

Bullying Victimization in Medically Hospitalized Patients With Somatic Symptom and Related Disorders: Prevalence and Associated Factors

Patricia Ibeziako, MD,^{ab} Christine Choi, BA,^a Edin Randall, PhD,^{ab} Simona Bujoreanu, PhD^{ab}

OBJECTIVES: The purpose of this study is to describe the prevalence of bullying victimization among medically admitted patients with somatic symptom and related disorders (SSDs) and to compare demographic, diagnostic, and psychosocial characteristics of bullied versus nonbullied patients.

METHODS: Medically admitted patients at a tertiary pediatric facility referred to the Psychiatry Consultation Service with somatic concerns were assessed via a quality improvement (QI) initiative, the SSD Standardized Clinical Assessment and Management Plan (SSD-SCAMP). Retrospective chart and QI data on adolescent and young adult patients assessed via SSD-SCAMP from May 2012 - December 2014 were reviewed.

RESULTS: Medical records of 282 patients (aged 12–22 years) diagnosed with SSDs were reviewed. Approximately 37% had a history of bullying victimization. Compared with nonbullied patients, bullied patients had higher somatization scores, more functional neurologic symptoms, and longer admissions. Bullied patients also had higher rates of comorbid anxiety, suicidal histories, and family psychiatric histories. Furthermore, bullied patients also had higher rates of learning disabilities and school accommodations and endorsed more significant life events within the year before hospitalization.

CONCLUSIONS: This study describes the unique health and psychosocial challenges experienced by medically hospitalized bullied adolescents and young adults with SSDs. The findings highlight the importance of a multidisciplinary approach to assessment and management. By implementing QI initiatives such as the SSD-SCAMP, providers can bridge the gap between the clinical needs and long-term management of patients with SSDs.

ABSTRACT

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Somatic symptom and related disorders (SSDs) are characterized by multiple somatic symptoms that are distressing and/or result in significant disruption in daily life.¹ Recent literature has identified several factors that predispose and precipitate somatic symptoms, including the following: physical illness, developmental transitions, academic pressures, dysfunctional family patterns, and trauma and bullying histories.²⁻⁴ Clinical and empirical accounts highlight the connection between bullying and somatic symptoms^{5,5} such as pain complaints, sleep disturbances, enuresis, and dizziness.⁶ Bullying was identified as the most common antecedent stressor in 23.8% of pediatric patients with conversion disorders in the United Kingdom and Ireland⁵ and a risk factor for recurrent abdominal pain among Malaysian youth.⁷

The 2013 US Youth Risk Behavior Survey revealed that 19.6% of high school students were bullied on school property and 14.8% were electronically bullied over a 1-year period,⁸ making bullying a prominent public health concern. Bullying victimization can be physical (shoving/fighting), verbal (name calling/threats), and/or psychological (rumors, shunning/exclusion)⁹ and is predictive of academic, interpersonal, physical, and mental health problems.¹⁰ Although research indicates that individuals with chronic illnesses/disabilities are more likely to be bullied,¹¹ longitudinal studies also show that being bullied is a unique predictor of increased physical and somatic symptoms, independent of preexisting medical conditions.^{6,12,13}

To our knowledge, there are no studies examining bullying within a cohort of medically hospitalized patients with SSDs. The majority of research examining bullying and somatic symptoms is conducted in schools, outpatient clinics, and/or community samples. In addition, patients with functional somatic symptoms severe enough to warrant an inpatient medical admission remain an understudied population. As such, this study aims to describe the prevalence of bullying victimization in medically admitted youth with SSDs and to compare the demographic, physical, and psychosocial characteristics between those with and without bullying histories. The current study hypothesizes that the majority of patients in the sample will not have a bullying history. However, patients with SSDs and a history of being bullied are hypothesized to present with unique characteristics that distinguish them from nonbullied patients with SSDs. The findings highlight potential implications for assessment and treatment of youth presenting with somatic concerns in inpatient medical hospital settings.

METHODS

Participants and Procedures

Consecutive patients referred to the Psychiatry Consultation Service (PCS) for somatic concerns from inpatient medical and surgical units at a tertiary pediatric academic institution were assessed by using a Standardized Clinical Assessment and Management Plan (SCAMP) protocol. The overarching goal of an SCAMP is to

standardize the assessment and management of a heterogeneous patient population and, through systematic data collection and analysis, generate information that further guides care delivery.¹⁴ The SSD-SCAMP is an ongoing quality improvement (QI) initiative and was developed on the basis of existing literature on the psychosocial characteristics and outcomes associated with SSDs.^{1,4,15,16}

All PCS clinicians received training for the implementation of the SSD-SCAMP protocol. With the use of this protocol, PCS clinicians conducted semistructured psychiatric interviews (usually with patients and parents separately) that included medical and psychiatric review of systems; assessment of developmental, academic, and psychosocial factors; and review of patient/family medical and psychiatric histories. Collateral information was obtained (when pertinent and with consent) from primary care providers (PCPs), outpatient mental health providers, and schools. All patients received comprehensive medical assessments in addition to the psychiatric evaluation.

Patients and parents completed several SSD-SCAMP measures during the hospitalization as part of the psychiatric evaluation protocol, and the information obtained was documented in the medical record. Measures included the Children's Somatization Inventory (CSI),¹⁷ the Functional Disability Inventory,¹⁸ the School Absence Measure, and the Life Events Checklist (LEC) (Table 1). The measures

TABLE 1 SSD-SCAMP Parent and Patient Measures

Measure	Number of Items	Description	Reporter	Internal Consistency
LEC ^a	60	Report of presence and impact (none/some/moderate/great) of life events in the past year in family, school/work, and social domains	Patient, parent	Cronbach's α : patient report = 0.858; parent report = 0.877
CSI ¹⁷	35	Report of presence of physical symptoms for previous 6 months on 4-point scale ("not at all" to "a whole lot")	Patient, parent	Cronbach's α : patient report = 0.872; parent report = 0.857
FDI ¹⁸	15	Report of functional impairment due to physical health for previous 2 weeks on 5-point scale ("no trouble" to "impossible")	Patient, parent	Cronbach's α : patient report = 0.919; parent report = 0.940
SAM ^a	1	Report of patient's school absences in the past year ("normal school attendance" to "over 1 year of missed school days")	Parent	Not applicable

FDI, Functional Disability Inventory; LEC, Life Events Checklist; SAM, School Absence Measure.

^a Measures created for the SSD-SCAMP.

were adapted for use with inpatient medical patients with the authors' permission and/or were developed specifically for the SSD-SCAMP. Of note, additional clinician measures incorporated in the ongoing SSD-SCAMP QI initiative were not included in the current study.

The SSD-SCAMP protocol used a multimethod (questionnaires, semistructured interview), multi-informant (patient, parents, and collaterals), and multidisciplinary (medical and mental health) assessment approach. More specifically, data on bullying victimization were collected via standardized self-report measures (ie, LEC), semistructured clinician interviews, as well as interviews with collaterals when appropriate. The SSD-SCAMP approach is consistent with research supporting the use of a multimethod approach for assessment of bullying experiences rather than relying only on patient/student self-rated assessments, due to their varying interpretations and reporting of bullying experiences.¹⁹ The LEC, completed by both patients and parents, included 1 question assessing whether the patient had experienced bullying at school and/or on the Internet during the past year. If the patient and/or parent indicated a history of bullying (for the patient) of "some," "moderate," or "great" impact on the LEC, bullying was considered "present." During the psychiatric assessment, additional efforts were made by PCS clinicians through interviews with patients, parents, and collateral sources to obtain specific information about patients' lifetime bullying victimization experiences. Information obtained by PCS clinicians as well as information provided by parents/patients via the LEC measure were combined to assess the lifetime history of bullying victimization.

During the course of the QI initiative, the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)*, was released and implemented. As such, patients were diagnosed with somatoform disorders or SSDs as well as other comorbid psychiatric disorders, as appropriate, according to the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*,²⁰ or according to the DSM-5 criteria¹ depending on the time of the

patient's assessment. All psychiatric diagnoses of patients seen before the implementation of DSM-5 were recoded from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*, to equivalent DSM-5 diagnoses via chart review by expert clinicians.

Chart and QI Data Review

Electronic medical records including SCAMP data from patients seen from May 2012 to December 2014 were retrospectively reviewed. Additional de-identified information obtained from the medical record included the following: (1) demographic characteristics; (2) patient medical and psychiatric histories; (3) family psychiatric history; (4) patient developmental, academic, and social characteristics; and (5) medical service utilization.

Ethical Issues

Parents (for patients <18 years old) and patients provided consent/assent for the psychiatric evaluation including the use of the self-report measures, and collection of collateral information, to inform treatment. The institutional review board deemed the prospective SCAMP exempt from review because the project was undertaken with the goal of applying QI methodology to enhance clinical standards of care and approved the retrospective review of medical records (including SCAMP data) after patients were discharged. Patients in the custody of Child Protective Services were not included in the current study.

Data Analysis

With the use of the Statistical Package for the Social Sciences (SPSS version 19; IBM SPSS Statistics, IBM Corporation, Armonk, NY), descriptive analyses and Pearson's χ^2 , Fisher's exact, and nonparametric Mann-Whitney *U* tests were performed on the 2 subsamples (bullied patients and nonbullied patients). All tests were 2-sided at the .05 significance level.

RESULTS

Sample Characteristics

The PCS conducted 3272 total consults during the 32-month period, of which 17.5% ($n = 574$; age range: 5–32 years) were

referred for somatic concerns and assessed with the SSD-SCAMP protocol. Ninety-seven of these were repeat consults. Of the 477 individual patients seen, 76% ($n = 364$) met DSM-5 SSD diagnostic criteria¹. For the current study, we reviewed charts of adolescents and young adults with SSDs to capture bullying experiences of middle school– through college-aged patients. Thus, patients who did not meet our study inclusion criteria were further excluded from the 364 individual patients with SSDs, for a final sample of 282 patients (mean [SD] age: 15.90 [2.54] years; range: 12–22 years).

Seventy percent ($n = 198$) of patients and 68% ($n = 191$) of parents in the final sample completed the LEC questionnaire, which included information on bullying victimization. Patient and parent reports of bullying were positively correlated ($r = 0.40$, $P < .001$). PCS clinicians also conducted psychiatric interviews and obtained collateral information when indicated. On the basis of combined reports via the LEC and psychiatric interview, a lifetime history of bullying victimization was elicited in 36.9% ($n = 104$) of the sample. There were no significant differences in age, gender, household incomes, or ethnicity between bullied and nonbullied patients (Table 2).

Physical Symptoms and Medical Utilization

On the basis of assessments by the admitting and consulting medical services, bullied patients with SSDs presented with higher rates of functional neurologic symptoms (nonepileptic seizures, memory difficulties, blindness, deafness, numbness, or limb paralysis) than nonbullied patients with SSDs and were more frequently diagnosed with conversion disorder (Table 3). Of the admitting services, Neurology had the highest percentage of bullied patients compared with nonbullied patients with SSDs, followed by General Pediatrics (Table 2).

Bullied patients had higher somatization scores on the CSI than did nonbullied patients via patient and parent report (Table 3). The most common pain type endorsed by bullied patients on the CSI was headaches (87.1%); in addition, bullied patients more frequently

TABLE 2 Nonsignificant Characteristics of Bullied and Nonbullied Patients With SSDs

	Nonbullied (<i>n</i> = 178)	Bullied (<i>n</i> = 104)
Age, median (SD), y	16.0 (2.64)	16.0 (2.36)
Gender, <i>n</i> (%)		
Female	144 (80.9)	76 (73.1)
Male	34 (19.1)	28 (26.9)
Race/ethnicity, <i>n</i> (%)		
Non-Hispanic white	134 (75.3)	70 (67.3)
Hispanic or Latino	12 (6.7)	11 (10.6)
Black	15 (8.4)	12 (11.5)
Asian	5 (2.8)	1 (1.0)
Other	12 (6.7)	10 (9.6)
Admitting service, <i>n</i> (%)		
General Pediatrics	66 (37.1)	30 (28.8)
Neurology	52 (29.2)	39 (37.5)
Gastroenterology	29 (16.3)	18 (17.3)
Other	31 (17.4)	17 (16.4)
Median (SD) annual household income, ^a US\$	75 326.50 (32 851.38)	70 195.50 (33 088.88)
Minimum	14 505.00	15 453.00
Maximum	250 000.00	161 927.00
FDI, median (SD)		
Patient	24.0 (14.75)	24.0 (15.33)
Parent	21.5 (16.29)	27.0 (15.32)

FDI, Functional Disability Inventory.

^a Values compiled via Census tract on the basis of recorded patient address.

reported stomachaches, muscle pain, and low back pains than did nonbullied patients (Table 3).

Median admission length for the overall sample was 3 days. Although there was no difference in functional disability scores between both groups (Table 2), bullied patients spent >1 week in the hospital nearly twice as frequently as nonbullied patients with SSDs (Table 3).

Life Events and Psychosocial Stressors

Bullied patients endorsed more life events of “some,” “moderate,” or “great” impact in the past year than did nonbullied patients (Table 3). The 5 most frequently endorsed life events by bullied patients were difficulties with learning (50.0%), self-image struggles (47.2%), major personal illness/injury (41.7%), grades falling/failing a grade (40.3%), and transition to a new grade/class (40.3%).

Developmental and Academic History

According to reports by patients, parents, PCPs, and/or school personnel, bullied patients had higher rates of preexisting

learning difficulties/disabilities (LDs) than did nonbullied patients and there were significantly fewer high-achieving/honors students among bullied patients compared with nonbullied patients (Table 3). Bullied patients had higher rates of academic accommodations/interventions, including individualized education plans, 504 plans, special classroom placements, 1:1 aides, and/or informal implementation of extended time for tests and assignments (Table 3). Furthermore, the median score on the School Absence Measure for both bullied and nonbullied patients was 3, indicating several weeks of missed school in the academic year before hospitalization for both groups.

Patient and Family Psychiatric History

Bullied patients presented with higher rates of comorbid anxiety disorders and history of suicidal ideation and/or self-harm than did nonbullied patients (Table 3). Biological parents of bullied patients had higher rates of mental illness than did parents of nonbullied patients, and biological mothers

of bullied patients had higher rates of anxiety than did mothers of nonbullied patients (Table 3).

DISCUSSION

This is the first study, to our knowledge, in medically hospitalized patients with SSDs to examine the prevalence of bullying victimization and to assess differences in somatic complaints, family characteristics, psychosocial and academic factors, and health care utilization between bullied and nonbullied patients with SSDs. The prevalence of bullying in our sample of patients with SSDs was similar to international averages of bullying evidenced among youth (32%) in community samples.²¹ Thus, as hypothesized, the majority of the patients with SSDs had not experienced bullying; however, bullied patients presented with more physical and psychosocial vulnerabilities in comparison with nonbullied patients. Although our study was cross-sectional, the findings corroborate the literature that indicates multiple psychosocial stressors before or after bullying^{22,23} and highlight the risks of developing somatic complaints²⁴ and SSDs^{1,4,7} in the context of psychosocial stressors.

Stressors and somatic symptoms in our bullied sample with SSDs often occurred in the context of academic/learning struggles at school, given the higher rates of LDs reported by this cohort. The cognitive efforts required for school tasks for youth with LDs may have contributed to the development and maintenance of headaches and other functional neurologic symptoms (eg, difficulty with memory, blindness, and nonepileptic seizures), which, along with comorbid anxiety, precluded further participation in academic activities. Furthermore, many youth with LDs have been shown to have difficulty developing and maintaining social relationships with peers²⁵ and are consequently at risk of peer victimization.^{26,27} Studies also showed that students who are victims of bullying have poorer school adjustment due to bullying (eg, problems with schoolwork) compared with their nonbullied peers.^{28,29}

It is notable that among medically hospitalized patients with SSDs in our study, bullied patients were not found to have

TABLE 3 Significant Characteristics of Bullied and Nonbullied Patients

	Nonbullied (<i>n</i> = 178)	Bullied (<i>n</i> = 104)
Physical symptoms and health care utilization: <i>n</i> (%)		
Functional neurologic symptoms	53 (29.8)	44 (42.3)*
Conversion disorder	27 (15.2)	29 (27.9)*
Length of admission >7 days	19 (10.7)	22 (21.2)*
CSI, median (SD)		
Parent-report	54.0 (11.54)	60.0 (15.06)**
Patient-report	58.0 (13.15)	64.0 (15.13)**
Patient-report pain type, <i>n</i> (%)		
Stomachache	82 (65.1)	59 (78.7)*
Muscle pain	74 (58.7)	59 (78.7)**
Low back pain	61 (48.4)	50 (66.7)*
Life events and psychosocial stressors		
Number of life events of “some,” “moderate,” or “great” impact on patient in the past year, median (SD)	7 (5.37)	10 (7.19)***
Developmental and academic history, <i>n</i> (%)		
LDs	27 (15.3)	38 (36.5)***
High-achievement/honors	68 (40.0)	24 (25.3)**
Learning accommodations/interventions	66 (37.1)	61 (58.7)**
Individualized education plans	23 (12.9)	29 (27.9)**
504 plans	24 (13.5)	25 (24.0)*
Other ^a	15 (8.4)	21 (20.2)**
Patient and family psychiatric history, <i>n</i> (%)		
Patient comorbid anxiety disorders	58 (32.6)	54 (51.9)**
Patient suicidal ideation and/or self-harm history	50 (28.1)	47 (45.2)**
Biological mothers with psychiatric history	57 (33.7)	49 (51.0)**
Biological mothers with anxiety	30 (16.9)	33 (31.7)**
Biological fathers with psychiatric history	37 (22.4)	41 (43.2)**

* $P < .05$, ** $P < .01$, and *** $P < .001$ (all 2-tailed).

^a Special classroom placements, 1:1 aides, and/or informal implementation of extended time for tests and assignments.

bullying victimization. Patients do not easily discuss their bullying experiences and rarely present to health care providers with bullying as their chief complaint. Bullied patients with SSDs had longer hospital admissions, suggesting that they are also at a higher risk of exposure to iatrogenic interventions and more health care utilization in response to their symptoms. Unless bullying is considered as a possible contributory or underlying factor and assessed during the evaluation process, it will not be uncovered.⁹

Routine assessments for bullying experiences as part of medical and psychiatric evaluations will allow health care providers to gain more comprehensive insight into the nature of presenting symptoms. Through the SSD-SCAMP initiative, PCS clinicians routinely assessed for bullying victimization as well as other psychosocial characteristics in hospitalized patients with SSDs. The findings from this study will guide the development of an algorithm for targeted assessment and treatment recommendations in future SSD-SCAMP iterations. These include alerting parents, PCPs, and schools about bullying to address ongoing issues and to minimize recurrence risk, to improve monitoring for suicidality, and to recommend follow-up mental health interventions. A multidisciplinary and systemic approach involving health care providers, families, schools, and communities is needed to identify and then intervene with this vulnerable group of patients who often present to hospitals with a myriad of medically unexplained symptoms. Hospital providers' collaboration with school personnel can help to increase understanding of the biopsychosocial model of somatic symptoms, promote adaptive school functioning, prevent hospitalizations, and interrupt a negative trajectory among youth with SSDs, especially those with histories of bullying victimization.

Our study has limitations. The generalizability of our findings is limited given the relatively small sample size of patients referred to a tertiary pediatric hospital. Our study did not differentiate between types of bullying (physical, verbal, or cyber) or examine the extent of the

more school absences than their nonbullied counterparts before admission, although both groups had missed a substantial amount of school in the past year. Our bullied patients, however, tended to receive more specialized learning interventions and reported more academic difficulties. Although special education services may provide youth with supports necessary for improved school attendance and academic mastery, research indicates that the presence of special education services in schools is also associated with negative attitudes toward peers with disabilities (physical, intellectual, and emotional),³⁰ including frequent exclusion and less peer acceptance.³¹ Of critical importance, 45% of

our sample of medically hospitalized bullied patients with SSDs had a history of suicidal ideation and/or self-harm and suicide is known to be one of the most serious outcomes related to bullying victimization.³² Findings from this study have important implications for medical providers (particularly pediatric hospitalists and neurologists), mental health professionals, school personnel, and parents. Many physical symptoms or help-seeking behaviors brought to the attention of medical providers often originate from events or circumstances that are not immediately apparent.⁹ This study indicates that physical symptoms in medically hospitalized youth, specifically functional neurologic and/or pain symptoms, may serve as warning signs of

bullying, but rather dichotomized the bullying variable (present or absent), thus precluding consideration of a “dose-response” relationship between bullying victimization and somatic symptoms. The study was also cross-sectional, which prevents conclusions about causality; future research should use longitudinal data to determine trajectories of bullying victimization and somatic complaints in patients with SSDs. Finally, exploring protective factors associated with positive outcomes is essential for informing strength-based treatment models.

This is the first study, to our knowledge, to examine bullying victimization among medically hospitalized patients with SSDs and to highlight a unique cluster of characteristics among adolescents and young adults with both bullying victimization and SSDs. By implementing QI initiatives such as the SSD-SCAMP, health care providers have an opportunity to bridge the gap between the acute clinical needs of bullied patients with SSDs and to affect their long-term management and health care utilization.

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