

Life Course Indicator: Bullying

The Life Course Metrics Project

As MCH programs begin to develop new programming guided by a life course framework, measures are needed to determine the success of their approaches. In response to the need for standardized metrics for the life course approach, AMCHP launched a project designed to identify and promote a set of indicators that can be used to measure progress using the life course approach to improve maternal and child health. This project was funded with support from the [W.K. Kellogg Foundation](#).

Using an RFA process, AMCHP selected seven state teams, Florida, Iowa, Louisiana, Massachusetts, Michigan, Nebraska and North Carolina, to propose, screen, select and develop potential life course indicators across four domains: Capacity, Outcomes, Services, and Risk. The first round of indicators, proposed both by the teams and members of the public included 413 indicators for consideration. The teams distilled the 413 proposed indicators down to 104 indicators that were written up according to three data and five life course criteria for final selection.

In June of 2013, state teams selected 59 indicators for the final set. The indicators were put out for public comment in July 2013, and the final set was released in the Fall of 2013.

Basic Indicator Information

Name of indicator: Bullying (LC-12)

Brief description: Percent of 9-12th graders who reported being bullied on school property or electronically bullied.

Indicator category: Discrimination and Segregation

Indicator domain: Risk/Outcome

Numerator: Number of 9th through 12th grade students (12-17 years) who reported having been bullied on school property or electronically during the past 12 months.

Denominator: 9th through 12th grade student population (12-17 years)

Potential modifiers: Sex, race/ethnicity, grade level, self-reported academics/grades in school

Data source: Youth Risk Behavior Surveillance System (YRBSS)

Notes on calculation: Numerator is derived from the responses to two questions: During the past 12 months, have you ever been bullied on school property? During the past 12 months, have you ever been electronically bullied? (Count being bullied through e-mail, chat rooms, instant messaging, websites or texting.) Respondents who answer yes to either question are included in the numerator. Analysts who use the raw datasets should apply the appropriate survey weights to generate the final estimates.

Similar measures in other indicator sets: Healthy People 2020 focus area IVP-35.

Life Course Criteria

Introduction

Existing literature supports that bullying on school property and electronically can impact an individual's health and wellness throughout the life course. There are several disparities within the prevalence of this indicator, and bullying can have substantial health-related, psychosocial, and economic impacts. Adolescence also is a critical time of physical and mental development where bullying and associated risk factors have potential to negatively impact the life course trajectory. Schools are key social contexts in which important health and developmental processes unfold for adolescents, and an opportune environment to intervene to prevent bullying and reduce adverse health outcomes in the population. While childhood is a critical stage in development, there is a lack of standardized data to assess bullying nationwide. Tools such as the National Survey of Children's Health rely on parent reports to measure child involvement in bullying. Children and youth often do not report bullying to adults; therefore self-reported measures, such as those assessed through the Youth Risk Behavior Surveillance System (YRBSS), are more likely to reflect true rates and experiences of bullying. It is for this reason that this indicator and its supporting narrative focus on the 9th-12th grade population. Furthermore, this narrative acknowledges that bullying has significant associations and implications for both the victim and the perpetrator – to date, the public health field lacks a nationwide, standardized measure of bullying perpetration, and therefore this indicator is limited to bullying victimization. This indicator is a reliable measure of prevalence of bullying among the nation's adolescent population. Improvements in this indicator have potential to greatly improve the health of the adolescent population, both current and throughout life.

Implications for equity

Bullying is prevalent among school-age youth, with risk factors among groups that have implications for disparities and inequity in certain environments.

Based on 2011 National YRBSS data, female students (22.0 percent) were more likely than male students (18.2 percent) to have been bullied on school property during the past 12 months [3]. The data also show females are more likely than males to be electronically bullied. Other studies have found males to experience higher rates of bullying, or no disparity [4-6]. This suggests a gender disparity with this indicator that may be dependent on environment and context, which can have implications for public health approaches to prevent bullying. In addition, the association between bullying and psychosocial health varies between males and females, thus interventions should take these differences into account to increase effectiveness.

2011 National YRBSS data also suggest that White students were more likely to have been bullied on school property or electronically during the past 12 months when compared to both Black and Hispanic students [3]. However, it is unclear how many youth are bullied based on their race or ethnicity. Some evidence suggests that Black or Hispanic youth who are bullied fare worse academically, but further research is needed to understand the implications race and ethnicity have on bullying and health equity.

Risk for bullying victimization is higher among lesbian, gay, bisexual, or transgender (LGBT) youth and those perceived as LGBT than heterosexual youth [7]. Often, bullying among students involves the use of homophobic teasing and slurs [8]. LGBT youth struggle with rejection from parents, peers and teachers, as well as societal homophobia. This can put them at greater risk for depression, which compounded with frequent bullying, can lead to increased risk of self-injury or suicide. Indeed, rates of suicide attempts in LGBT youth are between two to seven times higher than their heterosexual peers [9]. Additionally, LGBT students often do not receive much protection or support from school policies or administration [7]. These factors contribute to disparities in bullying victimization among this population.

Disparities also exist for youth with special health care needs (YSHCN), who are particularly vulnerable to bullying victimization. Students with disabilities are subject to more bullying than peers without disabilities, and the bullying is often a direct result of the disability [10]. Youth with disabilities also may have significant social skills challenges, either as a core trait of their disability or as a result of social isolation due to segregated environments or peer rejection. While all youth victims of bullying face negative emotional, educational and physical outcomes from bullying, students with disabilities are disproportionately impacted by the bullying.

Other studies have found that victims of bullying are more likely to be from low income families, not have a happy home life, have frequent arguments with their parents, and feel like leaving home [6,11].

Public health impact

Bullying is a significant problem in our society that can have short and long term psychological and health implications. In 2011, 20.1 percent of 9th through 12th grade students within the United States reported that they were bullied on school property and 16.2 percent reported they had been electronically bullied at some point during the past 12 months [3].

Evidence indicates bullying victims and perpetrators to have higher levels of depression, self-harm behavior, engagement in risky behaviors and suicidal ideation and suicide attempts. Suicide is the third leading cause of death of adolescents aged 15-19 years [12]; therefore bullying as a risk factor is a particular concern for public health. Youth involved in bullying also report lower levels of academic achievement and school attachment [13], and are more likely to report physical health problems, such as abdominal pains [14], and develop other common health programs, such as obesity [15].

Long-term health outcomes associated with bullying also have implications for public health. Individuals bullied as youth are more likely to develop generalized anxiety disorder, panic disorder, depression and suicidality as adults [16]. Further, research has shown those who bully as youth are more likely to have low job status at 18 years old, and use drugs, alcohol and cigarettes [17-18].

Reducing bullying within our schools and electronically should have a direct impact on the prevalence of these adverse health outcomes within the adolescent population, and potential to reduce the number of conditions that impact health as adults. Reducing the prevalence and impact of mental health conditions that are often lifelong and debilitating also should result in a reduction in health care costs. Public health policies and interventions that focus on reducing risk factors of bullying and promoting protective factors and resilience have the potential to lead to improved mental health outcomes, academic achievement, and reduce mortality in the adolescent populations.

Leverage or realign resources

While bullying is not a new issue for youth, the awareness of the harmful effects of bullying and understanding of the risk factors is relatively new. The Task Force on Community Preventive Services conducted a systematic review and found strong evidence that universal, school-based programs decrease rates of violence among school children [23]. These programs were delivered to all children in a particular grade or school, regardless of prior violence or risk of violence, and effects of the program were found at all grade levels. The Task Force on Community Preventive Services has recommended the implementation of universal, school-based programs to prevent violent behavior, including bullying.

Expanded bullying education programs for students and staff are needed in order to address this public health issue. Continued research also will contribute to a better understanding and recognition of bullying risk factors, in order to develop effective interventions. Further school funding is needed for the implementation of programs that educate students and staff on bullying and the severe impacts it can have on other students. These programs also should identify support mechanisms for students who are currently being bullied.

Health care providers often do not screen for emotional distress or provide services to address bullying [19]. There is an opportunity to expand health care services, and also make inroads with multiple settings – schools, communities, homes, etc. – in order to provide comprehensive, coordinated approaches to bullying prevention and reach more youth at risk. Bullying prevention also can be addressed through general youth violence prevention efforts and efforts to promote mental health and well-being among youth and families in clinical and nonclinical settings. Additionally, school anti-bullying policies are an important step to preventing bullying. Policies that include specific protections for at-risk groups (i.e. LGBT) can reduce bullying and also have protective effects for the mental health of students in those populations [7].

The potential to leverage and realign resources to impact bullying is great as efforts to reduce youth violence and promote mental health address many of the same factors to improve the mental and physical health of young people.

Predict an individual's health and wellness and/or that of their offspring

Being bullied on school property or electronically over time can affect the life course trajectory of children and adolescents as well as their long-term health.

Adolescence is a pivotal point in development that involves complex endocrine, neural, and social changes that can make adolescents very susceptible to psychological, physical, and emotional challenges, as well as risky behavior [20-21]. The

link between bullying and a multitude of adverse psychosocial health outcomes indicates that intervening during this critical time can have a positive impact on an individual's life course.

Bullying victims have shown increased internalizing behaviors (such as depression, anxiety, withdrawal, and avoidance), negative attitudes towards self, and lower social skills. Those who bully have shown higher externalizing behaviors (such as defiant or disruptive behaviors), academic challenges and negative self-cognitions [22]. Public health and other professionals may be able to positively affect the life course of adolescents through integrated approaches that aim to stop and prevent risk factors associated with bullying, as well as increase coping skills, family and school social support and supportive school environments. Such approaches can help ensure youth have skills and support to navigate the circumstances and complexities later in life and transition to young adulthood successfully.

Data Criteria

Data availability

The prevalence of having been bullied on school property or electronically during the past 12 months is calculated every two years based on data collected through the YRBSS. The YRBSS monitors priority health-risk behaviors and the prevalence of obesity and asthma among youth and young adults. The YRBSS includes a national school-based survey conducted by the Centers for Disease Control and Prevention (CDC), state, territorial, and local education and health agencies and tribal governments. YRBSS monitors six categories of priority health-risk behaviors among youth and young adults, including behaviors that contribute to unintentional injuries and violence; sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases, including HIV infection; alcohol and other drug use; tobacco use; unhealthy dietary behaviors; and inadequate physical activity. In addition, YRBSS monitors the prevalence of obesity and asthma.

The YRBSS is administered every other year (odd years), generally in the spring semester in schools via a pencil and paper mode. The YRBSS survey contains no skip patterns. In the even-numbered years, CDC leads a process of examining and revising the questionnaire, using both expert opinion and votes from the YRBSS coordinators in states. The final result is a standard questionnaire that can be modified by states to meet their needs, but modifications must be within certain parameters.: 1) the modified questionnaire must contain at least two-thirds of the original standard questionnaire, 2) questions that are added are limited to 8 mutually exclusive response options, 3) the questionnaire may not have skip patterns or fill in the blanks, and 4) the questionnaire may not exceed 99 questions, and the state must retain the height and weight questions. The 2011 YRBSS included a national school-based survey conducted by CDC and 47 state surveys, six territory surveys, two tribal government surveys, and 22 local surveys conducted among students in grades 9-12 during October 2010-February 2012. Data collected by CDC represent both public and private schools with students in grades 9 through 12; data collected by states, territories, tribes, and localities represents primarily public school students.

The YRBSS question related to this measure is part of the standard high school YRBSS questionnaire. These data are collected every two years at the national level and within approximately 90 percent of all states. Territorial, tribal, and local surveys also are conducted on a non-routine basis. The data for each jurisdiction (nation, state, territory, tribe, and local) are weighted by CDC so that the prevalence estimates based on these data are representative of the 9th through 12th grade student populations (12-17 years) within each jurisdiction. Jurisdiction-specific YRBSS prevalence estimates (overall and by potential modifiers) can be found on the Youth Online data exploration system (<http://apps.nccd.cdc.gov/youthonline>). These prevalence estimates also can be obtained by visiting state-specific YRBSS websites. For those who would like to analyze the data on their own, national YRBSS datasets and documentation files can be downloaded from the YRBSS Data Files & Methods website (<http://www.cdc.gov/healthyyouth/yrbs/data/index.htm>). Those interested in getting access to state, territory, tribe, or local survey data are required to submit the YRBSS Data Request Form (<http://www.cdc.gov/healthyyouth/yrbs/requestdata.htm>). YRBSS data collected within one calendar year are usually available to the public by the middle of the next calendar year.

Data quality

From the available YRBSS documentation, the 2011 national YRBSS school response rate was 81 percent; the student response rate was 87 percent; and the overall response rate was 71 percent. Comparisons between estimates for states and districts from the national data collection effort and the surveys collected by states, territories, tribes, and localities

can be found on the CDC YRBSS website. Each jurisdiction reached a minimum site response rate of 60 percent and therefore had weighted data for that year. Weighted data allows a jurisdiction to make statements from the data that generalize to all high school students in that jurisdiction.

Studies by CDC and others indicate that data about risk behaviors can be gathered as credibly from adolescents as from adults. YRBSS performs internal reliability checks to help identify the small percentage of students who falsify their answers. To obtain truthful answers, students must perceive the survey as important and know procedures have been developed to protect their privacy and allow for anonymous participation.

A test-retest study of the 1999 version of the questionnaire [1] found that 47 percent of items had at least “substantial” reliability, with kappa statistics of agreement of 61 percent or greater, and 93 percent of items had at least “moderate” reliability, with kappas of 41 percent or greater. The study found no differences in reliability by gender, grade, or race/ethnicity. The study found that items related to tobacco use, alcohol and other drug use, and sexual behavior had the highest reliability. By comparison, items asking about dietary behaviors, physical activity, and other health-related topics were less reliable. A study of mode and setting using the YRBSS questions [2] determined that students were more likely to report risk behaviors when they took the survey at school compared with taking the survey at home.

YRBSS prevalence estimates are based on self-reported responses from a random sample of the 9th through 12th grade student population (12-17 years) and thus are subject to some reporting bias that may lead to underreporting or overreporting for some behaviors. Furthermore, the YRBSS only captures information from the youth population that attends school, and therefore, is not 100 percent representative of this age group. CDC uses the most currently available demographic estimates for their weighting procedures. While no validity studies have been conducted on YRBSS questions, the YRBSS bullying on school property indicator is at least of substantial reliability.

Simplicity of indicator

The level of complexity in calculating and explaining the bullying on school property or electronically indicator is low. This indicator is based on two YRBSS questions with simple “Yes” or “No” response options. The numerator and denominator are simple and the meaning of this indicator can be easily explained to professionals and the public. This measure does not require the linkage of datasets. CDC calculates and provides the weighting variables necessary for the proper analysis of this indicator. The data analyses for all YRBSS indicators require the use of statistical software programs that can analyze data from complex sample designs (e.g., SUDAAN, SAS, SPSS, STATA, and R).

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