



Original Contribution

Nonsuicidal self-injury and suicide attempts among ED patients older than 50 years: comparison of risk factors and ED visit outcomes

Namkee G. Choi, PhD^{a,*}, Diana M. DiNitto, PhD^a, C. Nathan Marti, PhD^a, Bryan Y. Choi, MD, MPH^b^a University of Texas at Austin School of Social Work, 1925 San Jacinto Blvd, Austin, TX 78712, USA^b Brown University Department of Emergency Medicine, 593 Eddy St., Claverick 100, Providence, RI 02903, USA

ARTICLE INFO

Article history:

Received 14 January 2016

Received in revised form 21 February 2016

Accepted 21 February 2016

ABSTRACT

Background: Although the number of older adults who engage in nonsuicidal self-injury (NSSI) is not insignificant, research on older adults' NSSI is scant. The current study examined the prevalence and characteristics of NSSI compared to suicide attempt (SA) in adults older than 50 years who were seen at Emergency Departments (EDs) and their ED visit outcomes.

Methods: Data came from the 2012 Nationwide Emergency Department Sample. We used binary logistic regression analysis to examine demographic and clinical characteristics of NSSI versus SA among 67,069 visits with a diagnosis of either SA or NSSI, and multinomial logistic regression analysis to examine associations between NSSI versus SA and ED outcomes.

Results: Of self-inflicted intentional injuries, 76.89% were SA and 23.11% were NSSI. Visits for NSSI were associated with lower levels of psychiatric disorders and alcohol use disorders than SA and were more likely than SA visits to occur among older age groups (65–74 and 75+), females, and those with multiple injuries and drug use disorders. NSSI visits were also associated with greater risks of hospital admission (relative risk ratio [RRR] = 1.45, 95% CI = 1.36–1.54) and death (RRR = 18.64, 95% CI = 14.19–24.49), as opposed to treat-and-release, but lower risks of facility transfer/discharge with home health care (RRR = 0.77, 95% CI = 0.72–0.83).

Conclusions: The findings of higher hospitalization and death rates among those with NSSI than SA show how lethal intentional self-destructive behaviors in late life can be even if they are not classified as suicide attempts. The need for mental health and substance abuse treatment is discussed.

© 2016 Elsevier Inc. All rights reserved.

1. Introduction

Nonsuicidal self-injury (NSSI) is defined as the deliberate, self-inflicted destruction of body tissue (eg, cutting or burning oneself) without suicidal intent and for purposes not socially sanctioned [1]. Individuals engage in NSSI often as a means of alleviating negative emotions, self-derogation/self-punishment, escape from a situation/responsibility, and/or attention seeking [2–5]. In the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*, NSSI was considered a symptom of borderline personality disorder (BPD) [6]. However, in the *DSM-5*, NSSI is included as a disorder that is distinct from both BPD and suicidal behavior disorder, including suicide attempt (SA), but both NSSI and suicidal behavior disorder are noted as conditions needing further study [7]. Previous research provides empirical evidence that NSSI is not unique to BPD and may present with or without any psychiatric comorbidities [8].

In addition to the absence of suicidal intent, NSSI may differ from SA with respect to its risk factors. The National Comorbidity Survey showed that compared to the 2.7% of those aged 15 to 54 years who had at least

one lifetime suicide attempt, the 1.9% who had at least one lifetime NSSI (“suicide gesture”) were more likely to be female, and they had a significantly lower lifetime prevalence of DSM diagnoses of major depressive episode, drug abuse and dependence, conduct disorder, antisocial personality disorder, and simple phobia and a lower prevalence of multiple incidents of sexual molestation and physical assault [9]. A study of psychiatric patients in two Canadian emergency departments (EDs) between 2009 and 2011 also found that compared to the 14% who had attempted suicide, the 4.3% with NSSI had lower odds of depression, psychosis, acute life stressors, and higher rates of social support, but the 2 groups did not differ in gender, age, history of child abuse, and substance use disorders [10].

Other studies found that NSSI and SA often co-occur frequently, driven by overlapping genetic factors, personality traits, and psychiatric comorbidities in both adolescent and adult samples, although SA is associated with greater levels of psychiatric and psychosocial impairments [11–14]. In addition, one study found that psychiatric inpatients' NSSI history (presence and frequency) was more strongly associated with a history of SA than were their depressive symptoms, hopelessness, and BPD symptoms, and as strongly associated with SA history as current levels of suicidal ideation [15]. Among patients with a history of SA, those with an NSSI history also reported significantly greater

* Corresponding author. Tel.: +1 512 232 9590.

E-mail address: nchoi@austin.utexas.edu (N.G. Choi).

lethal intent for their most severe SA, and patients' number of prior NSSI episodes was positively correlated with the level of lethal intent associated with their most severe SA [15]. Other studies also support that NSSI is prognostic of suicide, especially among those who repeatedly engage in it and progressively use more lethal methods, though most suicides took place without intervening episodes of self-harm [16–20].

NSSI behaviors tend to begin during early adolescence, peak during adolescence and the early twenties, and then decrease with age [8]. Given the high prevalence of NSSI during adolescence and young adulthood, it is not surprising that most research on NSSI has focused on this age group, with a dearth of research on adults [3]. Although fewer older than younger adults engage in NSSI, the number of older adults who do so is not insignificant. For example, New Jersey hospital discharge data in 2003 found that 11.8% of patients (N = 3600) with a primary diagnosis of NSSI were aged 55+ (compared to 50.4% who were aged 15–34 and 37.9% who were aged 35–54); 9.7% of NSSI patients in the 55+ age group (compared to 11.9% in the 15–34 and 16.8% in the 35–54 age groups) had subsequent self-harm episode(s); and 1.7% of those aged 55+ (compared to 1.1% and 1.5% in the 15–34 and 35–54 age groups) died of suicide by 2007 [18]. There is no other record of research on NSSI among older adults in the United States; however, a study of homecare clients aged 60+ in Ontario, Canada, found that hospital records of intentional self-harm (including selected accidental poisoning) were present in 9.3 cases per 1000 [21]. The study identified younger age (60–74 years), any psychiatric diagnosis, alcohol use and dependence, psychotropic medication use, depressive symptoms, and moderate and severe cognitive impairment as risk factors [21], but it did not differentiate those with suicide intent from those without.

Previous studies found that common forms of NSSI among younger age groups include cutting, burning, scratching, banging, hitting, biting, and interfering with wound healing, with drug use and binge drinking contributing to such behaviors [22–24]. However, the aforementioned hospital discharge data in New Jersey in 2003, which included people of all age groups, showed that drug poisoning was the most common (76%) method (followed by cutting and piercing [13%] and other methods [11%]), and it continued to be the most popular method in subsequent follow-ups [18]. ED data between 2001 and 2004 also found that the rates of self-harm poisonings in NSSI for women were 101 per 100,000 (95% confidence interval [CI] 81–123) and 66 per 100,000 (95% CI 51–81) for men [25].

In 2013, the highest suicide rate was among people aged 45–64 years and the second highest suicide rate was among those aged 85+ years. Suicide was the fifth leading cause of death among the 45–54 age group, the eighth among the 55 to 64 years age group, and the seventeenth among the 65+ age group [26]. The Centers for Disease Control and Prevention also reports that 494,169 people were treated in EDs for nonfatal self-inflicted injuries in 2013; however, the data do not distinguish between SA and NSSI [26]. Most people with NSSI do not seek medical care [3]. However, ED visitors with NSSI or SA are likely to have serious injuries requiring medical and psychiatric attention, and thus comprise a subset with potentially lethal consequences. Given the high suicide rates among middle-aged and older adults and the potential of NSSI to escalate to suicidal behavior, it is important to understand potential similarities and differences between those with NSSI and SA with respect to their prevalence, correlates, and choice of methods. Using a nationally representative emergency sample data base, the current study examined (1) the prevalence and methods of SA and NSSI in adults older than 50 years who were seen at EDs; (2) demographic and clinical characteristics of those with SA and NSSI; and (3) ED visit outcomes in NSSI versus SA. Based on previous study findings, the study hypotheses were: Adjusting for demographic and clinical confounders, ED visits for NSSI, compared to SA, will be more likely to be by women and less likely to include a diagnosis of mental disorders and substance use disorders (H1); and they will be less likely to result in hospital admission, other facility transfer, discharge against medical advice, and death (H2).

2. Methods

2.1. Data and sample

Data came from the 2012 Nationwide Emergency Department Sample (NEDS) sponsored by the Agency for Healthcare Research and Quality. This de-identified, publicly available dataset is part of the Healthcare Cost and Utilization Project and is the largest all-payer ED database. In 2012, NEDS contained information on 31 million ED visits at 950 hospitals in 30 states and approximated a 20% stratified sample of all hospital-based EDs in the United States [27]. Stratification was based on geographic region, trauma center designation, hospitals' urban or rural location, teaching hospitals, and hospital ownership/control (public, for-profit, and not-for-profit). The 31 million ED events (visits) contained in the 2012 NEDS are weighted to represent the estimated 134 million ED events nationwide in that year [27].

NEDS data elements include patient demographics (age and gender); patient location (in counties by population size); patient zip code area income (in national quartiles); diagnostic and procedure codes from the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)* as well as the clusters/categories of diagnoses in the Clinical Classifications Software (CCS) system [28]; chronic condition indicator (*ICD-9-CM* diagnoses that last 12 months or longer and place limitations on self-care/independent living/social interactions and/or result in the need for ongoing intervention with medical products/services/special equipment); E Codes (for external causes of injury and poisoning: self-inflicted, intentional; unintentional; and assault-related); total charges; and ED dispositions/outcomes. In this study, we first examined the 26,142,903 ED visits by patients aged 13+ years for injury record and type and then the 2,201,766 ED visits by patients older than 50 years (representing 9,543,396 weighted events) with any type of injury. This report focuses on 67,069 visits by patients older than 50 years (representing 287,364 weighted events) with a diagnosis of either SA or NSSI.

2.2. Measures

SA and NSSI: These were identified from the NEDS E Codes. For SA, we cross-referenced the CCS diagnosis classifications of suicide with the E codes (ie, self-inflicted intentional injury for suicidal purpose). NSSI was defined as self-inflicted intentional injury that was not diagnosed as suicide. The E Codes were also used to identify *unintentional and assault-related injuries and methods of SA and NSSI*: falls, cutting/piercing, fire/burning, firearm, machinery, motor vehicle traffic (MVT), pedal cycling, pedestrian (not MVT), natural/environmental nature, overexertion, poisoning, being struck by/against, suffocation, adverse effects of medical care, adverse effect of medical drugs, and other.

ED outcomes were (1) treat-and-release; (2) admission to the same hospital or transfer to a short-term hospital as an inpatient (and did not die); (3) death either in the ED or in the hospital; (4) transfer to a skilled nursing facility, intermediate care facility, or other such facility (transfer to another facility); or discharge with initiation of home healthcare services (HHC); and (5) discharge against medical advice (AMA). Due to their small sample sizes, ED outcomes of transfer to another facility and HHC were combined in multivariate analyses, and "other/discharge with an unknown destination" was excluded from analyses.

Patient demographics and health status included (1) age in years (the 2012 NEDS data set provides chronological age up to 90 years and codes those who are older than 90 years), (2) age group (50–64, 65–74, 75+ years); (3) gender; (4) income by patient zip code area (lower 50% vs missing or upper 50% [reference category]); (5) number of chronic medical conditions; and (6) multi-injury indicator (1 = more than one injury; 0 = one injury only).

Mental health and substance use disorders (MHSUDs) were identified from the single-level CCS diagnosis classifications including 12 mental disorders (suicide is one of them) and two substance use disorders

Download English Version:

<https://daneshyari.com/en/article/3223117>

Download Persian Version:

<https://daneshyari.com/article/3223117>

[Daneshyari.com](https://daneshyari.com)