ELSEVIER

Patterns of Self-Harm Behavior Among Women with Borderline Personality Symptomatology: Psychiatric versus Primary Care Samples

Randy A. Sansone, M.D., Michael W. Wiederman, Ph.D., Lori A. Sansone, M.D., and Doug Monteith, M.D.

Abstract: *The current study investigated differences in self-harm behavior among individuals with borderline personality symptomatology from two different clinical settings. Participants were women, between the ages of 18 and 45, from an outpatient mental health setting or a primary care setting. Each participant completed the Self-Harm Inventory (SHI) and the borderline personality scale of the Personality Diagnostic Questionnaire-Revised (PDQ-R). Using a predetermined cut-off for substantial borderline personality symptomatology on the SHI, group comparisons with χ^2 analyses indicated that "overdosed" and "hit self" were significantly more common in the mental health subsample whereas "abused laxatives" was significantly more common in the primary care subsample. Using a predetermined cut-off for borderline personality on the PDQ-R, chi-square analyses indicated that "overdosed" and "hit self" remained significantly more common in the mental health subsample. Despite these differences, there was remarkable similarity of symptoms between groups. The implications of these findings are discussed.* © *2000 Elsevier Science Inc.*

Introduction

Few epidemiological studies exploring self-harm behaviors are available. Past research has addressed specific behaviors such as suicide attempts/completions [1–4] and self-inflicted burns [5] as well as focused on particular populations such as those from inpatient mental health settings [6] or mentally disabled populations [7,8]. However, self-harm behaviors pertain to individuals from a variety of clinical settings, including mental health and primary care. Indeed, some research indicates that many individuals with emotional disturbance are seen predominantly in primary care settings [9].

Whether there are behavioral differences among self-harming individuals seen in mental health versus primary care settings is unknown. If there are, such differences may influence or determine the individual's chosen setting for treatment. Because there appears to be an association between self-harm behaviors and borderline personality, this type of diagnostic identification might enable fair comparison among subjects from different settings. The following study was undertaken to explore whether there are differences in reported self-harm behaviors between two populations of individuals with borderline personality symptoms—one from an outpatient mental health setting and one from a primary care setting.

Method

Samples

Initial samples consisted of women ages 18–45, recruited from an outpatient psychiatric clinic ($n=43$) and a primary care medical clinic ($n=72$). This entire sample was part of a previous study exploring body weight, body image, and depression (Sansone RA, Wiederman MW, Sansone LA, Monteith D, manuscript submitted for publication).

Departments of Psychiatry and Internal Medicine at Wright State University School of Medicine in Dayton, Ohio (R.A.S.), Psychiatry Education, Kettering Medical Center (R.A.S.), Department of Human Relations at Columbia College in Columbia, South Carolina (M.W.W.), Kettering Medical Center Physicians Incorporated in Dayton, Ohio (L.A.S.), University of Texas Southwest Medical Center in Dallas, Texas (D.M.).

Address reprint requests to: Randy A. Sansone, M.D., Sycamore Primary Care Center, 2115 Leiter Road, Miamisburg, OH, 45342.

ISSN 0163-8343/00/$–see front matter
PII S0163-8343(00)00074-8
General Hospital Psychiatry 22, 174–178, 2000

655 Avenue of the Americas, New York, NY 10010

For the psychiatric sample, each consecutive patient who was scheduled for evaluation at a university-based outpatient psychiatric clinic was invited to participate. This clinic setting is located in a general office building rather than a medical college campus. All patient candidates in this clinic are pre-screened for stability as outpatients and most are non-psychotic. The majority are seeking psychiatric evaluation for affective disorders or medication evaluation through a referral from a non-physician mental health professional. From this original sample, all women who were invited to participate in the previous study agreed to do so, but one did not complete the questionnaire after enlistment.

The primary care sample of women was recruited from an HMO setting by a female family physician. Candidates were approached if they met the following general inclusion criteria: 1) 18 to 45 years of age; 2) cognitively intact; and 3) not in acute medical distress. This sample, recruited during a previous study (Sansone RA et al., manuscript submitted for publication), consisted of two subsamples: 1) controls (i.e., individuals who presented for non-emergent medical services) and 2) patients who were identified at the time of primary-care service as having depression or having been prescribed antidepressant medication. Participants were not recruited consecutively (i.e., the sample was one of convenience). Of the 88 women who were approached for the previous study, 72 agreed to participate.

Method

All participants completed the Self-Harm Inventory (SHI) [10], a 22-item, self-report, yes/no questionnaire that explores subjects' self-harm behaviors. Each item is preceded by the statement, "Have you ever intentionally, or on purpose . . ." Items include, "overdosed," "burned yourself," "attempted suicide," "cut yourself," and "engaged in sexually abusive relationships." A score on the SHI represents the number of endorsed items (i.e., "yes" responses), each of which represents a pathological response (i.e., there are no non-pathological items in the inventory). Scores on the SHI have been shown to highly correlate with borderline personality symptomatology [10] as measured by both the borderline personality scale of the Personality Diagnostic Questionnaire-Revised (PDQ-R) [11] as well as the Diagnostic Interview for Borderlines (DIB) [12]. In previous research, using a cut-off score of 5 resulted in 83.7% of cases being accurately classified as borderline or not using the DIB as the criterion [10].

Ultimately 27 women in the psychiatric sample and 24 women in the primary care sample scored in the range on the SHI suggestive of borderline personality symptomatology (Table 1). In the resulting psychiatric subsample, most of the women were either currently (44.4%) or previously (33.3%) married, all but 3 (11.1%) had earned a high school diploma, and all but one was White (Non-Hispanic). The resulting primary care subsample was very similar in that most of the women were either currently (37.5%) or previously (16.7%) married, all but one had earned a high school diploma, and all but three were White (Non-Hispanic). The ages of the women in the psychiatric ($M=29.48$; $SD=5.19$) and primary care ($M=29.92$; $SD=8.37$) subsamples did not differ, $F(1,113)=.05$, $P<.84$.

In addition to the SHI, all participants completed the borderline personality scale of the PDQ-R [11], an 18-item, self-report questionnaire that explores symptoms associated with borderline personality as defined by DSM-III-R [13]. Scores of 5 or greater are suggestive of borderline personality symptomatology. The PDQ-R has been reported as a useful screening measure for borderline personality in clinical [14,15] and nonclinical [16] samples. However, this measure has been criticized for being over-inclusive [14,16] and because of this, we conceptualized this second measure as a cross-check for the SHI.

Forming borderline personality groups based on PDQ-R scores (cut-off of 5 or greater) resulted in 35 women in the psychiatric sample and 27 women in the primary care sample. These two groups did not differ in their SHI score, $F(1,60)=.37$, $P>.55$. In the resulting psychiatric subsample, most of the women were either currently (45.7%) or previously (31.4%) married, all but six had earned a high school diploma, and all but three were White (Non-Hispanic). The resulting primary care subsample was very similar in that most of the women were either currently (37.0%) or previously (11.1%) married, all but two had earned a high school diploma, and all but three were White (Non-Hispanic). The ages of the women in the psychiatric ($M=30.83$; $SD=7.09$) and primary care ($M=27.81$; $SD=7.36$) subsamples did not differ, $F(1,60)=2.66$, $P<.11$.

Table 1. Prevalence of endorsement of self-harm behaviors for women diagnosed with BPD in a psychiatric ($n=27$) and a primary care ($n=24$) sample

Self-harm behavior	Psychiatric sample (%)	Primary care sample (%)
Overdosed	48.1	20.8*
Cut self	40.7	29.2
Burned self	7.4	9.1
Hit self	51.9	16.7*
Banged head	44.4	25.0
Scratched self	29.6	20.8
Attempted suicide	44.4	29.2
Prevented wounds from healing	7.4	4.2
Made medical conditions worse	22.2	20.8
Abused prescription medication	48.1	29.2
Exercised an injury	11.1	25.0
Starved self	40.7	41.7
Abused laxatives	0.0	16.7*
Abused alcohol	63.0	83.3
Driven recklessly	51.9	41.7
Been promiscuous (i.e., had many sexual partners)	66.7	62.5
Lost a job	22.2	33.3
Set self up in a relationship to be rejected	29.6	41.7
Distanced self from God as punishment	44.4	29.2
Engaged in emotionally abusive relationships	81.5	79.2
Engaged in sexually abusive relationships	37.0	37.5
Tortured self with self-defeating thoughts	88.9	87.5

Note: BPD status was determined by scores on the Self-Harm Inventory [10]. Values in the table are percentage of women who answered "yes" to each behavior.

* $P<.05$ for difference between the percentages based on χ^2 analysis.

Results

Because only women scoring above the clinical cut-off of five on the SHI (i.e., those with probable borderline personality symptomatology) were selected for the first analysis, it was expected that the two subsamples would not differ with regard to mean scores on the SHI ($F(1,113)=1.38$, $P<0.25$). We then examined possible differences between the psychiatric and primary care subsamples in patterns of endorsement for the various self-harm behaviors that were examined. The prevalence for each SHI item is presented in Table 1 as a function of subsample. Note that the two groups differed only with regard to the prevalence of having "overdosed," "hit self," and "abused laxatives."

In comparing groups based upon the PDQ-R cut-off score for borderline personality symptomatology, the two subsamples differed with regard to endorsement of two of the SHI items. More women in the psychiatric sample (40%) than the primary care sample (14.8%) endorsed the item "overdosed," $\chi^2=4.69$, $P<.05$. Similarly, more women in the psychiatric sample (40.0%) than the primary care sample (11.1%) endorsed the item "hit self," $\chi^2=6.39$, $P<.02$.

Discussion

Two general conclusions from this study may be noted. First, using either measure for borderline personality (i.e., SHI, or a less specific measure, the PDQ-R), the resulting borderline personality subsamples (psychiatric and primary care) differed very little in their overall self-harm profiles. Therefore, we might conclude that self-harm behaviors among individuals with borderline personality symptomatology are fairly consistent among these individuals across treatment settings and/or that the same individuals traverse both clinical settings.

Second, the frequency of particular self-harm behaviors may vary as a function of sample selection. Using the SHI cut-off scores for borderline personality, there were three behaviors that emerged in the respective subsamples at a significantly greater prevalence. "Overdosed" and "hitting self" were more frequent in the psychiatric subsample and may be interpreted as behaviors that are aberrant enough to warrant psychiatric attention (i.e., such individuals might not be managed in the primary care setting, alone). "Abused laxatives," which was more prevalent in the primary care setting, may relate to the physiological symptoms or syndromes secondary to laxative abuse (e.g., abdominal cramping, nausea, dyspepsia, constipation from chronic use, laxative dependence, cathartic colon), resulting in these individuals appearing more frequently in primary care settings.

When using the PDQ-R cut-off for borderline personality in the two subsamples, only "overdosed" and "hitting self" remain significantly more prevalent in the psychiatric subsample. That two SHI items remain consistently and significantly dif-

ferent between the subsamples when using two very different measures (i.e., different constructs) for borderline personality suggests that these findings are reliable.

It is somewhat surprising that many of the medically oriented self-harm behaviors (i.e., prevented wounds from healing, made medical conditions worse, abused prescription medication, exercised an injury) were not more common in the primary care subsample. Because the SHI inquires about behaviors using the phrase, "Have you ever . . .," it is possible that this finding may simply reflect sample overlap (i.e., that many women seen in mental health are also seen in primary care) or may indicate that, regardless of setting, individuals with borderline personality symptomatology engage in a potentially wide variety of self-harm behaviors. A sub-sample difference may have emerged had participants been asked, "how many times have you done this behavior?"

In examining the prevalence of self-harm behaviors in the psychiatric subsample, behaviors most commonly reported were "tortured self with self-defeating thoughts" (88.9%), "engaged in emotionally abusive relationships" (81.5%), "been promiscuous" (66.7%), "abused alcohol" (63.0%), "hit self" (51.9%), and "driven recklessly" (51.9%). More than half of the psychiatric subsample endorsed these items, which may reflect meaningful screening questions for mental health clinicians. The four most endorsed behaviors in the psychiatric subgroup were also the most endorsed behaviors in the primary care subsample. The prevalence of reported behaviors in both patient populations suggests that the SHI may be useful as a screening questionnaire for self-harm behavior in *both* mental health and primary care settings. It is important to note that both types of patient populations (i.e., mental health, primary care) were used in the initial development of the SHI [10].

There are several important limitations with this study. These include the self-report format of both measures (i.e., SHI, PDQ-R), small sample sizes, and the inability to control for whether participants were actively being treated in both mental health and primary care settings (i.e., population overlap). In addition, personality disorders are difficult to diagnose, particularly in a self-report format. In particular, the PDQ-R has been reported as over-inclusive, and in this study, was intended only as a second, cross-check measure. Therefore, we have consistently used the term, borderline personality symptomatology rather than borderline personality disorder, to indicate a broader group of individuals with these characterological features rather than a bonafide diagnosis of the disorder.

To our knowledge, this is the first study to examine possible differences in self-harm behavior profiles among individuals with borderline personality symptomatology from the settings of two different medical disciplines. Although there was a remarkable overlap between the two samples in the frequencies and types of self-harm behaviors, two behaviors appeared more frequently in the psychiatric setting. Whether other subsample differences exist is unknown (e.g., differences in psychotropic medication exposure, frequency of psychiatric hospitalization, extent of mental health treatment, lethality of self-harm behaviors, age of onset for different self-harm behaviors, overall social and occupational functionality). Additional research in this area is warranted.

References

1. Fyer MR, Frances AJ, Sullivan T, Hurt SW, Clarkin J: Suicide attempts in patients with borderline personality disorder. Am J Psychiatry 145:737–739, 1988
2. Gupta B, Trzepacz PT: Serious overdosers admitted to a general hospital: comparison with nonoverdose self-injuries and medically ill patients with suicidal ideation. Gen Hosp Psychiatry 19:209–215, 1997
3. Isometsa ET, Henriksson MM, Heikkinen ME, et al: Suicide among subjects with personality disorders. Am J Psychiatry 153:667–673, 1996
4. Lesage AD, Boyer R, Grunberg F, et al: Suicide and mental disorders: a case-control study of young men. Am J Psychiatry 151:1063–1068, 1994
5. Cameron DR, Pegg SP, Muller M: Self-inflicted burns. Burns 23:519–521, 1997
6. Shearer SL. Phenomenology of self-injury among inpatient women with borderline personality disorder. J Nerv Ment Dis 182:524–526, 1994
7. Davanzo PA, Belin TR, Widawski MH, King BH: Paroxetine treatment of aggression and self-injury in persons with mental retardation. Am J Ment Retard 102:427–437, 1998
8. Symons FJ, Thompson T: Self-injurious behaviour and body site preference. J Intellect Disabil Res 41: 456–468, 1997
9. Sansone RA, Wiederman MW, Sansone LA, Touchet B: An investigation of primary care patients on extended treatment with SSRI's. Am J Manag Care 4:1721–1723, 1998
10. Sansone RA, Wiederman MW, Sansone LA: The Self-Harm Inventory (SHI): development of a measure for identifying self-harm behaviors and borderline personality disorder. J Clin Psychol 54:973–983, 1998
11. Hyler SE, Rieder RO: Personality Diagnostic Questionnaire-Revised (PDQ-R). New York, New York State Psychiatric Institute, 1987

12. Kolb JE, Gunderson JG: Diagnosing borderline patients with a semistructured interview. Arch Gen Psychiatry 37:37–41, 1980
13. American Psychiatric Association: Diagnostic and statistical manual of mental disorders, 3rd ed., revised. Washington, DC, American Psychiatric Association, 1987
14. Dubro AF, Wetzler S, Kahn MW: A comparison of three self-reoprt questionnaires for the diagnosis of DSM-III personality disorders. J Pers Disord 2:256–266, 1988
15. Hyler SE, Lyons M, Rieder RO, et al: The factor structure of self-report DSM-III Axis II symptoms and their relationship to clinicians' ratings. Am J Psychiatry 147:751–757, 1990
16. Johnson JG, Bornstein RF: Utility of the Personality Diagnostic Questionnaire-Revised in a nonclinical population. J Pers Disord 6:450–457, 1992