

Association between bullying and pediatric psychiatric hospitalizations

SAGE Open Medicine

Volume 6: 1–7

© The Author(s) 2018

Reprints and permissions:

sagepub.co.uk/journalsPermissions.nav

DOI: 10.1177/2050312117750808

journals.sagepub.com/home/smo

Hadassa Leader^{1,2}, Jasmine Singh¹, Ayesha Ghaffar¹
and Cheryl de Silva^{1,2}

Abstract

Objectives: Bullying is a serious public health issue. We sought to demonstrate an association between bullying victimization and hospital admissions for acute psychiatric problems. We described the demographics and types of bullying in a sample of hospitalized patients in Staten Island, NY, and compared bullying victimization scores with psychiatric versus medical admissions.

Methods: Patients in grades 3–12 were recruited from the Staten Island University Hospital Inpatient Pediatrics unit and emergency department. Patients completed the validated *Olweus Bully/Victim Questionnaire (OBQ)* was analyzed to formulate a report of bullying in our sample as well as a sub-score measurement of bullying victimization. Pediatric residents simultaneously documented whether the subject was a medical versus an in-patient psychiatry admission. Statistical analysis was performed to look for an association between the victimization sub-score and a psychiatric indication for admission.

Results: A total of 185 surveys were analyzed. Peak bullying occurred in 7th and 8th grades. Demographics and types of bullying in our sample were described. A strong association between bullying victimization and hospitalization for in-patient psychiatry was demonstrated. Association between bullying victimization and suicidal ideation, psychiatry, and social work consults was also shown. Concern for an association between hospitalization for psychogenic illness and bullying victimization was also raised.

Conclusions: There is a significant association between bullying victimization and psychiatric hospital admissions. This raises the specter of the serious consequences of bullying as it is the first study to prospectively link hospital admissions to bullying. Studies using a valid measure of psychogenic illness to look for an association with bullying victimization are needed.

Keywords

Bullying, victimization, hospitalization, depression, suicide

Date received: 29 March 2017; accepted: 6 December 2017

Introduction

Bullying victimization is a serious public health issue that has been strongly linked to deleterious effects on the physical and mental health of our youth.^{1–5} Bullying and its impact on the lives of children have been well described. The effects of bullying victimization on symptoms of depression, suicidal ideation, and suicide attempts have been well established.^{6–13} For example, a study by Burk et al. showed that students who were bullied in various ways were twice as likely as non-victimized students to have experienced persistent sadness, considered attempting suicide, made a plan to attempt suicide, and attempted suicide. Work by Espelage et al. showed that even after subdividing groups looking separately at bullies, victims, verbal and physical aggression,

and various combinations of these, involvement in bullying in any capacity is linked to increased risk of suicidal ideation and behavior. The strength of this link can be demonstrated

¹Department of Pediatrics, Staten Island University Hospital, Northwell Health, Staten Island, NY, USA

²Department of Pediatrics, Hofstra-Northwell School of Medicine, Hempstead, NY, USA

Corresponding author:

Hadassa Leader, Department of Pediatrics, Staten Island University Hospital, Northwell Health, 475 Seaview Avenue, Staten Island, NY 10305, USA.

Email: dassi777@gmail.com



Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons

Attribution-NonCommercial 4.0 License (<http://www.creativecommons.org/licenses/by-nc/4.0/>) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access pages (<https://us.sagepub.com/en-us/nam/open-access-at-sage>).

by data showing that even the observation of bullying alone, as a bystander, is associated with suicide ideation.¹⁴

Attention to this issue has been increasing in the pediatric medical literature, and with advancement in technology and the potential for pervasive victimization, there is concern that the health consequences of bullying are expanding.^{15–17}

In addition to mental health sequelae, physical ailments such as headaches,¹⁸ backache, stomach ache, dizziness, fatigue, and others^{19–22} have been associated with bullying. For example, a meta-analysis conducted by Gini et al. demonstrated that bullied youth are about twice as likely to suffer from headache as their non-bullied peers. Similar studies have shown a strong link to psychosomatic problems in children. Children experiencing bullying have been shown to have about twice the risk of reporting backache, and three times the risk of complaining of dizziness, compared to non-bullied children.^{23,24}

Beyond associations, several studies attempt to establish causality between bullying victimization and health problems. Although temporal support is provided by findings that show being bullied as a young child precedes development of health problems in future years,²⁵ definitive causality has not been established. Nonetheless, the data lend growing support to the likelihood that bullying causes physical, psychosomatic, and psychiatric problems rather than the opposite.^{26–29}

Based on the frequent observation in the in-patient unit at Staten Island University Hospital (SIUH), Northwell Health that the need to hospitalize children and adolescents for depression, suicidality, and a variety of psychosomatic physical ailments seemed to stem from desperation caused by bullying in school, we sought to examine the possibility of a correlation between bullying and psychiatric hospitalizations. We hypothesized that a strong correlation exists between bullying victimization and hospital visits and admissions for acute psychiatric problems. A population-based study in Norway in 2009 was able to demonstrate that frequent bullying victimization in females could predict later psychiatric problems, including psychiatric hospitalization.³⁰ However, to our knowledge, there was no study examining a correlation between bullying victimization and acute hospitalization for mental-health-related problems.

Demographics of bullying in various geographical areas have been described,^{22,31} showing variation in the degree and types of bullying in different areas. We, therefore, also sought to specify the nature and demographics of bullying occurring in the in-patient population we studied, including the scope of the bullying problem faced by our patients, and any unique features, both for the benefit of our community, and any others that may be grappling with similar problems.

Methods

SIUH, part of the Northwell Health System, is a dual-campus 714-bed specialized teaching hospital located in New

York City (NYC). The North site of SIUH includes a 20-bed in-patient pediatric unit and a 4-bed pediatric intensive care unit (ICU), as well as a pediatric emergency department (ED) that sees approximately 20,000 pediatric patients per year. Due to the fact that SIUH does not currently have an in-patient psychiatric unit for children under the age of 18 years, patients seen in the pediatric ED that require admission to in-patient psychiatry for acute psychiatric care are boarded temporarily in the in-patient pediatric unit. These patients are designated as, “IPP Holds” and are provided with pediatric psychiatry consultation and social work services while arrangements are made for transfer to an appropriate pediatric psychiatric facility. This unique population of patients, that board alongside the population of medical pediatric in-patients, provided a unique opportunity to explore the question of whether bullying victimization could be linked to acute psychiatric hospitalizations in children and adolescents.

Our participant pool consisted of patients admitted to the pediatric inpatient unit at SIUH, both those admitted as medical patients and those designated IPP Holds. Children were included whether they were currently enrolled in public or private school, in grades 3 through 12, and were academically capable of reading and comprehending the questionnaire, designed to be at a third-grade reading level. The participants’ parent gave verbal consent and the participant gave verbal assent before completing the questionnaire, and anonymity was assured. No patient identifiers were collected. The study was approved by the Institutional Review Board (IRB) at Northwell Health.

The Olweus Bully/Victim Questionnaire (OBQ, Hazelden Publishing, Center City, MN), the most widely used self-report bullying survey in the world, has been extensively validated and has been included in the 2011 Compendium by the Centers for Disease Control and Prevention (CDC) as well as the National Center for Injury Prevention and Control as an assessment tool for victimization.³² In particular, this survey provides respondents with a clear understanding of bullying, while allowing them to have several response options to a wide variety of questions, including various types of physical, verbal, and cyber bullying. The questionnaire consists of 42 multiple-choice questions, using a Likert scale to measure perceived experience in degrees of severity or frequency. The survey has distinct questions addressing victimization, perpetration, and other elements of the bullying experience. For the demographic part of this study, we analyzed all 42 questions and their sub-questions. To examine our hypotheses that victimization is linked to hospitalizations, we used the subset of questions that measures victimization only, of which there were 10. We did not exclude any victimization-related questions, nor include any other types, such as those relating to perpetration. Answers on the Likert scale have a value of 1–5, resulting in scores between 10 and 50 on this “victimization sub-score,” which has not been separately validated.

Simultaneous to the patient completion of the survey, the pediatric resident caring for the patient on that day filled out a brief resident survey. On this survey, created for this study, the resident recorded whether this was a medical patient or an IPP hold. This did not require any particular thought process or diagnosis on the part of the resident, as the status of the admission was already designated in a binary manner: either medical or IPP. To look at the question from several other angles, although less well defined, we also asked the pediatric resident to answer several additional questions: the leading diagnosis, type of school (private or public), whether suicide or homicide ideation was an active problem on this admission, and whether there was a psychiatric or social work consult ordered on this admission. Given our anecdotal concern for a link between bullying victimization and psychogenic illness, we also asked the pediatric resident to state whether the working diagnosis was psychogenic (diagnosis of exclusion) versus organic problem. Since no definition of “psychogenic” was provided, and this was only a reflection of the gestalt of the medical team. We used this question to begin to explore a question that might require further study if an association was seen.

The data were collected between January 2014 and July 2015. The researchers recruited a convenience sample of medical and IPP patients present on the inpatient unit or ED, who were well enough to and agreeable to participate. Data were analyzed in two steps. First, a comprehensive report of the characteristics of bullying in our sample population was provided by an automated Scantron-type computer program. The report included prevalence, forms, location, duration, and whether victims reported bullying to an adult. Our sample’s data were also compared to pooled background national data, collected, and analyzed in an ongoing project by the company providing the questionnaire, Hazelden publishing.

Second, a separate analysis was performed to examine the relationship between the bullying victimization sub-score and medical versus IPP admissions. We also included an analyses of the other variables documented on the resident survey, such as whether a psychiatry consult had been called. Demographic data, including baseline characteristics, were collected on all study participants and analyzed using frequency distribution and descriptive statistics. Categorical data were summarized using frequency counts and percentages. Continuous variables were summarized by descriptive statistics, including mean, standard deviation, median, minimum, and maximum. The primary outcome measure of our study was the bullying victimization sub-score derived from the OBQ. Differences between groups in the primary outcome were estimated with nonparametric Mann–Whitney U-test. All statistical tests were two-sided and conducted at the 0.05 level of significance. Data analyses were performed with the SAS® System Version 9.3 (SAS Institute Inc., Cary, NC). We chose a convenience sample resulting in 185 participants. Post hoc power calculations showed that the sample size has sufficient power to demonstrate statistical

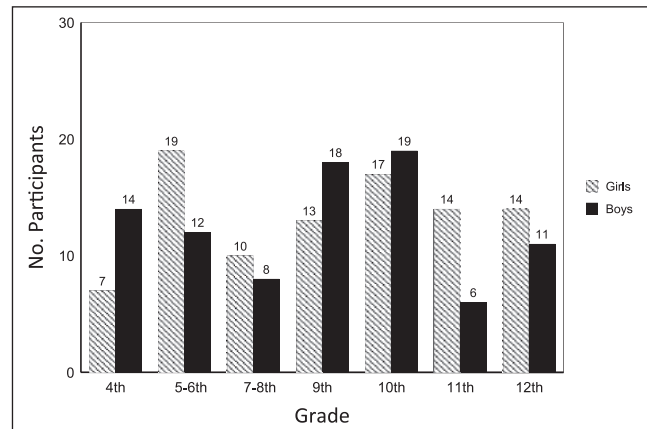


Figure 1. Number of boys and girls responding by grade.

significance in all measures except for homicidal ideation. Demographic p values were calculated using Fisher exact test. Comparisons to national averaged were assessed for statistical significance using Clopper–Pearson exact confidence intervals.

Results

Part 1: Demographics of bullying in our sample

The OBQ was administered to 198 participants and due to exclusion of 13 questionnaires for missing data or duplications, data analysis was conducted on 185 completed questionnaires. Our study group consisted of 51.6% girls and 48.4% boys. We grouped grades to maintain group sizes greater than 15, as seen in Figure 1.

Study participants reported ethnicity as 46% White, followed by 29% Hispanic, 10% African American or Black, 12% other, and 18% with no response or do not know.

Similar to national averages, 13% of our study population reported being bullied frequently, defined as 2–3 times per month or more. During the middle school period (5th–8th grades), our patient population reported victimization above national averages. Peak bullying victimization was in the 7/8th grade group, with 33% reporting frequent bullying as compared to national rate of approximately 17% (Figure 2). However, given the small number of frequently bullied children in our sample, statistical significance compared to national rates was not shown. For children who reported being bullied frequently, verbal bullying as well as exclusion and spreading of rumors was most frequent. Of note, racial forms of bullying were far more common in boys than girls, with $p \leq 0.001$ (Figure 3), although we were not able to determine whether male respondents were more likely to belong to a minority racial or ethnic group than female respondents.

Hallways, stairwells, and the lunchroom were the prime locations for bullying. Boys in our study tended to

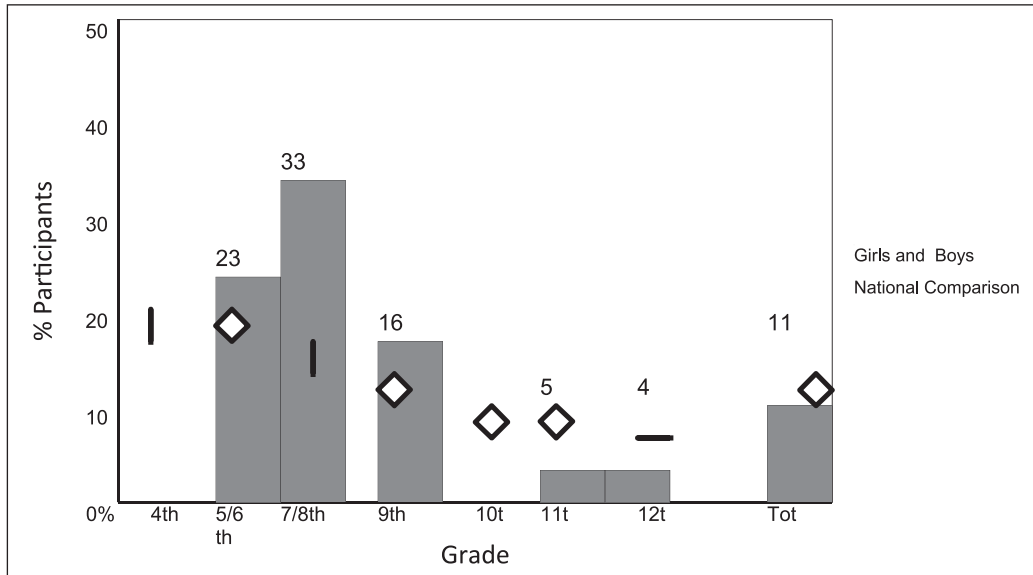


Figure 2. Percentage of girls and boys who have been bullied 2–3 times a month or more.

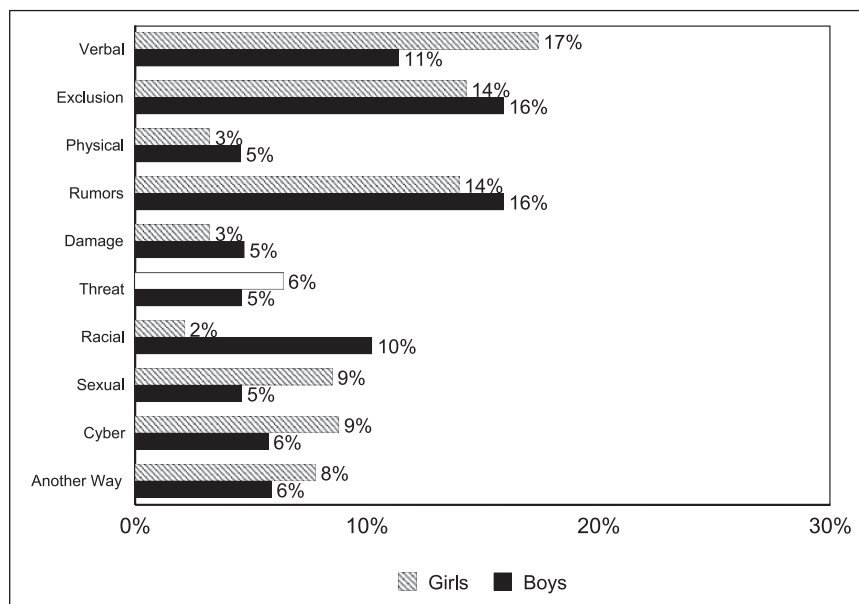


Figure 3. Ways of being bullied, for students who reported being bullied 2–3 times a month or more.

experience bullying in bathrooms, locker rooms, showers, and gyms more frequently than girls did. Girls reported bullying more often when the teacher was present in the room than boys did although not reaching statistical significance (Figure 4).

Our in-patient sample reported their bullying victimization to an adult at high rates, with frequency of seeking help above national comparisons. Girls told their parents about bullying far more so than boys ($p=0.012$). In our population, parents contacted the school and spoke with teachers about their children being bullied at a dramatically higher rate than

that seen in comparison to national school-based populations. For example, in the middle-school-aged children, 67% reported that a parent had contacted the school as compared to a national average of about 30%, a statistically significant difference. This trend continued in high school.

Part 2: Correlation between bullying victimization and psychiatric hospitalization

Of the 185 surveys analyzed, we had 151 (82%) pediatric medical patients and 34 pediatric IPP patients (18%).

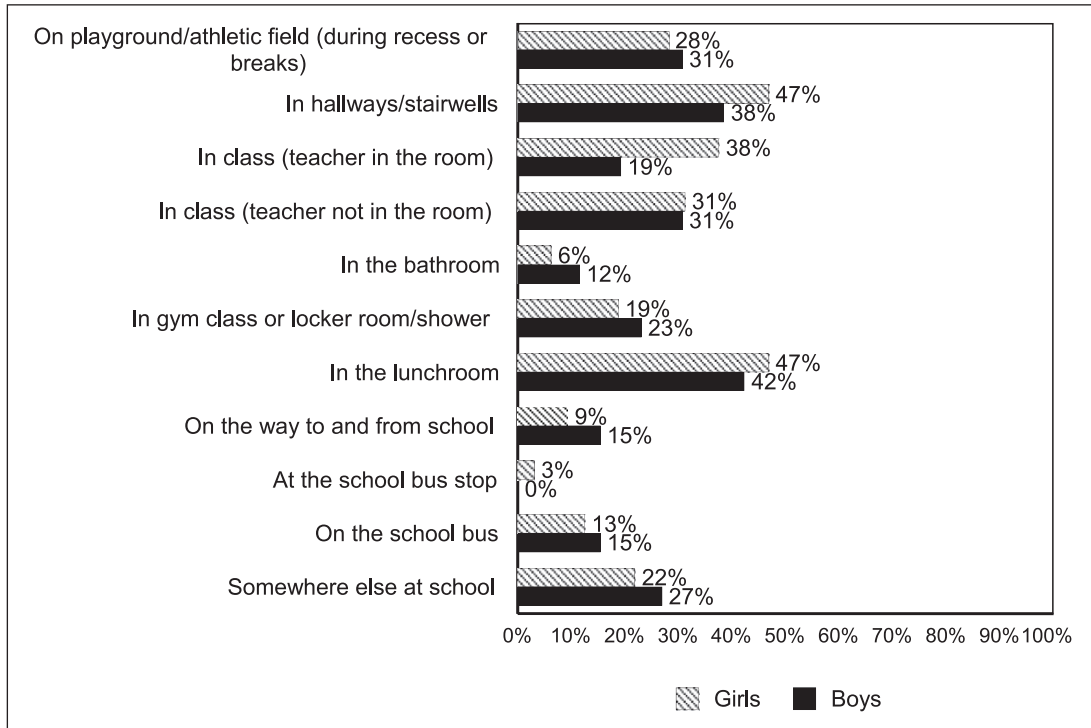


Figure 4. Where the bullying has occurred, for students who reported being bullied once or twice a month or more. Percentage of girls and boys who report being bullied in various places.

Table 1. Correlation between the surveyed variables and bullying victimization sub-score.

| | N | Bullying victimization sub-score Mean ± SD | Two-sided Pr > Z |
|-------------------------------|-----|--|-------------------|
| Public school | 165 | 14.04 ± 6.48 | 0.5064 |
| Private school | 20 | 13.15 ± 3.57 | |
| IPP/Psych admission | 34 | 17.21 ± 7.35 | <0.0001 |
| Medical admission | 151 | 13.23 ± 5.78 | |
| No suicidal ideation | 154 | 13.20 ± 5.74 | <0.0001 |
| Suicidal ideation | 33 | 17.73 ± 7.46 | |
| No homicidal ideation | 181 | 14.03 ± 6.32 | 0.8860 |
| Homicidal ideation | 5 | 13.80 ± 6.30 | |
| Social consult | 37 | 16.92 ± 7.38 | <0.0001 |
| No social consult | 149 | 13.30 ± 5.82 | |
| Psych consult | 38 | 16.82 ± 7.32 | <0.0001 |
| No psych consult | 148 | 13.30 ± 5.83 | |
| Psychosomatic/Dx of exclusion | 40 | 16.73 ± 7.93 | 0.0003 |
| Organic Dx | 140 | 13.16 ± 5.52 | |

Comparison of medical admissions with IPP holds revealed mean bullying victimization scores of 13.23 and 17.21, respectively (Pr > Z < 0.0001), demonstrating a strong, statistically significant association between bullying victimization and IPP admission (Table 1).

We also examined the other, less well-defined elements captured in the resident survey, as shown in Table 1. Mean victimization sub-scores were statistically significantly increased for patients with suicidal ideation, 17.73 versus 13.20 (Pr > Z < 0.0001), with a social work consult, (Pr > Z < 0.0001), and with a psychiatry consult (Pr > Z < 0.0001). For patients identified by the pediatric resident as having a leading diagnosis of psychogenic illness versus organic disease, bullying victimization was 16.73 versus 13.16 (Pr > Z = 0.0003).

There were no differences in rates of bullying victimization in public versus private schools (mean score 14.04 and 13.15, respectively, Pr > Z = 0.5064) and in children with homicidality versus those without (Pr > Z = 0.8860).

Discussion

We report data that provide strong evidence that there is a relationship between bullying victimization and hospitalization for acute psychiatric illness, as defined by an admission specifically for the acute need for in-patient psychiatric care. This was further enhanced by linking additional variables that identify patients with acute psychiatric needs, such as an in-patient psychiatry consult and suicidal ideation as an active problem for the medical team.

While prior studies have demonstrated repeatedly that bullying victimization is linked to depression, suicidal

ideation, and other mental health problems, our study links bullying victimization to a level of acuity and safety concerns rising to the need for psychiatric hospitalization.

The trend in our culture to view bullying as a more serious problem than it has been perceived historically is promising. By supporting the perception of bullying victimization as high risk (i.e. requiring psychiatric hospitalization), these data may lead to improvements in our response to victims as well. Ultimately, there is evidence that this high-risk perception may lead to decreases in prevalence. The effect of elevating the perception of risk of a behavior has been previously shown in relation to drug abuse. In a 2013 report,³³ the Substance Abuse and Mental Health Services Administration published a report that powerfully demonstrated that perception of risk of a drug like alcohol among adolescents could predict decreased prevalence of use of that drug, for example, binge drinking. To this end, although others have described various detrimental effects of bullying, our study attributes a higher level of severity to the associated health consequences, in that our subjects are presenting with psychiatric problems deemed worthy of hospitalization by medical providers, and of emergency room visits by the child or family.

Whether bullying victimization is causing psychiatric problems severe enough to reach the hospital, or, less likely, having these problems predisposes children to victimization, our data shed light on the seriousness of the link between psychological wellness and bullying victimization. This underscores the need for heightened awareness of risk both in the community and among healthcare providers.

Since completing this study, a retrospective review employing electronic medical records compared a validated measure of somatic symptoms with history of bullying and explored the question of bullying in hospitalized patients.³⁴ This report showed that hospitalized patients with a history of having been bullied had higher rates of anxiety, higher somatization scores, more functional neurologic symptoms, suicidal histories, and longer admissions. Our study used a prospective approach by recruiting participants from a cohort of hospitalized patients and then measuring bullying victimization and a psychiatric indication for admission simultaneously. Our study buttresses their findings with a prospective and reproducible approach, while their methods offer the possibility of using a valid measure of psychogenic illness that could be implemented to better explore one of our secondary questions.

Our examination of the state of bullying in a group of children admitted to a pediatric unit revealed peak victimization in middle school. Unexpectedly, we also noted the propensity for boys to engage in racial bullying. The reason for this was not explored in this study, but begs further evaluation. If bullying may be seen as a childhood parallel of what the adult legal system would call harassment, then racial bullying may be viewed as a childhood parallel of aggravated harassment, as it is defined by New York State law. If racial bullying is, as our study suggests, a problem encountered more frequently by our male pediatric patients, it ought to be studied further and addressed.

There are several limitations of this study. While the OBQ has been validated internationally, our sub-score has not been independently validated. However, by choosing all questions of a victimization nature, without leaving any out or adding any others, we expect the validity of this sub-score to roughly reflect that of the survey in its entirety. Because our methods were tied to the design of the questionnaire, our data and grouping were based on grade, not age, which is an unusual data point and varies by region. This highlights the fact that the OBQ was intended for the school—not the hospital—setting, a more general limitation of our methods.

Since we did not collect data on the number of families approached overall, we were unable to report the percentage of those approached that agreed to participate. Additionally, as mentioned previously, since psychogenic illness was not defined for residents completing the resident survey, we relied upon a gestalt of the medical team for this particular question. Clearly, this is a very limited measurement of somatoform illness. Therefore, this aspect of the data should be taken only as a possible phenomenon that would benefit from further study.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical approval

Ethical approval for this study was obtained from the Institutional Review Board, North Shore Long Island Health System FWA 00002505, approval ID # 13-569.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The Department of Pediatrics, Staten Island University Hospital, Northwell Health provided a small sum to cover the cost of surveys and survey analysis.

Informed consent

Verbal informed consent was obtained from all subjects in this study. Written informed consent was waived with approval from IRB.

References

1. Haltigan JD and Vaillancourt T. Joint trajectories of bullying and peer victimization across elementary and middle school and associations with symptoms of psychopathology. *Dev Psychol* 2014; 50(11): 2426–2436.
2. Dunn HK, Gjelsvik A, Pearlman DN, et al. Association between sexual behaviors, bullying victimization and suicidal ideation in a national sample of high school students: implications of a sexual double standard. *Womens Health Issues* 2014; 24(5): 567–574.
3. Wolk D, Lereya ST, Fisher HL, et al. Bullying in elementary school and psychotic experiences at 18 years: a longitudinal,

- population-based cohort study. *Psychol Med* 2014; 44(10): 2199–2211.
4. Dobry Y, Braquehais MD and Sher L. Bullying, psychiatric pathology and suicidal behavior. *Int J Adolesc Med Health* 2013; 25(3): 295–299.
 5. Kumpulainen K. Psychiatric conditions associated with bullying. *Int J Adolesc Med Health* 2008; 20(2): 121–132.
 6. Olweus D. *Bullying at school: what we know and what we can do*. Oxford: Blackwell Publishing, 1993.
 7. Burk T, Edmondson AH, Whitehead T, et al. Suicide risk factors among victims of bullying and other forms of violence: data from the 2009 and 2011 Oklahoma Youth Risk Behavior Surveys. *J Okla State Med Assoc* 2014; 107(6): 336–342.
 8. Duong J and Bradshaw C. Associations between bullying and engaging in aggressive and suicidal behaviors among sexual minority youth: the moderating role of connectedness. *J Sch Health* 2014; 84(10): 636–645.
 9. Espelage DL and Holt MK. Suicidal ideation and school bullying experiences after controlling for depression and delinquency. *J Adolesc Health* 2013; 53(1 Suppl.): S27–S31.
 10. Heikkila HK, Vaananen J, Helminen M, et al. Involvement in bullying and suicidal ideation in middle adolescence: a 2-year follow-up study. *Eur Child Adolesc Psychiatry* 2013; 22(2): 95–102.
 11. Hepburn L, Azrael D, Molnar B, et al. Bullying and suicidal behaviors among urban high school youth. *J Adolesc Health* 2012; 51(1): 93–95.
 12. Kim YS and Leventhal B. Bullying and suicide. A review. *Int J Adolesc Med Health* 2008; 20(2): 133–154.
 13. Brunstein Komek A, Marrocco F, Kleinman M, et al. Bullying, depression, and suicidality in adolescents. *J Am Acad Child Adolesc Psychiatry* 2007; 46(1): 40–49.
 14. Rivers I and Noret N. Potential suicide ideation and its association with observing bullying at school. *J Adolesc Health* 2013; 53(1 Suppl): S32–S36.
 15. Messias E, Kindrick K and Castro J. School bullying, cyberbullying, or both: correlates of teen suicidality in the 2011 CDC Youth Risk Behavior Survey. *Compr Psychiatry* 2014; 55(5): 1063–1068.
 16. Bannink R, Broeren S, van de Looij-Jansen PM, et al. Cyber and traditional bullying victimization as a risk factor for mental health problems and suicidal ideation in adolescents. *PLoS ONE* 2014; 9(4): e94026.
 17. Litwiller BJ and Brausch AM. Cyber bullying and physical bullying in adolescent suicide: the role of violent behavior and substance use. *J Youth Adolesc* 2013; 42(5): 675–684.
 18. Wang J, Nansel TR and Iannotti RJ. Cyber and traditional bullying: differential association with depression. *J Adolesc Health* 2011; 48(4): 415–417.
 19. Gini G, Pozzoli T, Lenzi M, et al. Bullying victimization at school and headache: a meta-analysis of observational studies. *Headache* 2014; 54: 976–986.
 20. Politis S, Bellou V, Belbasis L, et al. The association between bullying-related behaviours and subjective health complaints in late adolescence: cross-sectional study in Greece. *BMC Res Notes* 2014; 7: 523–532.
 21. Srabstein JC, McCarter RJ, Shao C, et al. Morbidities associated with bullying behaviors in adolescents. School based study of American adolescents. *Int J Adolesc Med Health* 2006; 18(4): 587–596.
 22. Due P, Holstein BE, Lynch J, et al. Bullying and symptoms among school-aged children: international comparative cross sectional study in 28 countries. *Eur J Public Health* 2005; 15(2): 128–132.
 23. Fekkes M, Pijpers FI and Verloove-Vanhorick SP. Bullying behavior and associations with psychosomatic complaints and depression in victims. *J Pediatr* 2004; 144(1): 17–22.
 24. Gini G and Pozzoli T. Bullied children and psychosomatic problems: a meta-analysis. *Pediatrics* 2013; 132(4): 720–729.
 25. Bogart L, Elliot M, Klein D, et al. Peer victimization in fifth grade and health in tenth grade. *Pediatrics* 2014; 133(3): 440–447.
 26. Kaltiala-Heino R, Frojd S and Marttunen M. Involvement in bullying and depression in a 2-year follow-up in middle adolescence. *Eur Child Adolesc Psychiatry* 2010; 19(1): 45–55.
 27. Kim YS, Leventhal BL, Koh YJ, et al. School bullying and youth violence: causes or consequences of psychopathologic behavior? *Arch Gen Psychiatry* 2006; 63(9): 1035–1041.
 28. Fekkes M, Pijpers FI, Freriks AM, et al. Do bullied children get ill, or do ill children get bullied? A prospective cohort study on the relationship between bullying and health-related symptoms. *Pediatrics* 2006; 117(5): 1568–1574.
 29. Bond L, Carlin JB, Thomas L, et al. Does bullying cause emotional problems? A prospective study of young teenagers. *BMJ* 2011; 323(7311): 480–484.
 30. Sourander A, Ronning J, Brunstein-Klomek A, et al. Childhood bullying behavior and later psychiatric hospital and psychopharmacologic treatment: findings from the Finnish 1981 birth cohort study. *Arch Gen Psychiatry* 2009; 66(9): 1005–1012.
 31. Ramya SG and Kulkarni ML. Bullying among school children: prevalence and association with common symptoms in childhood. *Indian J Pediatr* 2011; 78(3): 3017–3010.
 32. Hamburger ME, Basile KC and Vivolo AM. *Measuring bullying victimization, perpetration, and bystander experiences: a compendium of assessment tools*. Atlanta GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, 2001.
 33. Lipari RN. *The NSDUH report: trends in adolescent substance use and perception of risk from substance use*. Rockville, MD: Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, 2013.
 34. Ibeziako P, Choi C, Randall E, et al. Bullying victimization in medically hospitalized patients with somatic symptom and related disorders: prevalence and associated factors. *Hosp Pediatr* 2016; 6: 290–296.