

IMPLICATIONS OF YOUTH BULLYING ON MENTAL HEALTH

IMPLICANCIAS DEL BULLYING SOBRE LA SALUD MENTAL DE LOS ADOLESCENTES

Judith A. Vessey

PhD, MBA, RN, FAAN Boston College, William F. Connell School of Nursing

Amanda Lulloff

MSN, PhD, RN Boston College, William F. Connell School of Nursing

Luz Hernández Meneses

MA in Demography, MA in International Law, Doctoral Student in International Welfare Boston College. School of Social Work

Tania D. Strout

PhD, RN, MS Maine Medical Center, Department of Emergency Medicine Tufts University School of Medicine

Rachel L. DiFazio

PhD, RN, FAAN, Department of Orthopedics, Boston Children's Hospital

Artículo recibido el 24 de marzo 2016. Aceptado en versión corregida el 13 de abril 2016.

ABSTRACT

Introduction: Youth bullying is an international phenomenon that has similar mental health implications in different populations globally. The purpose of this literature review is to describe bullying and its impact on youths' mental health, examines the state of science on bullying interventions, and describes implications for nursing for addressing this problem.

Methodology: Four international databases were searched for all English and Spanish language articles including youth bullying and mental health effects. Articles chosen for review included meta-analyses, and systematic and integrated reviews which focused on youth bullying and mental health. **Discussion/Conclusions:** Findings indicated that youths who differed from their peers in some way are at high risk of being a victim of bullying. Victims of bullying can display externalizing behaviors such as aggression, but more commonly display internalizing behavior such as withdrawal, and increasing suicidality. Nurses, in schools or other community settings, as well as primary and acute care are well positioned to help identify victims of bullying and to intervene, potentially reducing or eliminating the long term negative mental health effects of bullying. Future research should focus on groups likely to be bullied but not yet extensively studied, like lesbian, gay, bisexual, queer, transgender youth and those with autism spectrum disorders. More effective interventions are needed to decrease the prevalence of bullying and reduce the effect of bullying on victims.

Key words: Bullying, mental health, nursing implications, youth.

DOI UC: 10.7764/Horiz Enferm.27.1.9

RESUMEN

Introducción: El bullying en adolescentes es un fenómeno internacional cuyas implicaciones sobre la salud mental son similares en distintas poblaciones a nivel global. El propósito de esta revisión bibliográfica es describir el concepto de bullying y su impacto sobre la salud

mental de los jóvenes'. Asimismo, examinar el estado de la ciencia en relación con las intervenciones en casos de bullying y describir las implicaciones que tiene para la enfermería el abordaje de este problema. **Metodología:** Se efectuó la búsqueda en cuatro bases de datos internacionales de todos los artículos escritos en inglés y en español que incluyeran efectos sobre la salud mental y bullying en adolescentes. Los artículos seleccionados para esta revisión incluyeron tanto metaanálisis como revisiones sistemáticas e integradas enfocadas de manera fundamental a los aspectos de bullying en adolescentes y la salud mental. **Discusión / Conclusiones:** Se encontró que aquellos jóvenes que tienen características diferentes de sus compañeros se encuentran de alguna manera en alto riesgo de ser víctimas de bullying. Estas víctimas pueden mostrar conductas de externalización como agresión, y conductas de internalización como retraimiento y más comúnmente, tendencias suicidas. Las enfermeras, tanto en escuelas como en otras instalaciones comunitarias, tanto en cuidados primarios como agudos se encuentran bien capacitadas para ayudar a identificar a las víctimas de bullying y para intervenir reduciendo potencialmente e incluso eliminando los efectos negativos del bullying sobre la salud mental a largo plazo. Las futuras investigaciones deberán centrarse en los grupos susceptibles de ser intimidados y los cuales aún no han sido suficientemente estudiados, como aquellos de jóvenes lesbianas, gays, bisexuales, transexuales y personas con trastornos del espectro autista. Intervenciones más eficaces para disminuir la prevalencia del bullying y reducir el efecto de la intimidación sobre las víctimas son necesarias.

Palabras clave: Violencia, salud mental, implicaciones para enfermería, adolescentes.

DOI UC: 10.7764/Horiz Enferm.27.1.9

INTRODUCTION

Bullying is a critical issue influencing the health of youths internationally and is considered a major public health problem across the globe⁽¹⁾. Exposure to bullying behavior threatens the well-being of targeted youths and results in a wide-range of significant academic, physical, and mental health problems⁽²⁻⁷⁾. Moreover, the emotional and behavioral difficulties arising following exposure to bullying during childhood are known to contribute to poorer life outcomes throughout adulthood^(8, 9). The association of bullying with impaired psychosocial adjustment and mental health disorders is remarkably similar across countries⁽³⁾.

The term bullying has been defined somewhat differently by various national and international policy groups. Generally, although not universally, for behavior to be labeled 'bullying', it needs to meet the following three criteria: 1) the behavior is intentional, 2) that a power differential exists

between the instigator and the recipient, and 3) the behavior is repeated⁽¹⁰⁾. For the purpose of this paper, and in absence of a World Health Organization definition, the United States Centers for Disease Control definition of bullying is used. It states: "Bullying is any unwanted aggressive behavior(s) by another youth or group of youths who are not siblings or current dating partners that involves an observed or perceived power imbalance and is repeated multiple times or is highly likely to be repeated"⁽¹⁰⁾.

Most often, bullying activity is classified as being direct or indirect⁽¹¹⁻¹³⁾. While direct forms of bullying are overt and easily identifiable (e.g., physical aggression, name-calling, and threats), indirect forms may be more subtle, involving relational manipulation and including behaviors such as backstabbing, rumor spreading, and exclusion from the larger social group⁽¹⁴⁾. Most commonly, direct forms of bullying include efforts to intimidate, humiliate, or belittle a victim in front of others, while

indirect methods are intended to damage a victims' social reputation or standing within a group⁽¹³⁾. In addition, the context in which bullying behavior takes place is important. While most research has been conducted in school settings where youths interact with their peers directly, the online environment increasingly provides an electronically mediated context for cyberbullying to occur⁽¹⁵⁾. Victimized youths may experience both traditional (face-to-face) and cyber-mediated bullying concurrently⁽¹⁶⁾.

Prevalence studies have used different definitions of bullying and surveillance procedures that have resulted in a wide range of estimates of the occurrence of bullying. Seven to 70% of school-aged youths have reported having experienced or observed some form of bullying behavior^(13,17). In general, most westernized countries report rates ranging around 20%; the highest rates are reported by sub-Saharan African countries⁽¹⁸⁻²¹⁾. Across Central and South America, rates of bullying are reportedly just under 50%, although there are significantly less data available from this region^(22,23).

It is critically important that nurses and other healthcare providers understand the relationship between exposure to bullying and its impact on the mental health of youths. The objectives of this paper are: 1) to review selected key reports on bullying and its sequelae for youths' mental health, 2) to examine the state of the science on bullying interventions, and 3) to describe implications for nurses and other health professionals as they work to address this critical public health problem.

METHOD

Design and Inclusion Criteria

To evaluate the current state of knowledge regarding the mental health sequelae associated with bullying, we appraised integrative and systematic reviews as well as meta-analyses published in refereed journals that specifically addressed youth bul-

lying and the mental or psychological health consequences of youth bullying. This approach allowed for a rigorous representation of the concepts of interest and their components, permitting the analysis and synthesis of key constructs. Papers were excluded if they did not conform to the systematic review, integrative review, or meta-analytic formats of interest or if the population considered was adults. Because youth bullying is an international problem, all refereed articles written in English and Spanish were included provided they could be accessed electronically. The evidence indicates that causes and manifestations of bullying are more similar across countries than different. This approach allowed for the analysis and synthesis of the greatest representation of mental health risks associated with youth bullying⁽²⁴⁾.

Search Strategies, Critique and Synthesis Methods

The literature search for this integrative review was conducted in four international databases: CINAHL, Medline, Psych Abstracts/PsychInfo, and SciELO. These databases were searched using a combination of keywords 'bullying' and 'mental health,' 'psychosocial problems,' 'psychosomatic,' 'depression,' 'anxiety,' or 'suicide,' for the years 2005 through 2015.

Manual searches of the reference lists of identified review articles were also conducted. Attempts were made to be as inclusive as possible, however the conclusions were drawn only from the retrieved literature and thus may not be completely representative of all mental health consequences of youth bullying.

All titles of articles returned from the search were reviewed. Abstracts for all articles with titles not explicitly meeting exclusion criteria were reviewed. If the abstract met the inclusion criteria, or it was unclear, the entire article was reviewed. All articles were reviewed chronologically and conceptually to ascertain how each contributed to our understanding of the

relationship between mental health and bullying among youths and the current state of the science as well as to provide direction for future study. Articles were reviewed for their design, population, setting, constructs under study, and key findings. Articles were categorized into factors predisposing a youth to be bullied and/or be a bully, the mental health outcomes of bullying behavior, and interventions for bullying; some articles fell into more than one category.

Research reported in this publication was supported by the Eunice Kennedy Shriver National Institute of Child Health & Human Development of the National Institutes of Health under Award Number R21HD093988. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

FINDINGS

Our database search initially returned 6,605 articles. When we applied the exclusion criteria and removed duplicates, our final sample included a total of 54 articles: 32 integrative reviews, 14 systematic reviews, and 8 meta-analyses; 34 articles were identified through initial searches and an additional 20 were identified through ancestry searches.

Search results revealed that youths victimized by bullying suffer numerous mental health conditions. In addition, a number of factors are implicated in increasing the likelihood of bullying victimization. These factors will be reviewed and will be followed by a discussion of bullying's relationship to specific mental health concerns.

Relationships Between Bullying and Mental Health Issues

No one trait or set of traits predisposes a youth for bullying; rather, it is the differences displayed from group norms across developmental and environmental domains that places youths at risk⁽²⁵⁾. Even when a trait is prevalent within a population but the trait is antithetical to cultural values

(e.g., obesity), it can be problematic for the youth as each peer group, school, and community has its own culture; what is acceptable in one may not be in another⁽¹³⁾. Because differences a youth displays are both discrete and additive, the number of differences exponentially increases the likelihood of being bullied^(26, 27).

Demographic Factors

Youth bullying tends to peak during the ages of 10 to 16 years, and is consequently often observed during the middle school years, when most youths are attending the sixth through tenth grades^(26, 48). Early adolescence is a time when youths are exploring new social roles in pursuit of gaining status among peers while simultaneously are under less direct adult supervision⁽²⁸⁾. Data on the role that gender plays are mixed^(28, 29). Historically, reports indicated that males engaged in bullying more than females and that males were more likely to be victimized by direct bullying while females were more likely to be victimized in indirect/relational bullying^(30, 31). Gender differences in both the amount and type of bullying, however, are equilibrating⁽²⁸⁾. Bullying and victimization does occur significantly more frequently among lesbian, gay, bisexual, transgender, and questioning youths (LGBTQ)^(28, 29, 32-34). Gender role nonconformity, homophobia, and minority status are all contributing factors that place young people at risk⁽³³⁾.

Findings regarding the roles that race and ethnicity play in youth bullying and victimization are inconsistent and complex as they are heavily influenced by group composition and local social mores^(28, 29).

Psychological Characteristics and Social Status

Recipients of bullying tend to have lower socioeconomic status than do their peers⁽³⁵⁾. The roughly two-thirds of bullied youths who are passive recipients, commonly referred to as victims, are more likely to have neglected (neither liked nor disliked) status when compared to their peers⁽³⁶⁾.

These youths have lower self-esteem, initiate prosocial behaviors less frequently and socially withdraw more readily, even before experiencing chronic bullying^(26, 36).

A smaller group of provocative victims, commonly called victim-bullies, have rejected (highly disliked) status by other youths⁽³⁶⁾. This group tends to be the most aggressive, may have deficient or deviant interpretations of social situations, and tend to provoke their attackers. Many are hyperactive and have difficulty with maintaining attention^(25, 36).

Physical Traits

The mere presence of a unique physical characteristic does not necessarily make a youth a target for bullying. Rather, it is the youth's perception of the difference in conjunction with behaviors that are less accepted by peers that place the youth at risk for bullying victimization^(26, 27, 37). In general, youths victimized by bullying are likely to be smaller, weaker, uncoordinated, less attractive, or obese and have diminished status in their peer group than their non-bullied peers^(25, 28). When bullying is directed towards a youth's physical appearance, the child's dissatisfaction with his or her body escalates, placing the child at increased risk for continued victimization⁽³⁸⁾.

Medical Fragility

Youths who have special health care needs, including chronic illnesses and developmental delays, are at greater risk for bullying. Ostracism by their peers is a particular concern^(25, 27, 37, 39).

Deviations in physical appearance, cognitive impairment, social and emotional immaturity, medical restrictions or impaired ability to participate in age-normative activities, and low perceived school connectedness place these youths at particular risk⁽⁴⁰⁾.

Selected groups of youths, such as those with neurological impairments and developmental delays, are at even higher risk for experiencing bullying victimization^(27, 41). Youths who were born prematurely and are of low birthweight with

poorer cognitive functioning, motor difficulties, and functional limitations are also at higher risk⁽⁴²⁾. The additive effects of condition-specific symptomatology (e.g., physical immaturity, dysmorphologies, food allergies), especially in conjunction with untoward behaviors, increases the likelihood of victimization⁽⁴³⁾.

Victimization rates fall on a continuum with youths with more severe conditions being at higher risk for bullying and ostracism⁽²⁷⁾. Victimization from bullying is also associated with poorer therapeutic adherence to treatment regimens⁽⁴⁰⁾. Not only is this a concern for management of conditions like diabetes and cystic fibrosis that require intensive and ongoing treatments, poor treatment adherence can also become part a downward spiral by increasing school absenteeism, contributing to poor academic performance and less school connectedness, setting the youth up for additional peer bullying.

Family Ecology

The social ecology of a child's family often affects a child's risk for bullying as youths' social-cognitive skills are primarily honed within their family systems⁽²⁵⁾. Victims who have insecure parent/child attachment patterns or children who are perceived as "vulnerable" by their parents are more likely to be targeted^(40,44). Uneven parenting, incendiary parent-child relationships, and child maltreatment all place youths at greater risk for peer rejection and victimization⁽²⁸⁾. Victim-bullies often come from troubled homes⁽³⁶⁾. Because a family's socio-economic circumstances and cultural referents influence their child's social development, low socio-economic status is often associated with poorer family function⁽⁴⁵⁾. Poverty, lower parental education, and/or being a member of a minority ethnic/racial group can trigger victimization⁽⁴⁵⁾.

School Environment

Youths with a low sense of school connectedness are at higher risk for peer

victimization⁽²⁸⁾. Entering a new school or returning to school after a prolonged absence places a child at greater risk. In schools where there are wide socio-economic differences among students, victimization from bullying is more likely⁽²⁸⁾.

Bullying among peers occurs throughout the school day and is more likely to occur in less structured and less supervised settings (e.g., during lunch, school bus travel) than in the classroom⁽⁴⁶⁾. This leads the teachers to repeatedly underestimate the amount, severity, and significance of bullying behaviors that occur in their school⁽⁴⁶⁾.

Mental Health Concerns

Virtually all youths victimized by bullying experience a variety of short and long-term mental health problems⁽²⁶⁾. However, due to the lack of well-designed, longitudinal research, evidence supporting most causal relationships between bullying and the development of mental health problems remain unclear⁽²⁵⁾. Many pre-existing behaviors associated with psychological dysfunction that place youths at-risk for bullying can result from, or be exacerbated by, being targeted. When youths with either neglected or rejected status are bullied, their responses can fuel the downward cycle of poor peer interactions resulting in frank bullying^(4-6, 47).

Bullying, the more likely victimized youth will experience significant short and long term emotional adjustment issues^(25, 48). Cyberbullying may be particularly detrimental as it is becoming ubiquitous across telephone and numerous internet social networking platforms. It is often anonymous, thus allowing the bully or bullies to be especially vitriolic, both verbally and graphically^(49, 50). In addition, some youths may even be unaware that they are being victimized online where overt nonverbal cues can be absent⁽⁵¹⁾.

Cyberbullying reduces the proximity between aggressor and victim and can be constant, leaving youths with no safe haven to turn to for support^(16, 52, 53).

Internalizing Problems

Internalizing problems result when youths who have difficulty coping with negative thoughts and feelings that result from stressful situations turn their negativity inward⁽¹³⁾. Many youths who are victimized by all types of bullying become more submissive, insecure, lonely, fearful, restrict their activities, and do not readily defend themselves when feeling threatened⁽¹³⁾. While depression is the most commonly identified mental health concern⁽²⁸⁾, these victims also may experience diminishing self-esteem, greater anxiety, worsening school attendance and academic performance, and generally have a lower quality of life^(6, 8, 28, 47-49, 54). The development of internalizing problems often is a consequence of bullying; moreover, it solidifies youths' standing as victims of peer abuse, compounding the problem⁽⁶⁾. Victimization from relational bullying is a stronger predictor for internalizing symptomatology than other types of bullying^(40, 48).

Peer victimization is clearly related to the use of cannabis and other illicit drugs^(55, 56). It is estimated that approximately one-third of all youths victimized by bullying have engaged in cannabis use⁽⁵⁵⁾ and these youths are approximately twice as likely to use drugs as are non-victimized youths⁽⁵⁶⁾. Drug and alcohol misuse is highest in LGBTQ victims and victim-bullies^(25, 32). Bullied youths may turn to substance use as a coping strategy in dealing with disturbing life events; it is a way of self-medicating to reduce stress^(55, 56). Causality between bullying and substance use, however, has not been firmly established as the majority of existing research employed cross-sectional designs.

Increasingly, bullying victimization is associated with suicidality^(2, 24, 28, 47, 57, 58). Major risk factors for suicide and suicidal ideation include depression; feelings of hopelessness and worthlessness; substance use; and a lack of a support network, including friends and peers^(28, 59). All of these risk factors are common in youths

who are bullied. Special populations with increased risk for the development of suicidal ideation are those with non-conforming gender or sexual orientations and those with learning and attention disorders^(47, 59). Youths who are victim-bullies are at the highest risk for suicide^(47, 57, 60). Both cross-sectional and longitudinally conducted research investigations support these associations⁽⁵⁷⁾.

The majority of studies do not confirm that peer victimization and suicidality is moderated by the age or gender of the recipient^(28, 58). The prevalence of suicide and suicide ideation among bullied youths does vary by country⁽²⁾. It is speculated that this is due to countries' varying approaches in addressing bullying behavior and suicidal behavior⁽²⁾. Finally, suicidal risk does worsen with increased exposure to bullying^(16, 61). Youths who are victimized by cyberbullying are at the highest risk as the bullying can occur all day long, every day⁽⁵⁸⁾. Those from vulnerable populations are disproportionately affected⁽⁵²⁾.

Externalizing Problems

Externalizing problems are generally associated with bullies but they can also be problematic for victim-bullies^(7, 62). These youths are more likely to be aggressive, have conduct issues, and participate in violence ranging from shoving and pushing to simple assaults and in extreme cases, homicide^(25, 36).

Many victim-bullies have a diagnosis of Attention-Deficit Hyperactivity Disorder/Hyperactivity Impulsivity (ADHD/HI). Youths with ADHD/HI may have both internalizing and externalizing problems, the externalizing features making them more likely to be a bully, the internalizing features more likely to be bullied^(25, 37).

Psychosomatic Symptomatology

Victims of bullying and victim-bullies report an increased number of common psychosomatic problems at approximately twice the rate of uninvolved peers across international samples^(63, 64). Symptoms

include, but are not limited to, headaches, stomachaches, poor appetite, sleep disruptions, and non-specific musculoskeletal complaints.

These findings were supported by meta-analyses of both cross-sectional and longitudinal studies^(44, 63). Higher medication use was also noted in youths with these symptoms⁽²⁵⁾.

Interventions

With attention to bullying increasing, the number of studies evaluating the efficacy of various prevention and intervention strategies has increased significantly, especially over the last ten years⁽¹³⁾. In fact, the number of empirical studies evaluating bullying interventions is large enough to have supported at least six research syntheses or meta-analyses to date^(46, 65-69). As the majority of youth bullying takes place in and around school activities, within the social context of the youths involved, the focus of most existing studies has been on the school^(13, 28). While some interventions have been specifically targeted for both bullies and victims, the majority have focused on primary prevention activities through whole-school programs⁽¹³⁾.

Schoolwide interventions include entire school communities and center on changing school culture where the common components were empathy building and creating codes of conduct rather than addressing problematic behaviors in only those involved in bullying. While meta-analyses^(66, 68) and narrative analyses^(65, 67) provide some evidence supporting the efficacy of schoolwide approaches, these programs have demonstrated only modest effect sizes with most changes influencing knowledge, attitudes and self-perception rather than actual bullying behaviors^(66, 68). However, there is little specific information about the quality of the studies, including their methodologies, reported in these reviews and meta-analyses.

Targeted interventions need to concentrate on those youths who are directly involved in bullying as either bullies or

victims; however, nearly all research to date has evaluated intervention effects for perpetrators alone. At this writing, neither any formal research reviews nor meta-analyses of targeted interventions focused on curtailing bullying behavior were available in the scientific literature. In addition, meta-analyses or synthesis reviews on interventions focused on cyberbullying interventions have not been conducted, despite evidence of a relationship between cyberbullying and depression and other mental health problems⁽⁵⁴⁾.

DISCUSSION

A plethora of research has been conducted on youth bullying over the past decade. When reviewed in its totality, there is clear support that youths who have been bullied are at risk for short- and long-term mental health problems^(25, 26).

The evidence support the overarching finding, youths are at increased risk for bullying if they are different from their peer group. Common differences leading to increased risk include: physical deformities, cognitive or social impairments, and socioeconomic factors^(26, 27, 35-37). Differences can have a compounding effect, the more differences a youth manifests from their peer group, the greater the likelihood the youth will experience bullying.

The correlation between being a victim and negative sequelae is well established, short and long term effects of being targeted can significantly affect an individual's quality of life and impair their health, especially their mental health. It is unclear if being bullied causes mental disorders or if youths who have mental health issues are more frequently targeted. There is support that more severe bullying lasting over a longer period of time correlates with more severe mental health concerns^(25, 48). With the high prevalence rates of bullying, and the growing concern of the 24 hour accessibility of cyber-bullies to their targets, bullying is a significant public health problem that must be recognized and addressed.

Implications for nursing practice and research

Due to the seriousness of bullying, the World Health Organization and other policymakers have issued a call to action for addressing bullying and its ramifications⁽⁷⁰⁾. Although educators are well aware of bullying and its sequelae, these issues here-to-fore have largely remained unaddressed by healthcare professionals^(25, 71). Nurses, present in schools and health care settings and educated in public health and health promotion, are well-positioned to respond to the call.

Nurses may have access to confidential information no one else in the school system may be aware of, including medical or psychological diagnoses putting a child at higher risk for bullying or becoming a bully. Early identification and intervention may assist the youth to develop coping strategies preventing the onset or reducing the severity of mental health concerns. Nurses working in the school or community can implement interventions based on the public health model.

The public health prevention model is useful for designing and testing interventions focused on addressing youth bullying and its impact on mental health^(71, 72). Primary prevention interventions are designed to prevent bullying. Secondary prevention interventions eliminate or reduce the severity of bullying that is occurring. They are aimed at stopping bullying behavior and reducing the chance of long-term adverse effects in targeted youths. Tertiary prevention interventions, if necessary due to failure of primary and secondary prevention interventions, can be designed to lessen the impact of serious adverse consequences that have occurred as a result of bullying involvement.

Nurses can utilize the public health prevention model of interventions to effectively address the problem of bullying in education, practice, and research. School nurses, public health nurses, primary care nurses, and acute care nurses all require

education on evidence-based assessment strategies and interventions for bullying aimed at improving the health of their individual patients and communities. To develop the evidence base for practice, nurse scientists must continue to investigate the phenomenon of bullying and rigorously test interventions at all three prevention

levels. Once intervention efficacy has been established scientifically, this evidence can be moved to practice in elementary and secondary school settings as well as in continuing education for teachers and healthcare providers so that those closest to the bullying problem can readily effect change (Table 1).

Table 1. *Implications of Youth Bullying on Mental Health Table of Responses to Reviewer Comments*

Comment	Response	Location in Revised Manuscript
Reviewer Comments		
Title Page: Please specify key words for indexing purposes	Noted: we have added 4 key words	Title page
Abstract: Please format using the following headings- Introduction, Methodology, Discussion/Conclusions. (Methodology is currently limited in description)	Noted. The headings have been updated including more information about the methodology.	Abstract
Introduction: Well written.	Thank you.	
Method: Explain method in greater detail, namely the procedure used for how the studies were classified and organized.	Thank you for your feedback. We have added more information about the method used in this review.	Search Strategies, Critique and Synthesis Methods
Exclusion criteria are listed under search strategies and perhaps this would be better stated with the section above that addresses design and inclusion criteria.	Thank you for this feedback. All exclusion criteria has been moved to the design and inclusion criteria	Design and Inclusion Criteria
It would be useful to provide greater detail on how the final sample was achieved (e.g. figure of #of articles identified by online search, # identified via ancestry search, # excluded # included and # of types of articles reviewed – meta-analyses vs. reviews).	Agreed. We have added this information, unfortunately we did not track the number of articles excluded during the search.	Findings
A point for clarification- the paper states that it is on meta-analyses and review publications but page 7, para 2, line 5 refers to research articles- please clarify use of individual research reports or reviews.	Thank you for pointing out this inconsistency. The language has been updated to indicate that only reviews were considered.	Search Strategies, Critique and Synthesis Methods
Findings: Omit last sentence of paragraph 1- already stated in methods.	Thank you for this suggestion. The sentence has been deleted.	Findings

Themes in each category do not appear to be fully addressed.	Thank you for this comment. The purpose of this paper was to provide a broad view of the impact bullying has on youth mental health and not focus on any specific relationships. Specific themes (i.e., bullying and depression, bullying and suicidality) are explicated in the papers reviewed for this manuscript. By focusing on the scope of bullying and mental health issues, the reader can appreciate the multi-faceted and complex relationships between bullying and mental health.	
It would be useful to indicate types of articles in final sample (see above).	Thank you for this suggestion. We've added more detailed information about the articles included in the review.	Findings
Paragraph 2- last sentence- change mental health "diagnoses" to mental health characteristics or factors as mental disorder diagnoses are minimally addressed.	Thank you for this feedback, we opted to change the term mental health diagnoses to mental health concerns, as we felt that term aligned better with the underlying construct.	Findings
Section on "Demographic Factors"- please list references for first sentence.	Noted. This sentence has been updated to include references.	Demographic Factors
"Personality and Social Status" section- consider changing terminology of "personality" to "psychological characteristics" as one could argue that these are not reflective of personality but rather psychological alterations or psychiatric disorders.	Thank you for this suggestion. We have changed the language.	Psychological Characteristics and Social Status
It should be clarified why the authors think the diagnoses of ADHD should be considered under "Externalizing problems".	Thank you for this suggestion. We have added a sentence explaining why ADHA/HI was included.	Externalizing Problems
Implications for Nursing Practice and Research: Great paper, but elucidate the themes in discussion and address implications of designs used to test interventions (e.g., were they RCT, descriptive).	Thank you. The key themes, their associations with each other, and limits of the available research are elucidated in a new section of the paper entitled 'discussion'.	New Section: Discussion
Expand on linking findings with implications.	Thank you for this feedback. A paragraph has been added expanding the link between the findings and implications.	Implications for Nursing Practice and Research
Summary: Add a highlight on how this paper advances what is already known.	Noted. We have highlighted the contribution of this work to the literature.	Summary

Limitations of this review

The bullying literature is quite robust and it is possible that by only reviewing meta-analyses, integrated, and systematic reviews that emerging areas of research inquiry have fallen outside the scope of this review, especially where there may currently be an insufficient number of individual studies to support a systematic review or meta-analysis. Publication bias influencing systematic reviews and meta-analyses as well as the articles selected for these reports may be an issue; only a few articles explicitly mentioned controlling for this factor.

Attempts were made to be as inclusive as possible in this review, but the conclusions were drawn only from the retrieved literature and thus may not be representative of all aspects of mental health issues associated with youth bullying. Moreover, the majority of reviews we identified captured studies that were primarily conducted in developed countries where English is the primary language used for reporting scientific findings. Although efforts were made to include research published in Spanish, some relevant works may have been missed. No attempt was made to evaluate the quality of the meta-analyses or reviews covered here; however, there appears to be considerable variability among them. Failure to use a common definition of bullying or uniformly defined outcomes across all meta-analyses and reviews may have influenced their findings. The majority of the studies included here used self-report as the primary method of identifying recipients of bullying and their associated symptomatology. This may be problematic as self-report is influenced by developmental maturation, social acceptance of the concept of bullying, and comfort level with the research process.

Of concern is the quality of the individual studies reported in the reviews or meta-analyses. Although it was beyond the scope of this article to assess the individual quality of studies included in

the reviews, where sufficient detail was provided in the review articles, it appears that these individual studies used diverse methodologies and were highly variable in methodologic rigor; often their quality was not reported at all. However it is known that few longitudinal, single cohort studies were conducted to measure the mental health effects of bullying nor do single- or double-blind randomized controlled trials exist that measure interventions. The overwhelming majority of the literature is based on descriptive studies using cross-sectional designs.

SUMMARY

Youth bullying is a global issue. It is detrimental to children and adolescents' general well-being and mental health. It results in internalizing and externalizing mental health problems, many that will persist well beyond the bullying encounters and have long-term sequelae that last throughout life. While the overall quality of available evidence on the epidemiology of bullying is well-developed; however, there is considerably less data-based evidence on effective interventions. This review increases the understanding of mental health effects of bullying on youth and provides a call to action for nursing professionals.

REFERENCES

- (1) Sraabstein JC, Leventhal BL. Prevention of bullying-related morbidity and mortality: a call for public health providers. *Bull World Health Organ.* 2010; 88(6): 403. doi: 10.2471/BLT.10.077123.
- (2) Holt MK, Vivolo-Kantor AM, Polanin JR, Holland KM, DeGue S, Matjasko JL, Wolfe M, Reid, G. Bullying and suicidal ideation and behaviors: a meta-analysis. *Pediatrics.* 2015; 135(2): e486-e509. doi: 10.1542/peds.2014-1864.
- (3) Nansel TR, Craig W, Woverpeck MD, Saluja G, Ruan J. Cross-national consistency in the relationship between bullying behaviors and psychosocial adjustment. *Arch Pediatr Adolesc Med.* 2004; 158(8): 730-6.

- (4) Card NA, Little TD. Proactive and reactive aggression in childhood and adolescence: A meta-analysis of differential relations with psychosocial adjustment. *Int J Behav Dev.* 2006; 30(5): 466-80. doi: 10.1177/0165025406071904.
- (5) Nakamoto J, Schwartz D. Is peer victimization associated with academic achievement? A meta-analytic review. *Dev Psychol.* 2010; 46(2): 516-529. doi: 10.1037/a0017199.
- (6) Reijntjes A, Kamphuis JH, Prinzie P, Telch MJ. Peer victimization and internalizing problems in children: a meta-analysis of longitudinal studies. *Child Abuse Negl.* 2010; 34(4): 244-52. doi: 10.1016/j.chiabu.2009.07.009.
- (7) Reijntjes A, Kamphuis JH, Prinzie P, Boelen PA, van der Schoot M, Telch MJ. Prospective linkages between peer victimization and externalizing problems in children: A meta-analysis. *Aggress Behav.* 2011; 37(3): 215-22. doi: 10.1002/ab.20374.
- (8) Ttofi MM, Farrington DP, Lösel F, Loeber R. Do the victims of school bullies tend to become depressed later in life? A systematic review and meta-analysis of longitudinal studies. *Journal of Aggression.* 2011; 3(2): 63-73. doi: 10.1108/17596591111132873.
- (9) Ttofi MM, Farrington DP, Lösel F. School bullying as a predictor of violence later in life: A systematic review and meta-analysis of prospective longitudinal studies. *Aggress Violent Behav.* 2012; 17 (5): 405-18. doi: 10.1016/j.avb.2012.05.002.
- (10) Gladden RM, Vivolo-Kantor AM, Hamburger ME, Lumpkin CD. Bullying surveillance among youths: uniform definitions for public health and recommended data elements, version 1.0. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, and U.S. Department of Education; 2014. Available from: <http://www.cdc.gov/violenceprevention/pdf/bullying-definitions-final-a.pdf>
- (11) Feshback ND. Sex differences in children's modes of aggressive responses towards outsiders. *Merrill Palmer Q.* 1969; 15(3): 249-58.
- (12) Lagerspetz KMJ, Bjorkqvist K, Peltonen T. Is indirect aggression typical of females? Gender differences in aggressiveness in 11- to 12-year-old children. *Aggress Behav.* 1988; 14(6): 403-14.
- (13) Juvonen J, Graham S. Bullying in schools: the power of bullies and the plight of victims. *Annu Rev Psychol.* 2014; 65: 159-85. Doi: 10.1146/annurev-psych-010213-115030.
- (14) Crick NR, Grotpeter JK. Relational aggression, gender, and social-psychological adjustment. *Child Dev.* 1995; 66: 710-22.
- (15) Slonnje R, Smith PK, Frisen A. The nature of cyberbullying, and strategies for prevention. *Comput Hum. Behav.* 2013; 29: 26-32.
- (16) Bottino SM, Bottino CM, Regina CG, Correia AV, Ribeiro WS. Cyberbullying and adolescent mental health: a systematic review. *Cad Saude Publica.* 2015; 31(3): 463-75.
- (17) Bradshaw CP, Sawyer AL, O'Brennan LM. Bullying and peer victimization at school: Perceptual differences between students and school staff. *School Psychology Review.* 2007; 36(3): 361-382.
- (18) Due P, Holstein BE, Soc MS. Bullying victimization among 13 to 15-year-old school children: results from two comparative studies in 66 countries and regions. *Int J Adolesc Med Health.* 2008; 20(2): 209-21.
- (19) Sittichai R, Smith PK. Bullying in south-east Asian countries: a review. *Aggress Violent Behav.* Forthcoming. doi: 10.1016/j.avb.2015.06.002.
- (20) Eaton D, Kann L, Kinchen S. Youth Risk Behavior Surveillance-United States. *MMWR Morb Mortal Wkly Rep.* 2012; 61(SS-4): 1-162.
- (21) Chan HC, Wong DSW. Traditional school bullying and cyberbullying in Chinese societies: prevalence and a review of the whole-school intervention approach. *Aggress Violent Behav.* Forthcoming. doi: 10.1016/j.avb.2015.05.010.
- (22) Fleming LC, Jacobsen KH. Bullying and symptoms of depression in Chilean middle school students. *J Sch Health.* 2009; 79(3): 130-7. doi: 10.1111/j.1746-1561.2008.0397.x.
- (23) Román M, Murillo F. Latin America: school bullying and academic achievement.

- Cepal Review. 2011; 104: 37-53. Available from <http://www.cepal.org/publicaciones/xml/2/45332/RVI104RomanMuriillo.pdf>
- (24) Cooper HM, Hedges LV, & Valentine J C. The handbook of research synthesis and meta-analysis (2nd ed.). New York: Russell Sage Foundation, 2009.
- (25) Kumpulainen K. Psychiatric conditions associated with bullying. *Int J Adolesc Med Health*. 2008; 20(2): 121-32.
- (26) Aluede O, Adeleke F, Omoike D, Afen-Akpa J. A review of the extent, nature, characteristics and effects of bullying behaviour in schools. *Journal of Instructional Psychology*. 2008; 35(2): 151-58.
- (27) Saylor CF, Williams KD, Nida SA, McKenna ME, Twomey KE, Macias MM. Ostracism in pediatric populations: review of theory and research. *J Dev Behav Pediatr*. 2013; 34(4): 279-87. doi: 10.1097/DBP.0b013e3182874127.
- (28) Hong JS, Kral MJ, Sterzing PR. Pathways from bullying perpetration, victimization, and bully victimization to suicidality among school-aged youth: a review of the potential mediators and a call for further investigation. *Trauma Violence Abuse*. 2015; 16(4): 379-90. doi: 10.1177/1524838014537904.
- (29) Zych I, Ortega-Ruiz R, Del Ray R. Systematic review of theoretical studies on bullying and cyberbullying: facts, knowledge, prevention, and intervention. *Aggress Violent Behav*. Forthcoming. doi: 10.1016/j.avb.2015.10.001.
- (30) Archer J. Sex differences in aggression in real-world settings: a meta-analytic review. *Rev Gen Psychol*. 2004; 8: 291-322.
- (31) Card NA, Stuckey BD, Sawalani GM, Little TD. Direct and indirect aggression during childhood and adolescence: a meta-analytic review of gender differences, intercorrelations, and relations to maladjustment. *Child Dev*. 2008; 79: 1185-229.
- (32) Friedman MS, Marshal MP, Guadamuz TE, Wei C, Wong CF, Saewyc E, Stall R. A meta-analysis of disparities in childhood sexual abuse, parental physical abuse, and peer victimization among sexual minority and sexual nonminority individuals. *Am J Public Health*. 2011; 101(8): 1481-94. doi: 10.2105/AJPH.2009.190009.
- (33) Varjas K, Dew B, Marshall M, Graybill E, Singh A, Meyers J, Birchbichler L. Bullying in schools towards sexual minority youth. *J Sch Violence*. 2008; 7(2): 59-86. doi: 10.1300/J202v07n02_05.
- (34) Katz-Wise SL, Hyde JS. Victimization experiences of lesbian, gay, and bisexual individuals: a meta-analysis. *J Sex Res*. 2012; 49: 142-67.
- (35) Juvonen J, Graham S, Schuster MA. Bullying among young adolescents: The strong, the weak, and the troubled. *Pediatrics*. 2003; 112(6 Pt 1): 1231-7.
- (36) Smokowski PR, Kopasz KH. Bullying in school: an overview of the types, effects, family characteristics, and intervention strategies. *Child Sch*. 2005; 27(2): 101-10. doi: 10.1093/cs/27.2.101.
- (37) Álvarez-García D, García T, Núñez JC. Predictors of school bullying perpetration in adolescence: a systematic review. *Aggress Violent Behav*. Forthcoming. doi: 10.1016/j.avb.2015.05.007.
- (38) Reijntjes A, Kamphuis JH, Prinzie P, Telch MJ. Peer victimization and internalizing problems in children: a meta-analysis of longitudinal studies. *Child Abuse Negl*. 2010; 34: 244-52.
- (39) Van Cleave J, Davis MM. Bullying and peer victimization among children with special health care needs. *Pediatrics*. 2006; 118(4): e1212-9. doi: 10.1542/peds.2005-3034.
- (40) Faith MA, Reed G, Heppner CE, Hamil LC, Tarkenton TR, Donewar CW. Bullying in medically fragile youth: a review of risks, protective factors, and recommendations for medical providers. *J Dev Behav Pediatr*. 2015 May; 36(4): 285-301. doi: 10.1097/DBP.0000000000000155.
- (41) Storch EA, Ledley DR. Peer victimization and psychological adjustment in children: current knowledge and future directions. *Clin Pediatr*. 2005; 44(1): 29-38.
- (42) Day KL, Van Lieshout RJ, Vaillancourt T, Schmidt LA. Peer victimization in survivors of premature birth and low birth weight: review and recommendations. *Aggress Violent Behav*. Forthcoming. doi: 10.1016/j.avb.2015.09.010.
- (43) Bacal LR. The impact of food allergies on quality of life. *Pediatr Ann*. 2013;

- 42(7): 141-5. doi: 10.3928/00904481-20130619-12.
- (44) Hansen TB, Steenberg LM, Palic S, Elklit A. A review of psychological factors related to bullying victimization in schools. *Aggress Violent Behav.* 2012; 17(4): 383-387. doi: 10.1016/j.avb.2012.03.008.
- (45) Albdour M, Krouse H. Bullying and victimization among adolescents: a literature review. *J Child Adolesc Psychiatr Nurs.* 2014; 27(2): 68-82. doi: 10.1111/jcap.12066.
- (46) Ttofi MM, Farrington DP. Effectiveness of school-based programs to reduce bullying: A systematic and meta-analytic review. *J Exp Criminol.* 2011; 7(1): 27-56. doi: 10.1007/s11292-010-9109-1.
- (47) Kim YS, Leventhal B. Bullying and suicide: a review. *Int J Adolesc Med Health.* 2008; 20(2): 133-54. doi: 10.1515/IJA-MH.2008.20.2.133.
- (48) Wu L, Zhang D, Su Z, Hu T. Peer victimization among children and adolescents: a meta-analytic review of links to emotional maladjustment. *Clin Pediatr.* 2015 Sep; 54(10): 941-55. doi: 10.1177/0009922814567873.
- (49) Baek J, Bullock LM. Cyberbullying: a cross-cultural perspective. *Emot Behav Diffic.* 2014; 19(2): 226-38. doi: 10.1080/13632752.2013.849028.
- (50) Bailin A, Milanaik R, Adesman A. Health implications of new age technologies for adolescents: a review of the research. *Curr Opin Pediatr.* 2014; 26(5): 605-19. doi: 10.1097/MOP.000000000000140.
- (51) Tokunga RS. Following you home from school: a critical review and synthesis of research on cyberbullying victimization. *Comput Human Behav.* 2010 May; 26(3): 277-87. doi: 10.1016/j.chb.2009.11.014.
- (52) Aboujaoude E, Savage MW, Starcevic V, Salame WO. Cyberbullying: review of an old problem gone viral. *J Adolesc Health.* 2015 Jul; 57(1): 10-8. doi: 10.1016/j.jadohealth.2015.04.011.
- (53) Ang A. Adolescent cyberbullying: a review of characteristics, prevention and intervention strategies. *Aggress Violent Behav.* Forthcoming. doi: 10.1016/j.avb.2015.07.011.
- (54) Hamm MP, Newton AS, Chisholm A, Shulhan J, Milne A, Sundar P, Ennis H, Scott SD, Hartling L. Prevalence and effect of cyberbullying on children and young people: a scoping review of social media studies. *JAMA Pediatr.* 2015; 169(8): 770-7. doi: 10.1001/jamapediatrics.2015.0944.
- (55) Maniglio R. Association between peer victimization in adolescence and cannabis use: a systematic review. *Aggress Violent Behav.* Forthcoming. doi: 10.1016/j.avb.2015.09.002
- (56) Valdebenito S, Ttofi M, Eisner M. Prevalence rates of drug use among school bullies and victims: a systematic review and meta-analysis of cross-sectional studies. *Aggress Violent Behav.* Forthcoming. doi: 10.1016/j.avb.2015.05.004.
- (57) Klomek BA, Sourander A, Gould M. The association of suicide and bullying in childhood to young adulthood: a review of cross-sectional and longitudinal research findings. *Can J Psychiatry.* 2010; 55(5): 282-8.
- (58) Van Geel M, Vedder P, Tanilon J. Relationship between peer victimization, cyberbullying, and suicide in children and adolescents: a meta-analysis. *JAMA Pediatr.* 2014; 168(5): 435-42. doi: 10.1001/jamapediatrics.2013.4143.
- (59) Cash SJ, Bridge JA. Epidemiology of youth suicide and suicidal behavior. *Curr Opin Pediatr.* 2009; 21(5): 613-619. doi: 10.1097/MOP.0b013e32833063e1.
- (60) Bursztein C, Apter A. Adolescent suicide. *Curr Opin Psychiatry.* 2009; 22(1): 1-6.
- (61) Cooper GD, Clements PT, Holt KE. Examining childhood bullying and adolescent suicide: implications for school nurses. *J Sch Nurs.* 2012; 28(4): 275-83. doi: 10.1177/1059840512438617.
- (62) Cook CR, Williams KR, Guerra NG, Kim TE, Sadek S. Predictors of bullying and victimization in childhood and adolescence: a meta-analytic investigation. *Sch Psychol Q.* 2010; 25(2): 65-83. doi: 10.1037/a0020149.
- (63) Gini G, Pozzoli T. Association between bullying and psychosomatic problems: a meta-analysis. *Pediatrics.* 2009; 123 (3): 1059-65. doi: 10.1542/peds.2008-1215.
- (64) Due P, Holstein BE, Lynch J, Diderichsen F, Gabhain SN, Scheidt P, Currie C, The Health Behaviour in School-Aged Children Working Group. Bullying and symptoms among school-aged children:

- international comparative cross sectional study in 28 countries. *Eur J Public Health*. 2005; 15(2): 128-32.
- (65) Baldry AC, Farrington DP. Effectiveness of programs to prevent school bullying. *Vict Offenders*. 2007; 2: 183-204.
- (66) Smith JD, Schneider BH, Smith PK, Ananiadou K. The effectiveness of whole-school antibullying programs: A synthesis of evaluation research. *School Psychology Review*. 2004; 33(4): 547-60.
- (67) Vreeman RC, Carrol AE. A systematic review of school-based interventions to prevent bullying. *Arch Pediatr Adolesc Med*. 2007 J; 161(1): 78-88.
- (68) Merrell KW, Gueldner BA, Ross SW, Isava DM. How effective are school bullying intervention programs? A meta-analysis of intervention research. *Sch Psychol Q*. 2008; 23(1): 26-42. doi: 10.1037/1045-3830.23.1.26.
- (69) Lee S, Kim CJ, Kim DH. A meta-analysis of the effect of school-based anti-bullying programs. *J Child Health Care*. 2015 Jun; 19(2): 136-53. doi: 10.1177/1367493513503581.
- (70) Strabstein JC, Berkman BE, Pyntikova E. Antibullying legislation: a public health perspective. *J Adolesc Health*. 2008; 42(1): 11-20. doi: 10.1016/j.jadohealth.2007.10.007
- (71) Vessey JA, DiFazio RL, Strout TD. "Names can also hurt me." Youth bullying: a review of the science and a call to action. *Nurs Outlook*. 2013 ; 61(5): 337-45. doi: 10.1016/j.outlook.2013.04.011.
- (72) Wallace RB, editor. *Wallace/Maxcy-Roseman-Last public health and preventative medicine*. 15th ed. Philadelphia, PA: McGraw-Hill; 2008.