aggression, and victimization as irritability, or anger dysregulation (e.g., trying to ‘calmly deal with’ activating events; Zeman, Shipman, & Suveg, 2002). ED has been linked with membership in bully and bully-victim (and aggressor and aggressive-victim) classes, but is theorized to be the driving force of membership in the bully- or aggressive-victim class (see Juvonen & Graham, 2014, for a review; also see Perry, Williard, & Perry, 1990; Schwartz et al., 2001). Specifically, bully- or aggressive-victims may respond to provocations with outward frustration and anger, which has been linked to reactive aggression (Skripkauskaite et al., 2015) and in turn, future victimization (Cooley, Fite, & Pederson, 2018). When conceptualized as irritability, or anger, higher ED appears to consistently differentiate aggressors and aggressive-victims from other youth (Bettencourt et al., 2013; Ettekal & Ladd, 2019; Schwartz, 2000; Toblin et al., 2005), but

it may not differentiate aggressors from aggressive-victims (and, in fact, may be associated with membership in an aggressor group over aggressive-victim; Ettekal & Ladd, 2019; Bettencourt et al., 2013). The limitation with regard to brief measurement of one form of aggression and victimization may be relevant in understanding these mixed findings regarding ED that are inconsistent with prevailing theory (Juvonen & Graham 2014; Perry et al., 1990; Schwartz et al., 2001). If some youth were classified as bullies or aggressors – but would have been categorized as bully- or aggressive-victims if other forms of the outcomes had been considered – that would muddle conclusions we draw regarding differences between these groups.

The third risk factor in the present study is internalizing problems (i.e., symptoms of depression and anxiety). Internalizing problems have demonstrated robust relations with victimization (measured continuously) in cross-sectional as well as longitudinal studies (e.g., see Fekkes, Pijpers, Fredriks, Vogels, & Verloove-Vanhorick, 2006; Mulder, Hutteman, & Van Aken, 2017; Sentse, Prinzie, & Salmivalli, 2017; Sweeting, Young, West, & Der, 2006; also see Hawker & Boulton, 2000, for a review). Youth with elevated internalizing problems often engage in negative-self attributions (e.g., ‘I did something stupid’) in response to ambiguous peer cues (Monti, Rudolph, & Miernicki, 2017; Prinstein, Cheah, & Guyer, 2005), which may lead to social isolation (Ladd, Ettekal, & Kochenderfer-Ladd, 2019) and maladaptive relationship appraisals (Rudolph, 2009). Internalizing problems have also been associated with predominant victim status over uninvolved (Bettencourt et al., 2013; Giang & Graham, 2008; Schwartz, 2000; Toblin et al., 2005) in studies of bully-involved groups, as well as studies of aggression-involved groups. However, in Bettencourt et al.’s (2013) study – one of three to use a

multivariate model to predict class membership – internalizing problems were no longer associated with predominant victim status once anger dysregulation was included in the analysis. This reinforces the importance of investigating the strength of relations of correlates *relative to each other*, and the current study will expand on Bettencourt et al.’s (2013) study by doing so.

Protective Factors

In an effort to combat bullying, researchers have shifted focus over the last 20 years from viewing it as an individual-level problem to one that views it as a “complicated social exchange among individuals, peer groups, and the broader social environment,” (i.e., social-ecological model; Espelage & Swearer, 2010, p.61). Importantly, some have argued recently that interventions may best be tailored by understanding how aspects of the environment interact with individual-level characteristics in contributing to bullying involvement (Farrell et al., 2013; Merrin, Espelage, & Hong, 2018). Specifically, if intervention efforts are to address multiple levels of the model, it is important to understand how “patterns of risk and protective factors within individuals and in their social structures” (Farrell et al., 2013, p.123) function for subgroups. Although there is considerable work on factors that are *negatively associated with* bullying, aggression, and victimization, there is much less work on *what may lessen, or buffer*, risk conferred by risk factors. Further, among the work on buffering factors that does exist, almost none of it applies to bully-involved groups. In one study in which bully-involved groups were considered (Kochel, Ladd, Bagwell, & Yabko, 2015), the relative strength of protective factors was not examined. Similar to when risk factors are considered, these limitations prevent researchers and practitioners

from establishing conclusions regarding which factors may buffer risk, which are most important among the ones that do buffer risk, and which may be most relevant for bully-involved groups.

Although the nature of relationships changes for adolescents as they spend an increasing amount of time with peers, parents may still remain central sources of support throughout this time period (Furman & Buhrmester, 1992). Two factors that have been consistently related to bullying and victimization are examined as protective factors in the present study. The first, parental involvement, is best defined as participation in a child's life in a supportive and trusting manner (Lereya, Samara, & Wolke, 2013). The second, parental warmth, may be best characterized as understanding and accepting a child's affect, and demonstrating emotional closeness (Lereya et al., 2013). These factors likely promote positive peer relationships in several ways. Parents who are appropriately involved in their adolescents' lives – for example, monitoring their relationships and interacting appropriately with school administrative staff – may have more opportunities to promote and model healthy interactions (Georgiou & Fanti, 2010; Leadbeater, Sukhawathanakul, Smith, & Bowen, 2015). Additionally, parents who demonstrate warmth and validate their youths' emotions facilitate socioemotional growth, thus providing their child the necessary attributes and skills to interact effectively with others (Duncan, 2004). Both involvement and warmth have been negatively associated with bullying and/or victimization cross-sectionally as well as longitudinally (Brendgen, Girard, Vitaro, Dionne, & Boivin, 2016; Georgiou & Fanti, 2010; Leadbeater et al., 2015). Additionally, both of these factors had among the highest effect sizes in a meta-analysis in which the relations among parenting behaviors and bullying and victimization

were examined (Lereya et al., 2013). However, to my knowledge, the degree to which these factors *buffer risk* has not been studied, thus leaving researchers and practitioners unsure of how to leverage them in addressing the needs of at-risk youth.

School climate – “an overall or shared quality of school life, including normative beliefs, values, and ideals that prevail in a school community,” (Leadbeater et al., 2015, p. 480) – is another critically important domain of study as a considerable portion of bullying and victimization occurs at school (Bradshaw, Sawyer, & Brennan, 2007). Two aspects of school climate – willingness to seek help (WTSH), referring to the perception that students and school staff members support students involved in bullying (Bandyopadhyay, Cornell, & Konold, 2009); and perceived prevalence of teasing and bullying (PTB), referring to the degree to which students believe that bullying is a problem at their school (Bandyopadhyay et al., 2009) – may be important protective factors and as such are examined in the present study. The notion that these components of school climate are most related to bullying and victimization, relative to others, originates from findings that up to 67% of middle school students believe that others (students or teachers) rarely try to stop bullying (Unnever & Cornell, 2003). Unnever and Cornell (2003) also reported that 25% of students stated that they might support a bully. This is particularly concerning as positive bystander behavior may decrease in adolescence (Pouwels, Lansu, & Cillessen, 2016). WTSH has been positively associated with actual help-seeking behavior and negatively related to aggression (Bandyopadhyay et al., 2009), as well as school-level prevalence of bullying and victimization (Cornell, Shukla, & Konold, 2015). Regarding PTB, establishing school norms against bullying may lead to decreased bullying behavior and/or an unfavorable view of bullies (Jones,

Haslam, York, & Ryan, 2008; Perkins, Craig, & Perkins, 2011). Despite the support underlying WTSH and PTB, previous work has not led us to conclude that they may *buffer risk conferred by risk factors*, or informed us regarding the degree to which they may be relevant for helping at-risk youth.

The final protective factor studied is friendship quality, as developing relationships is a key part of adolescence (Furman & Rose, 2015). As it pertains to the experience of victimization, friendship may make victimized youth feel less vulnerable by providing coping and problem-solving strategies (Bagwell & Schmidt, 2011). Unlike for school climate and parenting dimensions, there is evidence that friendship is not just negatively associated with victimization – it lessens risk conferred by risk factors (i.e., acts as a buffer). Specifically, the presence of one or more friends has weakened the relations among internalizing symptoms, externalizing problems, poor social skills, and victimization in elementary and middle-schooled aged students, or caused them to be nonsignificant altogether (e.g., see Fox & Boulton, 2006; Hodges & Perry, 1999; Jia & Mikami, 2015). Although these studies should be noted for their investigation of buffering factors, none examined the relative strength of buffering factors, and further, their relevance for bully-involved groups. Although Kochel et al. (2015) reported that friendship most lessened risk for future peer rejection in bully-victims (compared to bullies or predominant victims), rejection – or generally being disliked – is different than victimization (Sentse et al., 2017). The current study addresses the noted limitations by examining a critically important aspect of friendship – friendship quality – as this may be the mechanism through which adolescents develop coping strategies to manage difficult situations (Cuadros & Berger, 2016; Furman & Rose, 2015).

Summary

Evidence supporting current bullying intervention programs is mixed. Although there may be several reasons for this (Cunningham, Mapp, et al., 2016; Cunningham, Rimas, et al., 2016), the existence of different at-risk groups (i.e., bullies, bully-victims, and predominant victims) suggests that some youth may need a variety of types of support. Although there is considerable support for the idea that there are three at-risk groups, limitations to previous literature prevent us from concluding how to best tailor our supports for these youth. First, the omission of one or more forms of bullying (and where measured, aggression) and/or victimization in several studies of at-risk groups suggests that some youth may have been misclassified. Thus, this calls into question the validity of findings regarding correlates of these groups, and may help account for mixed findings in some areas. Second, in studies of risk factors for bully-involved status, group mean differences were often compared. As such, in efforts to improve interventions, we cannot conclude which risk factors may be *most important* to address and thus should receive priority. Third, studies of bully-involved groups have often considered characteristics of the individual while omitting context. This is a limitation because bullying occurs as part of a larger social framework (Espelage & Swearer, 2010), and it is critical to consider this framework when examining risk and protective factors for specific groups (Farrell et al., 2013; Farrell & Vulin-Reynolds, 2007). The lack of work in this area means that researchers and practitioners currently do not have any guidance on how that framework might be leveraged to buffer risk conferred by risk factors.

Current Study

The purpose of the present study was to examine risk and protective factors for

patterns of bullying involvement. Beliefs supporting aggression, emotion dysregulation, and internalizing problems were conceptualized as risk factors. The limitation regarding acknowledgement of social context in studies of bully-involved groups was addressed by inclusion of parental warmth, parental involvement, two components of school climate (perceived prevalence of bullying and willingness to seek help), and friendship quality as protective factors.

The first research question is, ‘what are patterns of involvement in bullying?’ Based on a bulk of prior work, I hypothesized that four groups (bullies, bully-victims, victims, and uninvolved youth) would emerge. In order to address the aforementioned measurement limitation, an assessment that included multiple forms of bullying and victimization was used. The second research question is, ‘what risk factors are associated with membership in a ‘bully-involved’ class versus an uninvolved class?’ The third research question is, in the presence of risk factors, what protective factors show a significant a) compensatory effect (i.e., buffering effect; observed when a protective factor *lessens risk conferred by a risk factor*; Masten, 2001) and b) protective effect (i.e., interactive effect; observed when a protective factor *lessens risk conferred by a risk factor at a higher degree for one level of that risk factor versus another*; Masten, 2001)? Multivariate models will be used in order to answer these questions and address the limitation regarding examination of group mean differences.

Method

Participants

Participants in this study included youth who were attending a middle school in the midwestern United States during Spring 2019. In total, $N = 775$ youth (M age = 12.33, $SD = 1.18$) contributed data for this study. The gender breakdown was relatively even, as 49.4% identified as girls, 44.5% identified as boys, and 6.1% identified a gender identity other than boy or girl or indicated they did not wish to answer. A majority of participants identified as European-American (92.1%), followed by multi-racial or other (4.8%), American Indian (1.3%), Asian-American (0.6%), African-American (0.4%), Non-white Hispanic (0.3%), and Native Hawaiian or Other Pacific Islander (0.3%). Two participants (0.3%) did not report their race. A majority of data came from students in sixth grade (31.6%) and seventh grade (27.6%), followed by eighth grade (25.2%) and fifth grade (15.6%).

At the middle school, 66.2% of students qualify for free or reduced lunch (School Digger, 2018). Demographic statistics on the whole were consistent with the demographics of the county at large; according to the United States Census Bureau, 96.5% of county residents identify as European-American only (i.e., not Hispanic; U.S. Census Bureau, 2017). The median household income in the county is \$43,382, which is 26.5% below the national median household income of \$59,039 (U.S. Census Bureau, 2017).

Procedures

Data were collected as part of a school-wide initiative to learn more about school culture and develop ways to combat bullying. Students completed the measures in one

sitting during one school day in February 2019, at a time designated by school administrative staff. The estimated time of completion for the questionnaires was between 15 and 20 minutes. Students were not compensated for participating. School staff obtained verbal assent from all students prior to participation and students were informed they could stop participating at any time. The University's Institutional Review Board approved analysis of the data that were collected using these procedures.

Measures

Problem Behavior Frequency Scales-Adolescent Report (PBFS-AR)

The PBFS-AR (Farrell, Sullivan, Goncy, & Le, 2016; Farrell, Thompson, Mehari, Sullivan, & Goncy, in press) is a self-report assessment designed to assess adolescents' frequency of victimization, aggression, and other problem behaviors. The measure was modified slightly for the present study to ensure that it assessed bullying behaviors (rather than only aggressive behaviors). Students were read the following instructions: "Please complete the following items about bullying. Bullying is when you keep doing mean things to someone else over and over. Bullying often happens when there is a power or status difference between the kids involved (like one kid being stronger, bigger, or more popular than the other one). Bullying involves actions like hitting, pushing, threatening, making fun of others, spreading rumors, leaving others out on purpose, or sending hurtful messages over a computer or cell phone."

As several items were added to the PBFS-AR since Farrell et al.'s (2016) original validation work – without clarity regarding the number of items to retain, and further, what scale upon which they might load – I conducted factor analyses to determine answers to these questions (see Appendix A). Based on results of those analyses, items

that were intended to capture verbal and relational bullying were combined into one subscale. As such, five subscales were used: physical bullying, verbal/relational bullying, cyber bullying, general victimization (consisting of items related to physical, verbal, and relational victimization), and cyber victimization.

The bullying items on the PBFS-AR are preceded by the following: “in the last 30 days, how many times have you...?” All items are rated on a 6-point frequency scale, 1 = *never*, 2 = *1-2 times*, 3 = *3-5 times*, 4 = *6-9 times*, 5 = *10-19 times*, 6 = *20 or more times*. This scoring method and has been validated and used previously (Farrell et al., 2016). The physical bullying scale has five items (e.g., hit or slapped another kid; present study $\alpha = .87$, good); the verbal/relational bullying scale has 11 items (e.g., put someone down to their face; spread a false rumor about someone; current study $\alpha = .89$, good); and the cyber-bullying scale has 11 items (e.g., called someone you know mean names online like on Facebook or Snapchat or through texting; present study $\alpha = .90$, excellent). The general victimization scale has 15 items (e.g., someone threatened to hit or physically harm you; someone put you down to your face; someone left you out on purpose when it was time to do an activity; present study $\alpha = .94$, excellent). The cyber-victimization scale has 11 items (e.g., someone used text-messaging to make fun of you; present study $\alpha = .94$, excellent).

Emotion Regulation Index for Children and Adolescents (ERICA)

The ERICA (MacDermott et al., 2010) was used to measure emotion dysregulation. The ERICA is a 16-item measure that assesses three factors pertaining to emotional control, emotional self-awareness, and situational representativeness. Items are rated on a five-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). The

emotional control subscale has seven items (e.g., I have trouble waiting for something I want); the emotional self-awareness subscale has five items (e.g., when I get upset, I can get over it quickly); and the situational responsiveness subscale has four items (e.g., when other kids are friendly to me, I am friendly to them). The ERICA is appropriate for use in youth aged nine through 16 (MacDermott et al., 2010). Additionally, the ERICA demonstrates strong internal consistency, four-week test-retest reliability, and convergent validity (MacDermott et al., 2010). In this study, scores on the aforementioned three factors were combined to create a total score, and internal consistency was good ($\alpha = .82$).

Strengths and Difficulties Questionnaire (SDQ)

Internalizing problems were measured using the SDQ (Goodman, 1997). The SDQ is a 25-item screening questionnaire that has teacher-report, parent-report, and self-report versions. For this study, only the self-report version was used. The SDQ comprises five subscales: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems, and prosocial behavior. For this study, the emotional symptoms and peer relationship problems subscales (ten items total) were combined to form an internalizing problems score. This approach is consistent with findings that suggest that the underlying structure of the self-report SDQ is best represented by internalizing and externalizing factors, with the emotional symptoms and peer relationship problems subscales comprising the internalizing factor (Goodman, Lamping, & Ploubidis, 2010). The model in which the five subscales were conceptualized as being subsumed by additional internalizing and externalizing factors demonstrated acceptable fit and convergent and discriminant validity relative to a diagnostic interview (Goodman et al.,

2010). The emotional symptoms subscale consists of five items (e.g., often complains of headaches, stomachaches, or sickness), and the peer problems subscale also consists of five items (e.g., would rather be alone than with other youth). All items are rated on a 3-point Likert scale (0 = not true; 2 = certainly true). When combined to assess internalizing problems, the emotional symptoms and peer relationship problem subscales demonstrated acceptable internal consistency in the present study ($\alpha = .74$).

Normative Beliefs About Aggression Scale (NOBAGS)

The general beliefs scale of the NOBAGS (Huesmann & Guerra, 1997) was used to assess beliefs about aggression. The general beliefs scale has eight items (e.g., in general, it is OK to yell at others and say bad things; it is wrong to insult other people). Each question is rated on a 4-point scale (1 = it's really wrong; 4 = it's perfectly okay). The answer most approving of aggression is always scored as a '4.' The NOBAGS is among the most commonly used measures of beliefs about aggression and has been used across developmental stages (e.g., Bailey & Ostrov, 2008; Huesmann & Guerra, 1997; Werner & Nixon, 2005). The general beliefs scale has demonstrated good internal consistency in prior studies with middle-school aged students (e.g., $\alpha = .91$; Gendron, Williams, & Guerra, 2011; $\alpha = .86$, Huesmann et al., 2017) and good predictive validity in middle school-aged students (i.e., has been associated with actual aggressive behavior; Gendron, Williams, & Guerra, 2011; Huesmann et al., 2017). In the present study, the general beliefs scale demonstrated good internal consistency ($\alpha = .91$).

Social and Health Assessment (SAHA) – parental warmth

Parental warmth was assessed through the five-item parental warmth scale on the SAHA (Schwab-Stone et al., 1995). The SAHA is a large survey designed to assess risk

behaviors in adolescence, and has been administered to large groups of youth in the United States, Europe, and Africa. Items are rated on a 4-point scale (1 = *never*; 4 = *often*). Items begin with the stem ‘my parents’ and finish with an aspect of parenting behavior (e.g., ‘are kind to me’). Cronbach’s alphas have consistently ranged from .81 (Stickley et al., 2015) to .82 (Karlsson, Stickley, Lindblad, Schwab-Stone, & Ruchkin, 2014), rendering its internal reliability as ‘good.’ The scale has been used in studies of aggression and victimization in middle-school aged youth (e.g., Karlsson et al., 2014). The parental warmth scale demonstrated good internal consistency in the present study ($\alpha = .83$).

Social and Health Assessment (SAHA) – parental involvement

Parental involvement was measured using the six-item parental involvement subscale from the SAHA (Schwab-Stone et al., 1995). The scale assesses the child’s perception of the degree to which their caregivers are involved in their life. Items are rated on a 4-point scale (1 = *never*; 4 = *often*). Items begin with the stem ‘my parents’ and finish with an aspect of parental involvement (e.g., are interested in my life; spend time with me). Similar to the parental warmth scale, Cronbach’s alphas in middle-school aged samples have consistently ranged in the low .80s (Karlsson et al., 2014; Stickley et al., 2015), rendering its internal reliability as ‘good.’ In the present study, the parental involvement scale demonstrated good internal consistency ($\alpha = .80$).

School Climate Bullying Survey (SCBS) – prevalence of teasing and bullying (PTB)

The PTB subscale of the SCBS was used as a means of measuring perception of school bullying climate (Bandyopadhyay et al., 2009). This scale consists of four items (e.g., bullying is a problem at this school) and is rated on a four-point Likert-type scale (1

= *strongly disagree*; 4 = *agree*). Estimates of internal consistency in adolescent samples have ranged from .77 (Klein, Cornell, & Konold, 2012) to .81 (Cornell et al., 2015), and scores have been associated with rates of peer victimization and risky behavior in those samples (Klein et al., 2012; Cornell et al., 2015). In the present research, the PTB demonstrated questionable internal consistency ($\alpha = .67$).

School Climate Bullying Survey (SCBS) – willingness to seek help (WTSH)

The WTSH subscale of the SCBS was also used as a means of measuring perception of school bullying climate. Items on this scale are also rated on a four-point Likert-type scale (1 = *strongly disagree*; 4 = *agree*). Estimates of internal consistency have ranged from .76 (Shukla, Konold, & Cornell, 2016) to .87 (Klein et al., 2012). Similar to the prevalence of bullying and teasing scale, scores have been associated with peer victimization and risky behavior, and have also been associated with actual help-seeking behavior (Klein et al., 2012; Bandyopadhyay et al., 2009). In the present study, the WTSH subscale demonstrated good internal consistency ($\alpha = .82$).

Friendship Quality Survey (FQS)

The FQS (Shelton et al., 2010) was used to assess friendship quality. It measures perceived affection, disclosure, perceived support, and closeness (Cuadros & Berger, 2016). The FQS is comprised of nine items that are rated on a 5-point Likert scale (1 = *never*; 5 = *always*). The FQS demonstrates good internal consistency (e.g., .88; Cuadros & Burger, 2016), and in this study, items were summed to form a total ‘friendship quality score.’ In the present study, the FQS demonstrated good internal consistency ($\alpha = .89$).

Analytic Plan

Research Question 1: What are patterns of involvement in bullying?

The outcome metrics for this analysis were scores on the bullying and victimization scales of the PBFS (i.e., average scores on the physical bullying, relational/verbal bullying, cyber-bullying, general victimization, and cyber victimization subscales). First, a latent profile analysis (LPA) was conducted to determine patterns of bullying involvement. This approach presents numerous advantages over establishing groups via cutoffs (e.g., one standard deviation above or below a mean on an indicator) as participants are grouped into mutually exclusive categories based on their data (McCutcheon, 1987). Because gender (e.g., Bettencourt et al., 2013; Ettekal & Ladd, 2017) and grade (Bettencourt & Farrell, 2013) have been associated with class membership, they were examined as covariates. Missing data was addressed using full information maximum likelihood estimation (Enders, 2010). Then, factors in determining model fit were determined according to procedures described by Nylund, Asparouhov, and Muthén (2007). Specifically, model fit was assessed using the Akaike Information Criteria (AIC), Bayesian information criterion (BIC), and sample size adjusted BIC (SSA-BIC). Decreases in the AIC, BIC, and SSA-BIC are considered evidence of improved model fit. Additionally, the Vuong-Lo-Mendel-Rubin Likelihood Ratio Test (VLMR) and the Bayesian Likelihood Ratio Test (BLRT) were examined compare the relative fit of a model with k classes to a model with $k-1$ classes. Entropy was also examined to determine classification accuracy (i.e., degree to which members of the classes are in the correct class); entropy values range from zero to 1, with higher values indicating better accuracy for the class in question. Once the latent class model was established, the posterior class probabilities, which indicate an individual's probability of membership in each class based on their pattern of responses, were used to assign

individuals to the class for which their probability of membership was highest.

Research Question 2: What risk factors are associated with membership in a ‘bully-involved’ class (e.g., as a bully or bully-victim) versus membership in an uninvolved class?

To answer this question, a risk model proposed by Masten (2001) and utilized by Bettencourt et al. (2013) was followed. Specifically, hypothesized risk factors (i.e., beliefs in support of aggression, emotion dysregulation, and internalizing problems) were entered into a multinomial logistic regression predicting class membership. To discern which risk factors were most important, each of the factors was entered together into the model.

Research Question 3: In the presence of risk factors, what protective factors show a significant a) compensatory effect and b) protective (i.e., interactive) effect?

Additional models that Masten (2001) proposed were utilized to answer this question. I anticipated that a multinomial logistic regression would be conducted to answer part A of this research question, with class membership as the outcome variable. Only factors that emerged as significant predictors in research question 2 were retained as predictors in research question 3. Then, hypothesized protective factors (i.e., parental involvement, parental warmth, willingness to seek help, perceived prevalence of bullying and teasing, and friendship quality) were entered together into the model.

To examine whether there were protective effects, interactions between risk and protective factors were examined after the above analyses were completed. A protective effect indicates that a protective factor protects against the effects of a risk factor on functioning at a higher degree for one level of the risk factor versus another.

Results

Data were first screened for outliers per the median absolute deviation (MAD) method (Leys et al., 2013). The MAD utilizes the median rather than the mean to detect outliers because the mean may be influenced by outliers. A cutoff of 2.5 (moderately conservative; Miller, 1991) was selected. There were 13 variables included in the present study. Twenty-seven outliers were identified among six variables (emotion dysregulation, parental involvement, internalizing problems, friendship quality, willingness to seek help, and perceived prevalence of teasing and bullying), and each outlier was winsorized (i.e., modified so that it falls at the cutoff identified rather than beyond the cutoff; Enders, 2010). However, based on Miller's (1991) moderately conservative cutoff, between 12 and 25% of values for the other seven variables in the study (parental warmth, beliefs in support of aggression, physical bullying, verbal/relational bullying, cyberbullying, victimization, and cybervictimization) were classified as outliers as those variables were skewed (e.g., values between -2.12 and 2.93; see Table 1). However, these data were not modified as those patterns of distribution are considered typical given the nature of those variables (e.g., Mehari & Farrell, 2016). Rather, for variables that are inherently non-normal, I followed Kline's (2016) recommendation to use an estimator (robust maximum likelihood) that is robust to nonnormality.

Descriptive Statistics

Descriptive statistics for each variable can be found in Table 1, and correlations among all variables can be found in Table

Table 1*Descriptive Statistics*

	M (SD)	Skew	Kurtosis
Emotion regulation	57.87 (9.60)	-0.36	-0.25
Internalizing problems	6.97 (3.83)	0.46	-0.37
Beliefs about aggression	28.66 (4.86)	-2.12	4.74
Parental warmth	17.68 (2.85)	-1.62	2.57
Parental involvement	18.27 (3.86)	-0.74	0.25
Friendship quality	33.94 (7.66)	-0.57	-0.19
Willingness to seek help	26.00 (5.40)	-0.66	0.25
Prevalence of teasing and bullying	10.61 (2.83)	-0.18	-0.56
Physical bullying	1.86 (1.09)	1.78	2.95
Verbal/relational bullying	1.50 (0.68)	2.51	7.89
Cyberbullying	1.38 (0.68)	2.93	10.50
General victimization	2.14 (1.11)	1.20	0.80
Cybervictimization	1.65 (0.97)	2.02	3.84

Note. Emotion regulation = ERICA total score; Internalizing problems = SDQ total score; Beliefs about aggression = NOBAGS total score; Parental warmth = SAHA parental warmth subscale score; Parental involvement = SAHA parental involvement subscale score; Friendship quality = Friendship Quality Survey total score; Willingness to seek help = SCBS willingness to seek help subscale score; Prevalence of teasing and bullying = SCBS prevalence of teasing and bullying subscale score; Physical bullying = PBFS physical bullying average subscale score; Verbal bullying = PBFS verbal bullying average subscale score; Relational bullying = PBFS relational bullying average subscale score; Cyberbullying = PBFS cyberbullying average subscale score; General victimization = PBFS general victimization average subscale score; Cybervictimization = PBFS cybervictimization average subscale score. PBFS subscale scores are as follows: (1 = *never*, 2 = *1-2 times*, 3 = *3-5 times*, 4 = *6-9 times*, 5 = *10-19 times*, 6 = *20 or more times*).

Table 2*Correlations Among Risk/Protective Factors and Bullying/Victimization*

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Emotion regulation	--												
2. Internalizing problems	-.46**	--											
3. Beliefs about aggression	.43**	-.09*	--										
4. Parental warmth	.45**	-.29**	.34**	--									
5. Parental involvement	.46**	-.32**	.30**	.72**	--								
6. Friendship quality	.19**	-.01	.16**	.17**	.31**	--							
7. Willingness to seek help	.47**	-.28**	.46**	.41**	.38**	.13**	--						
8. Prevalence of teasing and bullying	-.19**	.41**	.09*	-.07	-.07	.12**	-.04	--					
9. Physical bullying	-.53**	.17**	-.51**	-.34**	-.28**	-.06	-.39**	.08*	--				
10. Verbal/relational bullying	-.51**	.17**	-.50**	-.30**	-.24**	-.03	-.38**	.07	.78**	--			
11. Cyberbullying	-.44**	.20**	-.44**	-.26**	-.19**	.03	-.34**	.10**	.69**	.83**	--		
12. General victimization	-.40**	.50**	-.26**	-.32**	-.28**	-.01	-.37**	.36**	.48**	.46**	.49**	--	

Table 2: Continued

13. Cybervictimization	-.36**	.42**	-.27**	-.29**	-.22**	.07	-.33**	.27**	.45**	.51**	.68**	.75**	--
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Note. Emotion regulation = ERICA total score; Internalizing problems = SDQ total score; Beliefs about aggression = NOBAGS total score; Parental warmth = SAHA parental warmth subscale score; Parental involvement = SAHA parental involvement subscale score; Friendship quality = Friendship Quality Survey total score; Willingness to seek help = SCBS willingness to seek help subscale score; Prevalence of teasing and bullying = SCBS prevalence of teasing and bullying subscale score; Physical bullying = PBFS physical bullying average subscale score; Verbal bullying = PBFS verbal bullying average subscale score; Relational bullying = PBFS relational bullying average subscale score; Cyberbullying = PBFS cyberbullying average subscale score; General victimization = PBFS general victimization average subscale score; Cybervictimization = PBFS cybervictimization average subscale score. ** $p < .01$; * $p < .05$

Research Question 1: What are patterns of involvement in bullying?

As seen in Table 2, all the PBFS indicators proposed for inclusion in the LPA were moderately to highly correlated. As such, LPA models were conducted with local independence not assumed by adding covariance among the indicators (Collins & Lanza, 2010). Fit indices can be seen in Table 3. Examination of information criteria (i.e., AIC, BIC, and SABIC) indicated that the criteria values decreased as the number of classes increased. However, examination of those criteria did not indicate a single solution when examined in conjunction with the VLMR and BLRT, as results of the VLMR suggested that solutions with more than three classes did not enhance model fit relative to a model with $k-1$ classes, but results of the BLRT suggested that fit increased with number of classes. Examination of indicator means and class sizes in the four, five, and six class solutions suggested they were difficult to interpret and inconsistent with theory (e.g., splitting an existing class into two smaller classes with similar indicator means). As such, a three-class solution was selected.

Mean scores on each indicator in the LPA, within each class, can be seen in Table 4. Examination of these means revealed an uninvolved class characterized by little to no involvement in bullying and victimization ($N = 666$, 85.9% of total sample); a bully-victim class, characterized by elevated bullying behavior as well as experience of victimization ($N = 40$, 5.2% of total sample); and a predominant victim class, characterized by infrequent bullying but frequent report of victimization ($N = 69$, 8.9% of total sample).

The relations between grade and class membership, and gender and class membership, were also explored. The percentage of youth by grade and gender in each

class can be seen in Table 5. Students in eighth grade were more likely than students in all other grades to be predominant victims; relative to students in fifth grade, (OR = 2.33, $p < .05$), 95% CI [1.07, 5.10]; relative to students in sixth grade, (OR = 2.40, $p < .01$), 95% CI [1.30, 4.46]; relative to students in seventh grade, (OR = 3.43, $p = .001$), 95% CI [1.67, 7.04]. For a more specific illustration of the percent of youth in each grade who were involved in bullying, see Figure 1. Regarding gender and class membership, girls were more likely than boys to be predominant victims, (OR = 2.72, $p = .001$), 95% CI [1.50, 4.92]. Youth who identified their gender as ‘other’ or preferred not to answer were more likely than boys to be predominant victims (OR = 3.33, $p = .02$), 95% CI [1.21, 9.16].

Table 3*Fit Indices for Latent Profile Analysis*

Class solution	LogL	AIC	BIC	SABIC	VLMR	BLRT	Entropy
1	-3575.75	7191.49	7284.50	7221.04	--	--	--
2	-3324.05	6700.09	6821.07	6738.50	$p = .05$	$p < .01$	.98
3	-3140.90	6345.80	6494.70	6393.08	$p = .03$	$p < .01$	.97
4	-3033.99	6143.98	6320.79	6200.12	$p = .25$	$p < .01$	.96
5	-2939.65	5967.29	6172.02	6032.29	$p = .12$	$p < .01$	.96
6	-2851.04	5802.07	6034.71	5875.94	$p = .45$	$p < .01$	.96

Note. LogL = loglikelihood; AIC = Akaike Information Criteria; BIC = Bayesian Information Criteria; SABIC = sample-size adjusted BIC; VLMR = p value of Vuong-Lo-Mendel-Rubin Likelihood Ratio Test. A significant p value indicates that the class provides a better fit than the solution with one fewer classes; BLRT = p value of Bayesian Likelihood Ratio Test. A significant p value indicates that the class provides a better fit than the solution with one fewer classes.

Table 4*Class Descriptive Statistics on Indicators Included in LPA*

Class	Physical bullying M (SD)	Verbal/relational bullying M (SD)	Cyberbullying M (SD)	General victimization M (SD)	Cybervictimization M (SD)
Uninvolved	1.68 (0.88)	1.37 (0.46)	1.19 (0.30)	1.88 (0.87)	1.33 (0.44)
Bully-victim	3.94 (1.39)	3.25 (1.14)	3.55 (0.89)	3.35 (0.92)	3.08 (1.04)
Predominant victim	2.43 (1.27)	1.91 (0.71)	1.96 (0.68)	3.99 (0.89)	3.91 (0.80)

Note. Uninvolved, N = 666; Bully-victim, N = 40; Predominant victim, N = 69.

Table 5*Number and Percentage of Students in Each Class by Grade and Gender*

Demographic variable	Uninvolved (N = 666)	Bully-victim (N = 40)	Predominant victim (N = 69)
5 th grade	105 (15.8%)	7 (17.5%)	9 (13.0%)
6 th grade	217 (32.6%)	10 (25.0%)	18 (26.1%)
7 th grade	189 (28.4%)	14 (35.0%)	11 (15.9%)
8 th grade	155 (23.3%)	9 (22.5%)	31 (44.9%)
Boys	306 (45.9%)	23 (57.5%)	16 (23.2%)
Girls	322 (48.3%)	14 (35.0%)	47 (68.1%)
Other/Prefer not to answer	38 (5.7%)	3 (7.5%)	6 (8.7%)

Note. Frequency counts and corresponding percentages in rows pertain to percent of youth in the class listed in the column header.

Figure 1

Percentage of Youth Involved in Bullying, By Grade

Research Question 2: What risk factors are associated with membership in a bully-involved class versus membership in an uninvolved class?

A multinomial logistic regression was conducted with each of the risk factors entered together in the model, and class membership as the outcome variable. Because grade and gender were associated with class membership, they were entered as covariates. Because results of research question one indicated that eighth grade students were more likely than all other students to be classified as predominant victims, grade was recoded to be a binary variable (i.e., eighth grade versus not). Similarly, gender was recoded to be binary (i.e., boy versus not). This also helped to produce models with the greatest parsimony.

The following assumptions of multinomial logistic regression were also explored prior to conducting this analysis (Hosmer, Lemeshow, & Sturdivant, 2013): first, the dependent variable must be measured at the nominal level; second, there must be independence of observations as well as mutually exclusive categories of the dependent variable; third, there should be no multicollinearity among independent variables; fourth, there must be a linear relation among independent variables and the logit transformation of the dependent variable (i.e., for every one-unit increase in the independent variable, the value of the log odds (logit) of the dependent variable should change by a constant amount); fifth, there should not be influential outliers. The first two assumptions were not violated because class status is nominal and mutually exclusive, and the data were collected at one time point. Examination of tolerance and VIF values demonstrated that the third assumption was not violated as tolerance for each independent variable was above .10, and VIF values were less than 10. The fourth assumption was assessed via the

Box-Tidwell (1962) test (Box & Tidwell, 1962) and found not to have been violated. The fifth assumption of avoiding influential outliers was managed by using the winsorization process described above.

Results for research question two can be seen in Table 6. After controlling for gender and grade, emotion dysregulation was associated with bully-victim status ($OR = 1.12, p < .001$), 95% CI [1.07, 1.18]. Beliefs in support of aggression were also associated with bully-victim status ($OR = 1.12, p < .001$), 95% CI [1.06, 1.19]. Internalizing problems were not associated with membership in the bully-victim class.

However, internalizing problems were associated with membership in the predominant victim class ($OR = 1.36, p < .001$), 95% CI [1.24, 1.49]. Beliefs in support of aggression and emotion dysregulation were not significantly associated with membership in the predominant victim class. Grade remained a significant correlate of membership in the predominant victim class, as students in the eighth grade were more likely than all other students to be classified as predominant victims, ($OR = 1.08, p = .05$), 95% CI [1.00, 1.18].

Table 6*Risk Factors for Bullying Involvement*

	Bully-victim				Predominant victim			
	<i>B</i>	SE	<i>p</i>	OR (95% CI)	<i>B</i>	SE	<i>p</i>	OR (95% CI)
Grade	0.02	0.06	ns	1.02 (0.91, 1.16)	0.08	0.04	.05	1.08 (1.00, 1.18)
Gender	-0.11	0.06	ns	0.89 (0.76, 1.05)	0.06	0.07	ns	1.06 (0.93, 1.22)
Emotion dysregulation	0.12	1.12	<.001	1.12 (1.07, 1.18)	-0.02	0.02	ns	0.98 (0.95, 1.02)
Internalizing problems	-0.05	0.06	ns	0.95 (0.85, 1.07)	0.31	0.05	<.001	1.36 (1.24, 1.49)
Beliefs in support of aggression	0.11	0.03	< .001	1.12 (1.06, 1.19)	0.05	0.03	ns	1.05 (0.99, 1.05)

Note. Uninvolved is the reference group. Grade coding was as follows: 0 = not eighth grade; 1 = eighth grade. Gender coding was as follows: 0 = boys; 1 = girls and other/prefer not to answer.

Research Question 3: In the presence of risk factors, what protective factors show a significant a) compensatory effect and b) protective effect?

Compensatory effects – part A. A compensatory effect is observed when a protective factor buffers risk imposed by a risk factor (Masten, 2001). As such, to answer part A of this question, hypothesized protective factors (i.e., parental warmth, parental involvement, friendship quality, willingness to seek help, and perceived prevalence of teasing and bullying) were entered into a multinomial logistic regression along with risk factors and covariates. Results can be seen in Table 7.

Bully-victim status. In the presence of the risk factors, willingness to seek help was associated with bully-victim status ($OR = 0.90, p = .01$), 95% CI [0.83, 0.98]. No other hypothesized protective factors lessened the risk conferred by the risk factors. Interestingly, higher friendship quality increased risk for bully-victim status, ($OR = 1.09, p < .01$), 95% CI [1.03, 1.16]. In the presence of the hypothesized protective factors, the main effect of gender also became significant. Girls and youth who answered ‘other’ or ‘prefer not to answer’ for gender were less likely than boys to be classified as bully-victims ($OR = 0.77, p < .01$), 95% CI [0.63, 0.93].

Predominant victim status. In the presence of the risk factors, no hypothesized protective factors lessened the risk conferred by the risk factors. There was a nonsignificant trend in the relation between willingness to seek help and predominant victim status, ($OR = 0.94, p = .07$), 95% CI [0.88, 1.01]. Additionally, perceived prevalence of bullying and teasing increased risk for predominant victim status, ($OR = 1.22, p < .01$), 95% CI [1.07, 1.40].

Protective effects – part B. A protective (i.e., interactive) effect occurs when a

protective factor protects against the effects of a risk factor at a higher degree for one level of that risk factor versus another (Masten, 2001). As willingness to seek help was the only buffering factor associated with class membership, interaction terms between it and each of the risk factors were created to investigate whether there were protective effects. The interaction term between emotion dysregulation and willingness to seek help was significantly associated with class membership. There were no other significant interactions. As such, I explored whether willingness to seek help protected against the effects of emotion dysregulation at one standard deviation above the mean (worse dysregulation) and one standard deviation below the mean (better regulation). Emotion dysregulation and willingness to seek help were grand mean centered prior to conducting these analyses. Results can be seen in Tables 8 and 9, respectively. At high levels of emotion dysregulation (i.e., one standard deviation above the mean), willingness to seek help no longer lessened risk conferred by the risk factors (see Table 8). However, as seen in Table 9, at low levels of emotion dysregulation (i.e., better *regulation*; one standard deviation below the mean), in the presence of the other risk factors, willingness to seek help lessened risk for bully-victim status (OR = 0.75, $p < .001$), 95% CI [0.64, 0.87].

Table 7*Risk and Protective Factors for Bullying Involvement*

	Bully-victim				Predominant victim			
	<i>B</i>	SE	<i>p</i>	OR (95% CI)	<i>B</i>	SE	<i>p</i>	OR (95% CI)
Grade	-0.04	0.07	ns	0.97 (0.84, 1.11)	0.05	0.05	ns	1.05 (0.84, 1.11)
Gender	-0.27	0.10	<.01	0.77 (0.63, 0.93)	0.27	0.08	ns	1.03 (0.88, 1.20)
Emotion dysregulation	0.12	0.03	<.001	1.14 (1.06, 1.19)	-0.03	0.02	ns	0.97 (0.93, 1.01)
Internalizing problems	-0.11	0.07	ns	0.90 (0.79, 1.02)	0.25	0.05	<.001	1.28 (1.16, 1.42)
Beliefs in support of aggression	0.10	0.04	<.01	1.10 (1.03, 1.19)	0.05	0.04	ns	1.05 (0.97, 1.14)
Parental warmth	-0.14	0.09	ns	0.87 (0.73, 1.04)	-0.07	0.07	ns	0.93 (0.81, 1.08)
Parental involvement	0.04	0.07	ns	1.04 (0.90, 1.21)	-0.01	0.06	ns	0.99 (0.88, 1.11)
Friendship quality	0.09	0.03	<.01	1.09 (1.03, 1.16)	0.01	0.02	ns	1.01 (0.96, 1.05)
Willingness to seek help	-0.11	0.04	= .01	0.90 (0.83, 0.98)	-0.06	0.03	.07	0.94 (0.88, 1.01)
Prevalence of teasing and bullying	0.09	0.08	ns	1.10 (0.93, 1.29)	0.20	0.07	<.01	1.22 (1.07, 1.40)

Note. Uninvolved is the reference group. Grade coding was as follows: 0 = not eighth grade; 1 = eighth grade. Gender coding was as follows: 0 = boys; 1 = girls and other/prefer not to answer.

Table 8

Protective Effect of Willingness to Seek Help at Low Levels of Emotion Regulation (i.e., more dysregulation)

	Bully-victim				Predominant victim			
	<i>B</i>	SE	<i>p</i>	OR (95% CI)	<i>B</i>	SE	<i>p</i>	OR (95% CI)
Grade	-0.04	0.21	ns	0.96 (0.64, 1.44)	0.01	0.15	ns	1.00 (0.76, 1.33)
Gender	-0.25	0.21	ns	0.78 (0.53, 1.13)	0.03	0.16	ns	1.04 (0.75, 1.40)
ED (high)	0.17	0.04	<.001	1.19 (1.11, 1.28)	-0.02	0.02	ns	0.98 (0.95, 1.03)
ED X WTSH	0.01	0.01	<.01	1.01 (1.01, 1.02)	-0.02	0.00	ns	1.00 (1.00, 1.01)
WTSH	-0.06	0.04	ns	0.94 (0.87, 1.02)	-0.04	0.04	ns	0.96 (0.90, 1.04)
Beliefs in support of aggression	-0.10	0.04	<.01	1.11 (1.03, 1.19)	0.03	0.04	ns	1.03 (0.96, 1.11)
Internalizing problems	-0.09	0.06	ns	0.92 (0.81, 1.03)	0.31	0.05	<.001	1.36 (1.24, 1.49)

Note. Uninvolved is the reference group. Grade coding was as follows: 0 = not eighth grade; 1 = eighth grade. Gender coding was as follows: 0 = boys; 1 = girls and other/prefer not to answer. ED = Emotion dysregulation. WTSH = willingness to seek help.

Table 9

Protective Effect of Willingness to Seek Help at High Levels of Emotion Regulation (i.e., better regulation)

	Bully-victim				Predominant victim			
	<i>B</i>	SE	<i>p</i>	OR (95% CI)	<i>B</i>	SE	<i>p</i>	OR (95% CI)
Grade	-0.04	0.19	ns	0.96 (0.64, 1.44)	0.01	0.15	ns	1.00 (0.76, 1.33)
Gender	-0.25	0.19	ns	0.78 (0.53, 1.13)	0.03	0.16	ns	1.04 (0.75, 1.40)
ED (low)	0.17	0.04	<.001	1.19 (1.11, 1.28)	-0.02	0.02	ns	0.98 (0.95, 1.03)
ED X WTSH	0.01	0.01	<.01	1.01 (1.01, 1.02)	-0.02	0.00	ns	1.00 (1.00, 1.01)
WTSH	-0.29	0.08	<.001	0.75 (0.64, 0.87)	-0.10	0.05	.02	0.90 (0.83, 0.98)
Beliefs in support of aggression	0.10	0.04	<.01	1.11 (1.03, 1.19)	0.10	0.04	<.01	1.11 (1.03, 1.19)
Internalizing problems	-0.09	0.06	ns	0.92 (0.81, 1.03)	-0.09	0.06	ns	0.92 (0.81, 1.03)

Note. Uninvolved is the reference group. Grade coding was as follows: 0 = not eighth grade; 1 = eighth grade. Gender coding was as follows: 0 = boys; 1 = girls and other/prefer not to answer. ED = Emotion dysregulation. WTSH = willingness to seek help.

Discussion

The goals of this study were to, first, examine patterns of bullying involvement (i.e., status as a bully, bully-victim, or predominant victim); second, to examine risk factors for bullying involvement; and third, examine which factors may buffer the risk conferred by the risk factors. A three-class solution (i.e., bully-victim, predominant victim, and uninvolved) best fit the data. Higher emotion dysregulation (ED) and stronger beliefs in support of aggression were significantly associated with membership in the bully-victim group, but not the predominant victim group. In contrast, higher internalizing problems were associated with membership in the predominant victim group, but not in the bully-victim group. Increased willingness to seek help buffered risk for membership in the bully-victim group. Although it did not buffer risk for membership in the predominant victim group, there was a nonsignificant trend in the relation between this factor and status as a predominant victim. Finally, a protective effect emerged such that willingness to seek help buffered risk for bully-victim status at low levels of emotion dysregulation (or, conceptually, higher levels of emotion *regulation*), but did not buffer risk at higher levels of emotion dysregulation (conceptually, lower levels of emotion *regulation*).

The finding of a three-class solution omitting a bully group is inconsistent with previous findings, as existence of this solution was only reported in one study (Williford, Brisson, Bender, Jenson, & Forrest-Bank, 2011) of nine (Bettencourt & Farrell, 2013; Bettencourt et al., 2013; Ettekal & Ladd, 2017; Giang & Graham, 2008; Kochel et al.,

2015; Lovegrove et al., 2012; Schwartz, 2000; Toblin et al., 2005) in which researchers examined these groups. On the surface, it appears as if this finding is difficult to interpret, as demographic characteristics (e.g., gender breakdown) are similar to the aforementioned studies. However, when examined in the context of measurement, some possible explanations emerge.

Four of the nine studies on these bully-involved groups established classes on the basis of self-report measures (Bettencourt & Farrell, 2013; Bettencourt et al., 2013; Lovegrove et al., 2012; Williford et al., 2011). However, in three of those studies (Bettencourt & Farrell, 2013; Bettencourt et al., 2013; Lovegrove et al., 2012), groups were established almost exclusively on the basis of items related to physical victimization. Only Williford et al. (2011) assessed multiple forms (i.e., physical, verbal, and relational) of aggression and victimization as was done in this study, and thus it is interesting that the present finding most closely resembles Williford and colleagues' (2011). It is particularly noteworthy that relational victimization was not assessed in three of the four studies that established groups on the basis of self-report measures. One possibility is that the 'bullies' in those studies were experiencing relational victimization, but were not perceiving it as such or had no way to report it. Although person-centered analyses suggest that forms of victimization do co-occur (Bradshaw, Waasdorp, & Johnson, 2015; Bradshaw, Waasdorp, & O'Brennan, 2013; Nylund, Bellmore, Nishina, & Graham, 2007), not all of them may occur at the same time. For example, in large samples of middle and high-school aged students, Bradshaw, Waasdorp, and Lindstrom-Johnson (2015) and Bradshaw, Waasdorp, and O'Brennan (2013) reported classes of

youth that experienced verbal and relational victimization (but not physical), and verbal and physical victimization (but not relational). As such, it appears that our finding of a three-class solution may be more likely to emerge in circumstances in which multiple forms of victimization are assessed – an avenue that appears important to keep pursuing in the future.

In the remaining five studies on bully involved groups, classes were established on the basis of peer nominations (Ettekal & Ladd, 2017; Giang & Graham, 2008; Kochel et al., 2015; Schwartz, 2000; Toblin et al., 2005). Although solutions varied in two of these studies (Ettekal & Ladd, 2017; Giang & Graham, 2008), each one of them found support for a ‘bully’ or ‘aggressor’ class. The differences between self- and peer-identified victims may be informative for interpreting the present finding. For example, researchers have established the existence of convergent victims, who self-identify as experiencing victimization and who are also identified by their peers as experiencing victimization; self-identified victims, who report experiencing victimization but who peers do not identify as victims; and peer-identified victims, who do not self-report being victimized but their peers disagree (Dawes, Chen, Farmer, & Hamm, 2017; Graham, Bellmore, & Juvonen, 2003; Scholte et al., 2013). There are meaningful differences among these groups. Self-identified victims may score similarly to nonvictims on assessments of popularity and liking (Dawes, Norwalk, Chen, Hamm, & Farmer, in press; Scholte et al., 2013), although they may also report lower self-esteem and more loneliness than nonvictims (Dawes et al., 2017). It is possible that a group of youth in the present study perceived that they are experiencing victimization, but that their peers

would disagree. This is especially possible given that bullies may demonstrate hostile attribution biases (i.e., inclination to interpret ambiguous social cues as hostile), allowing them to justify their behavior as a response to a perceived slight (de Castro, Veerman, Koops, Bosch, & Monshouwer, 2002). Nevertheless, when considered in the context of identification of bully-involved groups, studies on self- and peer-identified victims suggest the importance of multi-method assessment.

We found that eighth grade students were more likely than all other students to be classified as predominantly victimized. This result is interesting as it also appears difficult to interpret in the context of previous studies. As youth become more concerned with social status during the transition to middle school (LaFontana & Cillessen, 2010), frequency of victimization has been thought of as peaking during this time before declining throughout middle school and high school (see Juvonen & Graham, 2014, and Troop-Gordon, 2017, for reviews). Although person-centered methods have revealed that there are groups of youth who experience higher levels of victimization than their peers in middle school (e.g., see Brendgen et al., 2016; Ladd, Ettekal, & Kochenderfer-Ladd, 2017; Nylund et al., 2007; Sheppard, Giletta, & Prinstein, 2019), the prevalence rate of victimization often declines over time (Brendgen et al., 2016; Ladd et al., 2017; Sheppard et al., 2019), and the percentage of youth who are classified as uninvolved or ‘nonvictimized’ should rise throughout middle school (Nylund et al., 2007). As shown in Figure 1, the percentage of youth who were uninvolved remained relatively consistent in grades five through seven before decreasing in grade eight. Although the present finding appears curious in the context of the aforementioned studies, it must be noted that we did

not follow youth over time. As such, it is possible that there was a cohort effect in the present study. In other words, the mean level of victimization may have decreased over time for the current eighth grade class, but still be higher than in the other classes.

Another possibility is that, in school districts in which the transition from elementary to middle school occurs in fifth grade (as opposed to sixth or seventh), youth are developmentally less concerned about social status. Adolescents who participated in the current study started middle school in fifth grade. In many previous studies (Brendgen et al., 2016; Ladd et al., 2017; Nylund et al., 2007; Sheppard et al., 2019), the transition occurred after grade five. In cases in which the transition is delayed, angst regarding it – and the implied upending of the social order – may also be delayed.

Examining our finding regarding grade in the context of other studies of bully-involved groups is difficult as many only investigated students from one or two grades (Giang & Graham, 2008; Kochel et al., 2015; Lovegrove et al., 2012), did not examine grade effects (Bettencourt et al., 2013; Schwartz, 2000; Toblin et al., 2005; Ettekal & Ladd, 2017), or did not examine a comparable sample (i.e., grades four, five, and six; Williford et al., 2011). Thus, it appears that a necessary first step is, where applicable, to examine these effects. In one study in which grade effects were examined, Bettencourt and Farrell (2013) reported that eighth grade students were less likely than sixth grade students to be classified as aggressive-victims. One possible explanation for the present finding may be that the risk factor associated with membership in the predominant victim class changed over time. As seen in Appendix C, eighth grade students experienced significantly more internalizing problems than their peers in grades five through seven.

For some youth, a rise in internalizing problems may confer additional risk for membership in this group, an idea that future studies should examine.

We found that girls were more likely than boys to be classified as predominant victims. This finding adds mixture to a group of findings that is already mixed and difficult to compare. Some studies of bully-involved groups reported no gender differences in group membership (e.g., Bettencourt & Farrell, 2013; Williford et al., 2011), some did not examine gender as a covariate (e.g., Giang & Graham, 2008), one reported existence of a group almost entirely consisting of girls (i.e., relational aggressive-victims; Ettekal & Ladd, 2017), and one reported that girls were more likely than boys to be aggressive-victims (Bettencourt et al., 2013). As noted, there has been variability of methods in studies of bully-involved groups, and the present study is the first that uses a comprehensive self-report (i.e., measuring not just physical and verbal bullying and victimization, but also, relational and cyber forms) to establish groups. As such, one possible explanation for the present finding pertains to gender differences in the experiences of relational and cyber forms of victimization. Although effects have been small, girls may experience more relational and cyber victimization than boys (Card & Hodges, 2008; Rueger & Jenkins, 2014; Sun & Fan, 2018). Additionally, girls experience more internalizing problems than boys in adolescence (Jenkins & Curwen, 2008; Leadbeater, Kuperminc, Blatt, & Hertzog, 1999), which have been theorized to be the driving forces of distress in predominant victims (see Juvonen & Graham, 2014, for a review) and were associated with predominant victim status in the present study. Thus, girls may be more likely than boys to demonstrate these problems in response to

victimization, contributing to a bidirectional cycle in which someone is gossiped about or ostracized socially, appears sad or anxious, then continues to experience victimization (Reijntjes et al., 2010).

Risk Factors Associated With Membership In 'Bully-Involved' Groups

Emotion dysregulation (ED) was associated with membership in the bully-victim class over uninvolved. This finding is consistent with previous work with bully-involved groups (e.g., Bettencourt et al., 2013; Ettekal & Ladd, 2019; Lovegrove et al., 2012). ED has been theorized to play a major role in bully-victim status (Juvonen & Graham, 2014; Perry et al., 1990; Schwartz et al., 2001) as it is likely that bully-victims are involved in a cycle in which they are victimized, respond aggressively, and are victimized again (Reijntjes et al., 2011).

Notably, our finding regarding ED expands on previous literature in an important way. In studies of bully-involved groups – or victimization in general – ED was often conceptualized as pertaining to anger dysregulation and/or irritability (Bettencourt & Farrell, 2013; Ettekal & Ladd, 2019; Kaynak, Lepore, Kliever, & Jaggi, 2015). In the current study, ED was conceptualized as a combination of emotional control (i.e., the ability to assess socially inappropriate responses and expressions; example items include “*I have angry outbursts*” and “*I can be disruptive at the wrong times*”), emotional self-awareness (i.e., emotional recognition and awareness; example items include “*When I get upset, I can get over it quickly*” and “*I handle it well when things change*”), and situational responsiveness (i.e., social sensitivity and appropriate responding in social situations; example items include “*when others are upset, I become sad or concerned for*

them” and “*when other kids are friendly to me, I am friendly to them*”). It appears as if examining the degree to which *specific aspects* of ED are implicated in conferring risk is an interesting avenue for future research. For example, a student may be disruptive in class, annoy others, and engage in verbal or relational aggression in response to being teased. This may lead to peer rejection (i.e., being disliked), while the use of aggression toward other peers may qualify that student as an aggressive-victim. If that student then aggresses toward others perceived to be weaker in status as a way to compensate, then that student may also be a bully-victim. Along similar lines, another student may demonstrate lack of situational responsiveness by being emotionally distant from peers and teachers and appear worried in new situations, also leading to peer rejection and possible teasing. However, these emotional processes may confer risk for predominant victim status. Recent findings have established divergent validity for similar emotional processes (Monopoli et al., in press), suggesting that different forms of ED may confer different types of risk. Importantly, this is a possibility that researchers can explore in the context of membership in a bully-involved group.

Beliefs in support of aggression (i.e., that it is acceptable to use against others generally as well as in response to provocation) also conferred risk for membership in the bully-victim group over uninvolved. This finding is consistent with limited previous work (e.g., Bettencourt & Farrell, 2013) in which these types of beliefs were examined as correlates of membership in bully involved classes. Notably, Bettencourt and Farrell (2013) reported that, relative to uninvolved youth, aggressive-victims were more likely to hold beliefs in support of aggression *and* endorse aggressive responses to hypothetical

social scenarios that involved a provocation. Current findings extend previous work that linked actual aggressive behavior with beliefs (Elsaesser, Gorman-Smith, & Henry, 2013; Huesmann & Guerra, 1997; Lim & Ang, 2009) by also linking experience of victimization with these beliefs. From a social cognitive perspective (Crick & Dodge, 1994), one implication is that bully-victims wish to use aggression to accomplish social goals (e.g., higher social status, or just retaliation without being victimized further) that arise from being victimized. Within that perspective, it would appear as if bully-victims may have unrealistic outcome expectations regarding the consequences of their decision (Step 5: Response Decision; Crick & Dodge, 1994) and perhaps high self-efficacy for engaging in aggression effectively. However, it appears as if they may not use aggression effectively – or at least as effectively as those theorized to be bullies – as bully-victims continue to experience peer rejection (Ettekal & Ladd, 2019) and future victimization (Reijntjes et al., 2010). Linking relevant areas of Crick and Dodge's (1994) model with bully-victim status specifically may be an avenue for future research and perhaps an opening to adjusting interventions to meet the needs of bully-victims.

Internalizing problems conferred risk for predominant victim status. This is consistent with prior work that has linked anxiety and depression symptoms to victimization experience generally (see Hawker & Boulton, 2000, for a review; Reijntjes et al., 2010). Regarding the linkage between internalizing problems and status in a bully-involved group, results are consistent with Giang and Graham's (2008) finding that higher depressive symptoms were associated with status in highly victimized groups over uninvolved. Although Bettencourt et al. (2013) reported that depression and anxiety

symptoms were related to predominant victim status when examined separately, the effects became nonsignificant when examined in a multivariate model alongside anger dysregulation. Bettencourt et al. (2013) noted that that may have been due to the very high correlation (.72) between depression and anxiety in their study. As such, continuing to evaluate important risk factors together in order to discern which may be *most related* to at-risk status is an important endeavor.

The relations among internalizing problems and victimization appear transactional (Reijntjes et al., 2010). As youth appear sad or anxious in the context of relationships, they may engage in self-blame in response to conflict (Monti et al., 2017), which may be reinforcing for bullies and/or lead to social isolation and rejection (Ladd et al., 2019). One interesting avenue for future study may be exploring the degree to which the relations among internalizing problems and victimization may be due to negative perceptions of others' behavior. For example, youth may perceive that they are relationally or verbally victimized due to hostile attribution bias (Camodeca & Goossens, 2005), leading to further symptoms and isolation.

The use of a multivariate model – examining the effects of risk factors while controlling for others – is an important addition to the literature. In the present study, the multivariate approach revealed that ED and beliefs in support of aggression were associated with bully-victim status, but not predominant victim status; and that internalizing problems were associated with predominant victim status, but not bully-victim status. This suggests different risks for each class. It is interesting to note that, although the effects (ORs ranging from 1.12 to 1.36) were small, even slight changes in

an adolescent's response pattern can increase their chance of membership in a bully-involved group. For example, response choices on the present measure of internalizing problems were zero (not true), one (somewhat true) or two (certainly true). If an adolescent changed endorsement of just one item (e.g., being depressed or tearful) from zero to one, the odds of that adolescent being classified as a predominant victim would increase 36 percent. Practically, this may provide some hope for practitioners as the implication is that even seemingly small changes in select risk factors can decrease the odds of being classified in one of these groups.

Protective Factors That Buffered Risk for 'Bully-Involved Status'

Willingness to seek help (WTSH) lessened risk conferred by the risk factors for bully-victim status. Although WTSH was not a statistically significant correlate of predominant victim status, a nonsignificant trend emerged ($p = .07$) between it and membership in that group. Notably, WTSH refers to students' trust in staff and belief that they will manage incidences of bullying appropriately (e.g., example items include 'teachers here make it clear to students that bullying is not tolerated'; 'there are adults at this school I could turn to if I had a personal problem'). As such, the finding that WTSH buffered risk points to the importance of fostering a school climate in which students feel connected to staff as well as other peers. This finding appears consistent with social bonding theory (Hirschi, 1969), proponents of which would suggest that positive bonds with others at school help lower risks for bullying behavior by promoting an atmosphere in which it is seen as non-normative. This may help account for why WTSH might be more protective for bully-victims than predominant victims; a positive climate in which

bullying is perceived as atypical might make a bully less likely to bully, but a student who experiences victimization will report it nonetheless. Still, a belief that others at school will be helpful in managing that experience may help a student cope with victimization, contributing to the trend found in the current study. Nevertheless, current results should be interpreted with caution pending replication in future studies. Although the idea that positive school climate is negatively associated with bullying and victimization is not new (see Espelage & Hong, 2019, for a review), present findings expand on previous work by investigating protective effects for different groups, and by using multivariate models to examine relative effects.

One moderating relation emerged when examining protective factors for membership in a bully involved group. WTSH buffered the risk conferred by ED specifically at lower levels of dysregulation (thus, *better regulation*). However, at higher levels of dysregulation (and thus, *worse regulation*), WTSH did not buffer risk conferred by ED. Thus, it appears that the buffering effect of WTSH may be contingent upon attaining a specific degree of emotion regulation. In the context of social bonding theory (Hirschi, 1969), worse regulation may make it more difficult to form positive relationships and trust others – thus, making aggressive behavior more likely. Further, as an adolescent displays more dysregulation, he or she may increasingly become more involved in bullying and victimization, contributing to a cycle in which that adolescent experiences more conflict with others, lowers others' expectations for them (thus, leading to a decrease in opportunities to develop a positive relationship), and continues to engage in bullying (Espelage, Polanin, & Low, 2014; Longobardi, Iotti, Jungert, & Settanni,

2018). In contrast, increased levels of regulation may suggest that, despite engaging in bullying behavior and experiencing victimization, bully-victims are able to develop beliefs that others can be trusted and that staff make genuine efforts to combat bullying. Pending additional study of these processes, it may be that youth with acute ED problems would benefit first from addressing those problems before they are able to profit from universal or targeted school-based bullying interventions.

It is worth noting that, of the hypothesized protective factors, only WTSH had a buffering effect. This again demonstrates the importance of using multivariate models to investigate correlates of bully-involved groups. For example, parental warmth and parental involvement were both negatively correlated with bullying and victimization. Messages that caregivers promulgate may certainly be relevant to youth behavior (Kawabata, Alink, Tseng, van Ijzendoorn, & Crick, 2011; Vieno, Nation, Pastore, & Santinello, 2009) but as they pertain to bullying and victimization, aspects of school climate – specifically, WTSH – may be more proximal to the outcome. Thus, modifying aspects of school climate may bear the most fruit in lowering risk for bullying and victimization. Of course, present results must first be replicated as, to my knowledge, relative effects of protective factors have not been examined in any previous study.

Protective Factors As Risk Factors

In examining which hypothesized protective factors buffered risk, an unusual finding emerged. Higher friendship quality – the perceived degree of closeness with a best friend (Cuadros & Berger, 2016) – was positively associated with bully-victim status, although unrelated to predominant victim status. This is counter to a considerable

bulk of work which demonstrates that friendship quality is negatively associated with bullying and victimization (e.g., see Bollmer et al., 2005; Crawford & Manassis, 2011; Cuadros & Berger, 2016; Hodges et al., 1999; Kendrick, Jutengren, & Stattin, 2012). It is difficult to determine what may have led to the inverse relationship in the present study, as definitions of friendship quality and sample characteristics appear relatively similar across the aforementioned studies. It is, however, worth noting that bullying and victimization were examined continuously in previous studies that incorporated friendship quality. It may be that friendship quality is protective at lower levels of bullying and victimization – but, at levels necessary to be classified as a bully-victim in the present study, it confers risk. Youth who demonstrate these levels of bullying and victimization, and endorse having high quality friendships, might be more likely than other youth to use that friendship to plan retaliatory behavior. This may be consistent with the possibility that youth who engaging in bullying behavior find friends who also engage in it. Importantly, the relation between friendship quality and membership in bully involved groups needs further study, as only one group of authors (Kochel et al., 2015) examined the degree to which presence of friendship buffered risk for future peer rejection among bullies, bully-victims, and victims.

Implications

Present findings have several implications for intervention. First, it must be noted that although programs that are largely universal have had small effects, noted heterogeneity in bullying experiences may be only one of many reasons for this. As such, as others have suggested (Ettekal & Ladd, 2019), these types of approaches should not be

cast aside on a whim in favor of strictly targeted interventions. As bullying goes beyond a two-person dyad, approaches that combine a variety of perspectives and acknowledge that several factors contribute to bullying are most likely to succeed.

Present findings that there were different risk factors for different bully-involved groups suggest that these factors ought to be considered when determining how to best intervene with at-risk youth. Once groups of at-risk youth are determined, researchers and practitioners may wish to address these risk factors as part of a targeted intervention. In the present study, ED and beliefs in support of aggression were associated with bully-victim status; and internalizing problems were associated with predominant victim status. It may be prudent to first utilize screening strategies to determine who is at risk, specifically in the case of ED as youth who are particularly dysregulated (i.e., an average score of 1 SD above the mean) may not be able to initially benefit from protective factors. One specific strategy that may be relevant these youth is school-based dialectical behavioral therapy (Zapolski & Smith, 2017), in which students develop emotional awareness and regulation skills. Other possibilities that may apply to the risk factors studied here include exploration of outcome expectancies and self-efficacy for engaging in aggressive behavior (Crick & Dodge, 1994) within a motivational framework (Walton et al., 2014), or other treatments for internalizing problems (e.g., Higa-McMillan, Francis, Rith-Najarian, & Chorpita, 2016; Weersing, Jeffreys, Do, Schwartz, & Bolano, 2017). Of course, if these strategies are to be implemented as part of targeted interventions, groups must be first established and an appropriate timeline for the intervention must be set. As such, a critical avenue for future work will be further

exploration of the stability of these groups, an area that is presently understudied (but see Bettencourt et al., 2013, for an exception). Regardless, strategies discussed here are only the start of the possibilities; it is critical that school officials select strategies that best fit their school's culture and their students' needs (Astor, Meyer, Benbenishty, Marachi, & Rosemond, 2005).

WTSH buffered risk for bully-victim status. The importance of bolstering student/staff relationships – and school climate more broadly – is not only a main implication of the social-ecological perspective (Espelage & Swearer, 2010), but has also been a recommendation that students have made in focus groups (Cunningham, Mapp, et al., 2016). If students perceive that there will be appropriate consequences for bullying, bullies may be less likely to engage in the behavior and the students they bully may have more options to help them cope effectively. Along similar lines, there is also an opportunity to incorporate bystanders into interventions, as this is an area that has shown promise (Polanin, Espelage, & Pigott, 2012). The uninvolved group accounted for just over 85% of the sample in the present study, and future work should examine the degree to which their presence can be leveraged for good. If both peers and staff members are able to establish a norm in which bullying is not acceptable, youth may be less likely to engage in the behavior.

The focus on improving school climate is important because it illuminates other broader recommendations for school officials. Interventions will only show desirable effects to the degree that staff agree on the need for them and further are empowered to devote adequate time to them (Ansary, Elias, Greene, & Green, 2015; Cunningham,

Rimas, et al., 2016). Additionally, care should be taken to ensure that interventions have engaging content and are age-appropriate (Ansary et al., 2015; Cunningham, Mapp, et al., 2016).

Limitations and Future Directions

There are a few limitations to this study that must be noted. First, self-report was used to measure bullying and victimization, as well as the hypothesized risk and protective factors. Although this is a valid and recommended way to assess the variables of interest in this age group (Card & Hodges, 2008; Silverman & Ollendick, 2005), incorporation of peer and/or teacher report would provide further context for understanding victimization (and thus, the degree to which potential differences between self-identified victims and peer-identified victims may have contributed to the finding of a lack of a bully class). As such, it will be important to replicate the current study while incorporating multi-method assessment. Second, a cross-sectional design was utilized in the present study. In theory, risk and protective factors are uncovered temporally prior to an outcome's occurrence (Rose et al., 2004) and as such a longitudinal design should be considered in future studies. Third, the study sample was ethnically homogenous as 92.1% of participants identified as European-American. Although other demographic characteristics (e.g., percent of students qualifying for free or reduced price lunch) of the present study's sample are relatively similar to those of previous studies, potential cultural differences in each school and each district must be acknowledged (Ansary et al., 2015) in interpreting findings and particularly when discussing generalizability.

Additional ideas for future directions that warrant mention include, first,

continued exploration of protective factors using multivariate models. This will enable researchers and practitioners to determine which factors may be most potent in buffering risk. Second, it may be prudent to address additional risk factors that contribute to bully-involved status (e.g., peer rejection; Ettekal & Ladd, 2019) in future studies as the current list was intended to be comprehensive, but is by no means exhaustive.

Conclusion

Present findings of a three-class solution (bully-victims, predominant victims, and noninvolved youth) and different patterns of associations among risk and protective factors and these groups extend prior work on heterogeneity in bullying involvement. Specifically, present findings extend prior work by establishing groups on the basis of a comprehensive self-report measure by including examination of protective factors, and by utilizing multivariate models to examine effects of those factors. Present findings must be replicated, but in the meantime help illuminate a path forward for how interventions might reach these at-risk youth.

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Appendix A

Factor Analytic Background of the Problem Behavior Frequency Scales-Adolescent Report (PBFS-AR)

As I was preparing this defense document, I learned of a recent study (i.e., Farrell et al., in press), in which the authors explored the factor structure of the version of the PBFS that was used in this dissertation. In their study published in 2016, Farrell and colleagues found support for a five-factor model of aggression and victimization (i.e., physical aggression, verbal aggression, relational aggression, overt victimization, and relational victimization). Farrell and colleagues then revised the measure to add items while subtracting others. Notably, they added a cyber-aggression as well as a cyber-victimization scale and recommended their use in the newest (Farrell et al., in press) version.

However, Farrell et al. (in press) reported that “although both the CFA and EFAs supported separate factors for physical and relational aggression, items representing verbal forms of aggression did not clearly fit into this structure,” (p. 6). As such, Farrell et al. (in press) recommended removal of the verbal aggression items from the PBFS-AR.

In an effort to ascertain whether to retain the verbal aggression scale in the present study, I conducted an EFA and compared the factor loadings in my study to those of Farrell et al. (in press). Results can be seen in Appendix B. In short, the number of eigenvalues suggested no more than two factors, at first replicating Farrell et al.’s (in press) results. However, the nature of the factor loadings was considerably different in my study. Farrell et al. (in press) reported that item 30 (thought to be on the physical

aggression subscale) cross-loaded but retained it in additional analyses. In the present study, I found that item 30 loaded clearly on factor 2. Of the items thought to be on the verbal aggression subscale, item 6 loaded on factor 1 in Farrell et al.'s (in press) study; here, it loaded on factor 2. Farrell et al. (in press) reported that items 12, 16, 17, and 20 cross-loaded; here, each loaded clearly on factor 2. Based on these patterns, I elected to retain the verbal aggression items as they load on the two factors in my EFA.

Appendix B

Comparison of EFA factor loadings in the present study with those in Farrell et al. (in press)

Appendix B – Table 1

PBFS Factor Loadings in Present Study (Highlighted in Green; Left) and in Farrell et al. (in press) (Highlighted in Yellow; Right)

Items	Factor 1	Factor 2	Factor 1	Factor 2
PBFS 10 – How often have you hit or slapped someone?	.935*	-.011	1.035*	-.0225
PBFS 11 – How often have you thrown something at someone to hurt them?	.656*	.271*	.642*	.151*
PBFS 15 – How often have you threatened to hit or physically harm someone?	.568*	.303*	.682*	.181*
PBFS 18 – How often have you shoved or pushed someone?	.677*	.186*	.850*	-.0006
PBFS 30 – How often have you threatened someone with a weapon?	.272*	.572*	.374*	.349*
PBFS 6 – How often have you put someone down to their face?	.311*	.554*	.703*	0.054
PBFS 7 – How often have you yelled at someone or called them mean names?	.494*	.378*	.805*	0.011
PBFS 12 – How often have you said something disrespectful to someone about their family?	.199*	.570*	.386*	.467*
PBFS 16 – How often have you picked on someone?	.169*	.658*	.440*	.436*
PBFS 17 – How often have you made fun of someone to make others laugh?	0.054	.780*	.316*	.546*
PBFS 20 – How often have you teased someone to make them angry?	.271*	.609*	.486*	.399*
PBFS 1 – How often have you told someone you wouldn't like them unless they did what you wanted?	0.068	.623*	0.005	.734*
PBFS 2 – How often have you spread a false rumor about someone?	-.037	.719*	0	.752*
PBFS 5 – How often have you tried to keep others from liking another kid by saying mean things about him or her?	-.052	.714*	-.011	.901*
PBFS 14 – How often have you left someone out on purpose when it was time to do an activity?	-.0005	.807*	.153*	.629*
PBFS 24 – How often have you not let someone be in your group anymore because you were made at them?	-.084	.821*	0.096	.662*

Note. * = $p < .05$. Factor 1 = physical bullying. Factor 2 = verbal and relational bullying. Only items pertaining to physical, verbal, and relational bullying were included in the analysis. Fit indices in present study (highlighted in green on the left): RMSEA = .045 (good), CFI = .988 (good). In Farrell et al. (in press), Factor 1 = physical aggression. Factor 2 = items that measured verbal and relational aggression. Items 6, 7, 12, 16, 17, and 20 were originally hypothesized to measure verbal aggression. Fit indices: RMSEA = .032 (good), CFI = .985 (good).

Appendix C

Results of Independent Samples t-test Comparing Levels of Internalizing Symptoms in Eighth Grade Students to Students in Grades Five Through Seven

	M	SD	<i>t</i>	df	<i>p</i>	Mean difference
Grades 5-7	6.63	3.78	-4.25	744	< .001	-1.35
Grade 8	7.98	3.82				

Note. M and SD values are scores on the SDQ measure as described in the Method section.

Appendix D

Copies of Instruments Used in the Present Study (note: names of instruments were not provided to participants)

DEMOGRAPHICS**PLEASE MARK YOUR SEX:**

____ MALE

____ FEMALE

____ OTHER (WRITE IN)

____ PREFER NOT TO ANSWER

PLEASE MARK YOUR RACE:

____ WHITE

____ AFRICAN-AMERICAN/BLACK

____ AMERICAN INDIAN OR ALASKA NATIVE

____ ASIAN-AMERICAN

____ NON-WHITE HISPANIC

____ NATIVE HAWAIIAN OR OTHER PACIFIC ISLANDER

____ MULTI-RACIAL

____ OTHER/NOT LISTED HERE (WRITE IN)

PLEASE CHECK HOW OLD YOU ARE

____ 11

____ 12

____ 13

____ 14

____ 15

PLEASE CHECK YOUR GRADE

____5

____6

____7

____8

Emotion Regulation Index for Children and Adolescents

Instructions: Please rate the following items according to this scale:

1 = strongly disagree 2 = disagree 3 = half and half 4 = agree 5 = strongly agree

1. I am a happy person.	1	2	3	4	5
2. When adults are friendly to me, I am friendly to them.	1	2	3	4	5
3. I handle it well when things change or I have to try something new.	1	2	3	4	5
4. When I get upset, I can get over it quickly.	1	2	3	4	5
5. When things don't go my way, I get upset easily.	1	2	3	4	5
6. When other kids are friendly to me, I am friendly to them.	1	2	3	4	5
7. I have angry outbursts.	1	2	3	4	5
8. I enjoy seeing others hurt or upset.	1	2	3	4	5
9. I can be disruptive at the wrong times.	1	2	3	4	5
10. I get angry when adults tell me what I can and cannot do.	1	2	3	4	5
11. I am a sad person.	1	2	3	4	5

12. I have trouble waiting for something I want.	1	2	3	4	5
13. I am quiet and shy, and I don't show my feelings.	1	2	3	4	5
14. I do things without thinking about them first.	1	2	3	4	5
15. When others are upset, I become sad or concerned for them.	1	2	3	4	5
16. I annoy others by not minding my own business.	1	2	3	4	5

Social and Health Assessment – Parental Warmth and Parental Involvement

Instructions: Please rate the items thinking about your parent(s) or whoever takes care of you at home. Please rate the following items according to this scale:

1 = never 2 = rarely 3 = sometimes 4 = often

1. My parent(s) is/are interested in my friends.	1	2	3	4
2. My parent(s) show their love for me.	1	2	3	4
3. My parent(s) spends free time with me.	1	2	3	4
4. My parent(s) encourages interest in different things.	1	2	3	4
5. My parent(s) are kind to me.	1	2	3	4
6. My parent(s) ask about my life.	1	2	3	4
7. My parent(s) make me feel good when I am with them.	1	2	3	4
8. My parent(s) spends time on activities at school.	1	2	3	4
9. My parent(s) hug or kiss me.	1	2	3	4
10. My parent(s) are proud of me.	1	2	3	4
11. My parent(s) give good advice.	1	2	3	4

Strength and Difficulties Questionnaire

Instructions: For each item, please mark the box for Not True, Somewhat True or Certainly True. Please answer all items as best you can even if you are not absolutely certain. Please give your answers on the basis of how things have been for you over the last six months.

0 = Not True 1 = Somewhat True 2 = Certainly True

1. I have one good friend or more.	0	1	2
2. I worry a lot.	0	1	2
3. I would rather be alone than with people of my age.	0	1	2
4. Other people my age generally like me.	0	1	2
5. I am nervous or clingy in new situations.	0	1	2
6. I have many fears, I am easily scared.	0	1	2
7. Other children or young people pick on me or bully me.	0	1	2
8. I get a lot of headaches, stomachaches, or sickness.	0	1	2
9. I get along better with adults than with people my own age.	0	1	2

10. I am often unhappy, depressed, or tearful.	0 1 2
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Friendship Quality Survey

Instructions: Please rate the following items, thinking about interactions with your **best friend.**

Remember: 1 = very little 2 = a little 3 = somewhat 4 = much 5 = very much

1. How much of your feelings do you tell your friend?	1	2	3	4	5
2. How much of his/her feelings does your friend tell you?	1	2	3	4	5
3. How much personal (or private) information do you tell your friend?	1	2	3	4	5
4. How much personal (or private) information does YOUR FRIEND TELL YOU?	1	2	3	4	5
5. How much do you feel accepted by your friend?	1	2	3	4	5
6. How much do you feel that you are cared for and supported by your friend?	1	2	3	4	5
7. How well do you feel your friend understands you when talk about private/personal issues?	1	2	3	4	5

8. Compared to all your other friendships, how much do you appreciate your friendship with this friend?	1	2	3	4	5
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FOR THE NEXT ITEM, PLEASE USE THE FOLLOWING SCALE:

1 = not close 2 = a little close 3 = somewhat close 4 = close 5 = very close

9. How close would you say the relationship is with your best friend?	1	2	3	4	5
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Normative Beliefs About Aggression Scale

Instructions: Please rate the following items according to this scale:

1 = It's perfectly OK 2 = It's Sort of OK 3 = It's sort of wrong 4 = It's really wrong

1. In general, it is wrong to hit other people.	1	2	3	4
4. If you're angry, it is OK to say mean things to other people.	1	2	3	4
15. In general, it is OK to yell at others and say bad things.	1	2	3	4
16. It is usually OK to push or shove other people around if you're mad.	1	2	3	4
17. It is wrong to insult other people.	1	2	3	4
18. It is wrong to take it out on others by saying mean things when you're mad.	1	2	3	4
19. It is generally wrong to get into physical fights with others.	1	2	3	4
20. In general, it is OK to take your anger out on others by using physical force.	1	2	3	4

School Climate Bullying Survey

Instructions: Please rate the following items according to this scale:

1 = strongly disagree 2 = disagree 3 = agree 4 = strongly agree

1. Students here often get put down because of their race or ethnicity.	1	2	3	4
2. If I tell a teacher that someone is bullying me, the teacher will do something to help.	1	2	3	4
3. Bullying is a problem at this school.	1	2	3	4
4. If another student brought a gun to school, I would tell one of the teachers or staff at school.	1	2	3	4
5. If another student talked about killing someone, I would tell one of the teachers or staff at school.	1	2	3	4
6. Students here try to stop bullying when they see it happening.	1	2	3	4
7. There is a lot of teasing about sexual topics at this school.	1	2	3	4
8. Students tell teachers when other students are being bullied.	1	2	3	4

9. The teachers at this school are genuinely concerned about me.	1	2	3	4
10. Students here often get teased about their clothing or physical appearance.	1	2	3	4
11. There are adults at this school I could turn to if I had a personal problem.	1	2	3	4
12. If another student was bullying me, I would tell one of the teachers or staff at school.	1	2	3	4
13. Teachers here make it clear to students that bullying is not tolerated.	1	2	3	4

Problem Behavior Frequency Scales

Instructions: Please answer the following questions about bullying. *Bullying is when you keep doing mean things to someone else over and over. Bullying often happens when one child is stronger, bigger, or more popular than the other one. Bullying involves actions like hitting, pushing, threatening, making fun of others, spreading rumors, leaving others out on purpose, or sending hurtful messages over a computer or cell phone.*

For the following questions, please CIRCLE how many times you bullied other kids, or been bullied, in the last 30 DAYS. Remember this scale:

1 = never, 2 = 1-2 times, 3 = 3-5 times, 4 = 6-9 times, 5 = 10-19 times, 6 = 20 or more times	
1. How often have you told someone you wouldn't like them unless they did what you wanted?	1 2 3 4 5 6
2. How often have you spread a false rumor about someone?	1 2 3 4 5 6
4. How often have you used cell phone pictures to make fun of someone?	1 2 3 4 5 6
5. How often have you tried to keep others from liking another kid by saying mean things about him or her?	1 2 3 4 5 6
6. How often have you put someone down to their face?	1 2 3 4 5 6

1 = never, 2 = 1-2 times, 3 = 3-5 times, 4 = 6-9 times, 5 = 10-19 times, 6 = 20 or more times						
7. How often have you yelled at someone or called them mean names?	1	2	3	4	5	6
9. How often have you used text-messaging to threaten to hurt someone physically?	1	2	3	4	5	6
10. How often have you hit or slapped someone?	1	2	3	4	5	6
11. How often have you thrown something at someone to hurt them?	1	2	3	4	5	6
12. How often have you said something disrespectful to someone about their family?	1	2	3	4	5	6
13. How often have you used a chat room or Internet website to make fun of someone?	1	2	3	4	5	6
14. How often have you left someone out on purpose when it was time to do an activity?	1	2	3	4	5	6
15. How often have you threatened to hit or physically harm someone?	1	2	3	4	5	6
16. How often have you picked on someone?	1	2	3	4	5	6
17. How often have you made fun of someone to make others laugh?	1	2	3	4	5	6

1 = never, 2 = 1-2 times, 3 = 3-5 times, 4 = 6-9 times, 5 = 10-19 times, 6 = 20 or more times						
18. How often have you shoved or pushed someone?	1	2	3	4	5	6
19. How often have you used cell phone pictures to threaten to hurt someone physically?	1	2	3	4	5	6
20. How often have you teased someone to make them angry?	1	2	3	4	5	6
21. How often have you used text-messaging to make fun of someone?	1	2	3	4	5	6
24. How often have you not let someone be in your group anymore because you were mad at them?	1	2	3	4	5	6
30. How often have you threatened someone with a weapon (gun, knife, club, etc.)?	1	2	3	4	5	6
42. How often has someone threatened to hit or physically harm you?	1	2	3	4	5	6
43. How often has someone who was mad at you tried to get back at you by not letting you be in their group?	1	2	3	4	5	6

1 = never, 2 = 1-2 times, 3 = 3-5 times, 4 = 6-9 times, 5 = 10-19 times, 6 = 20 or more times						
44. How often has someone put you down to your face?	1	2	3	4	5	6
46. How often has someone used cell phone pictures to make fun of you?	1	2	3	4	5	6
48. How often has someone pushed or shoved you?	1	2	3	4	5	6
49. How often has someone said something disrespectful to you about your family?	1	2	3	4	5	6
50. How often has someone used text-messaging to threaten to hurt you physically?	1	2	3	4	5	6
51. How often has someone threatened or injured you with a weapon (gun, knife, club, etc.)?	1	2	3	4	5	6
52. How often has someone said they wouldn't like you unless you did what he or she wanted?	1	2	3	4	5	6
53. How often has someone threw something at you to hurt you?	1	2	3	4	5	6
54. How often has someone teased you to make you mad?	1	2	3	4	5	6

1 = never, 2 = 1-2 times, 3 = 3-5 times, 4 = 6-9 times, 5 = 10-19 times, 6 = 20 or more times						
55. How often has someone made fun of you to make others laugh?	1	2	3	4	5	6
57. How often has someone used cell phone pictures to threaten to hurt you physically?	1	2	3	4	5	6
58. How often has someone yelled at you or called you mean names?	1	2	3	4	5	6
61. How often has someone left you out on purpose when it was time to do an activity?	1	2	3	4	5	6
63. How often has someone spread a false rumor about you?	1	2	3	4	5	6
64. How often has someone tried to keep others from liking you by saying mean things about you?	1	2	3	4	5	6
65. How often has someone hit you hard enough to hurt?	1	2	3	4	5	6
66. How often has someone used text-messaging to make fun of you?	1	2	3	4	5	6
67. How often has someone used a chat room or Internet website to make fun of you?	1	2	3	4	5	6

1 = never, 2 = 1-2 times, 3 = 3-5 times, 4 = 6-9 times, 5 = 10-19 times, 6 = 20 or more times						
69. How often have you called someone you know mean names online like on Facebook or Snapchat or through texting?	1	2	3	4	5	6
70. How often have you pretended to be someone else online or through texting?	1	2	3	4	5	6
71. How often have you left someone out of an online group or unfriended/unfollowed them?	1	2	3	4	5	6
72. How often have you sent or posted embarrassing pictures of someone without their permission?	1	2	3	4	5	6
73. How often have you posted rude comments about someone you know online?	1	2	3	4	5	6
74. How often have you spread rumors about someone you know online or through texting?	1	2	3	4	5	6
75. Has someone sent or posted embarrassing pictures of you without your permission?	1	2	3	4	5	6

1 = <i>never</i> , 2 = <i>1-2 times</i> , 3 = <i>3-5 times</i> , 4 = <i>6-9 times</i> , 5 = <i>10-19 times</i> , 6 = <i>20 or more times</i>						
76. Has someone called you mean names online or using a cell phone?	1	2	3	4	5	6
77. How often has someone pretended to be someone else online or using a cell phone to trick you?	1	2	3	4	5	6
78. How often has someone left you out of an online group or unfriended/unfollowed you?	1	2	3	4	5	6
79. How often has someone posted rude comments about you online?	1	2	3	4	5	6
80. How often has someone spread rumors about you online or by texting?	1	2	3	4	5	6

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