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Posttraumatic stress and depression symptoms as correlates of deliberate self-harm among community women experiencing intimate partner violence

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Abstract

Deliberate self-harm (DSH) among women in the general population is correlated separately with posttraumatic stress, depression, and abuse during childhood and adulthood. The prevalence of these DSH correlates is particularly high among women exposed to intimate partner violence (IPV), yet few studies have examined DSH among this high-risk population and none have examined these correlates simultaneously. 212 IPV-victimized women in the community participated in a 2-hour retrospective interview. One-third reported current or past DSH. Discriminant analysis was used to examine which posttraumatic stress and depression symptoms and types of current IPV and childhood abuse were uniquely associated with current DSH. Findings show that women who currently use DSH reported greater severity of posttraumatic stress numbing symptoms and more severe sexual IPV compared to women who used DSH only in the past. Examining factors that are associated with women's current DSH in this population is critical so that a focus on DSH can be integrated into the treatment plans of women who are receiving mental health care, but also so that women who are not receiving such care can be referred to adequate mental health services

Keywords

self-harm; posttraumatic stress; PTSD symptom clusters; depression; intimate partner violence; childhood abuse

Introduction

Deliberate self-harm (DSH), whereby an individual deliberately causes tissue damage without suicidal intent (Gratz, 2001), is consistently and strongly associated with sexual victimization in both childhood (Gladstone et al., 2004; Mina and Gallop, 1998; Noll et al., 2003) and adulthood (Campbell et al., 2007; Gratz, 2006) and with mental health problems such as posttraumatic stress (Cloitre et al., 2002; Harned et al., 2006; Harned et al., 2010b; Nada-Raja and Skegg, 2011) and depression (Boudewyn and Liem, 1995; Hawton et al., 1999). Despite the high prevalence of the aforementioned DSH correlates among women experiencing intimate partner violence (IPV; Caetano and Cunradi, 2003; Desai et al., 2002;

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Golding, 1999; Sullivan et al., 2009), few studies have examined DSH in this high risk population (Boyle et al., 2006; Levesque et al., 2010; Noll et al., 2003; Sansone et al., 2007). DSH and IPV constitute critical health issues: According to recent data, 6% of women experience IPV annually (Black et al., 2011) and 4-8% of women in the general population use DSH (Brown et al., 2007). IPV-victimized women are up to three times more likely to present with DSH than non-victimized women (Boyle et al., 2006).

Past research has taken different approaches to simultaneously examining DSH and IPV. In one instance, both constructs were examined as common consequences of childhood sexual abuse (Noll et al., 2003). In other research, their associations were examined in women psychiatric inpatients (Sansone et al., 2007), emergency medicine patients (Boyle et al., 2006), and university students (Levesque et al., 2010). However no study to date has examined the prevalence of DSH among IPV-victimized women in the community. Past studies are further limited in that they did not assess separately past and current DSH. Further, while some studies distinguished IPV types (Levesque et al., 2010; Noll et al., 2003), no study simultaneously examined multiple types of IPV and types of childhood abuse. Failing to distinguish among psychological, physical, and sexual IPV or childhood emotional, physical, and sexual abuse as correlates of DSH is problematic since research indicates that types of abuse are differentially related to mental health outcomes (e.g., Clemmons et al., 2007; Dutton et al., 2006; Hedtke et al., 2008; Senn and Carey, 2010; Sullivan et al., 2006).

It is critical to examine factors that are associated with current use of DSH among IPV-victimized women so that (a) for women who already are receiving mental health care, a focus on DSH can be integrated into their treatment plans and (b) for women who are not receiving such care but are in contact with other service providers, those providers can better identify the need for a referral to mental health services. Therefore, the purpose of this study is to determine the extent to which different posttraumatic stress and depression symptoms, and types of IPV and childhood abuse, differentiate women who are currently using DSH from those who used it only in the past or not at all.

Research indicates that DSH, though maladaptive, is highly functional in the service of emotion regulation (Chapman et al., 2006; Gratz and Tull, 2010). Theories of emotion regulation suggest that DSH can be understood as a way (a) to express or control unbearable or intense negative emotions including pain, fear, and anger; (b) to cope with the effects of dissociation that result from the intensity of such negative emotions; or (c) to mitigate the effects of posttraumatic stress reexperiencing and emotional numbing symptoms (Briere and Gil, 1998; Brown et al., 2007; Dyer et al., 2009; Gratz, 2003). Compared to women who experience other types of traumatic life events, IPV-victimized women are at heightened risk for DSH since they often report experiencing an array of particularly intense negative emotions, including shame, guilt, and fear (Beck et al., 2011; Jaquier and Sullivan, in press) and are at high risk for both posttraumatic stress and depression symptoms (Caetano and Cunradi, 2003; Desai et al., 2002; Golding, 1999; Sullivan et al., 2009). These negative emotions and mental health problems, which are saliently related to DSH, tend to be more persistent and severe among individuals who experience interpersonal traumas such as IPV compared to impersonal traumas (Anders et al., 2011; Forbes et al., 2012). Further, IPV-victimized women endure a high probability of repeat victimization, continued negative effects of IPV victimization, and a minimal likelihood of recovery over time compared to women who experience other traumatic life events (Beeble et al., 2009; Blasco-Ros et al., 2010). IPV-victimized women are also at heightened risk for DSH because they are more likely than nonvictims to have experienced childhood sexual abuse (e.g., Golding, 1999; McGuigan and Middlemiss, 2005), which also is often related to poor emotional regulation skills (e.g., Cloitre et al., 2005).

Women with complex abuse histories often have similarly complex diagnostic profiles characterized by posttraumatic stress, depression, and DSH – which, in turn, are all characterized by emotional dysregulation (Chapman et al., 2006; Cloitre et al., 2005; Gratz and Tull, in press). Women with such complex issues often have limited adaptive emotion regulation skills and incur many obstacles to gaining access to and receiving appropriate mental health care (Briere and Gil, 1998; Johnson and Zlotnick, 2006; Johnson et al., 2011). Few principles exist to guide clinical decision making for mental health care providers who treat these high-risk women (Forbes et al., 2007; Harned et al., 2010a). Therefore, the first step toward improving providers' clinical decision making among IPV-victimized women in various settings is to understand how current and past DSH are differentially related to women's abuse histories and co-occurring mental health problems. This exploratory study addresses this gap in the literature by examining the severity of women's posttraumatic stress and depression symptoms and the severity of their types of IPV and childhood abuse to identify correlates unique to current DSH (vs. past or no DSH) among IPV-victimized women in the community.

1. Method

1.1. Participants

Two hundred forty women were recruited from an urban community in New England. Recruitment flyers were posted throughout the community including health clinics, churches, salons, grocery stores, and community agencies inviting women to participate in the Women's Relationship Study, a larger study examining the daily relationships among IPV and various co-occurring problems. Eligibility was determined via phone screen. The primary inclusion criterion was that the woman had experienced at least one act of physical IPV by her current male partner during the prior six months as measured by selected screening questions from the Conflict Tactics Scale-2 (CTS-2; Straus et al., 2003). Additional inclusion criteria were: (a) current involvement in a heterosexual intimate relationship of at least six months with contact at least twice per week; (b) continuous partner contact (i.e., no more than two weeks apart); and (c) monthly household income no greater than \$4,200 – determined a priori to methodologically control for differential resources associated with income (e.g., greater access to resources such as medical and mental health services). The final sample was comprised of 212 women.

1.2. Procedures

A two-hour, semi-structured, computer-assisted interview was administered face-to-face by a trained master or doctoral-level research associate. After completion of the interview, all participants were debriefed, remunerated \$50, and provided with a list of community resources. All study procedures were approved by the Institutional Review Board of the primary investigator's institution.

The average age of women in this sample was 36.6 years ($SD = 10.5$). Overall, 78.7% of women had children. Most women were either unemployed (34.4%) or unable to work (30.7%), with a mean level of education of 12 years ($SD = 1.6$) and a mean annual household income of \$13,304 ($SD = \$9,600$). One hundred and forty-four women were African American, forty-three were White, nine were Latina, six were American Indian or Alaska Native, and ten identified themselves as multiracial or didn't specify their race. Over half of couples were living together (59.4%) and the length of their relationship ranged from 6 months to 33 years ($M = 6.5$ years, $SD = 6.4$).

1.3. Measures

Deliberate self-harm—The Deliberate Self-harm Inventory (DSHI; Gratz, 2001) is a 17-item self-report measure designed to examine non-suicidal DSH. The DSHI documents the frequency, age of onset, duration, severity, and most recent occurrence of DSH. To reduce participant burden, we combined questions that were similar and dropped questions with a low frequency of responses in Gratz's (2001) study. Women were asked whether they had engaged in (1) cutting, (2) burning, (3) carving, (4) scratching, (5) sticking sharp objects into their skin, (6) preventing their wounds from healing, or (7) anything else to hurt themselves. Internal consistency for this revised measure was good, $\alpha = 0.71$. The referent time period for assessment of DSH was the duration of women's current intimate relationships. Women were classified into three mutually exclusive groups: (a) women who self-harmed in their current relationship, (b) women who self-harmed only in the past, and (c) women who never self-harmed.

Posttraumatic stress—The severity of posttraumatic stress was measured using the 49-item Posttraumatic Stress Diagnostic Scale (PDS; Foa, 1995). Posttraumatic stress symptom severity was assessed in relation to IPV by the current partner for the duration of the relationship. Diagnostic criteria (B) re-experiencing, (C) avoidance and emotional numbing, and (D) arousal symptoms were assessed over the previous six months. Building on previous research supporting the utility of a four-cluster structure for posttraumatic stress symptoms (Krause et al., 2007; Yufik and Simms, 2010), we separated the DSM-IV (American Psychological Association [APA], 1994) avoidance and numbing symptoms. Four-cluster symptom severity scores were created by summing women's responses: 0 (*not at all, or only one time*), 1 (*once a week or less, or once in a while*), 2 (*2 to 4 times a week, or half the time*), and 3 (*5 or more times a week, or almost always*). Reliability for these subscales was good: $\alpha = 0.87$ for the five re-experiencing symptoms, $\alpha = 0.78$ for the five numbing symptoms, and $\alpha = 0.79$ for the five arousal symptoms (cluster D); the inter-item correlation for the two avoidance symptoms was 0.46. Seventy-one women (33.5%) met the criteria for posttraumatic stress disorder in this sample.

Depression—The Center for Epidemiological Studies-Depression Scale (Radloff, 1977) was used to assess depressive symptoms over the previous six months. This scale is comprised of 20 items. Response categories ranged from 0 (*rarely or none of the time*) to 3 (*most or all of the time [5-7 days a week]*). Responses were summed to create the total score, with strong internal consistency, $\alpha = 0.91$. One-hundred and sixty-one women (75.9%) scored above the CES-D severity threshold of 16 which indicates a positive screener for depression.

Intimate partner violence—Physical IPV severity was measured with the Conflict Tactics Scales-2 (CTS-2; Straus et al., 2003). For the present analyses, a reference period of six months was chosen. Physical IPV response categories that comprised a range of values were recoded (Straus et al., 2003; i.e., *twice, 3-5 times* [recoded to 4], *6-10 times* [recoded to 8], *11-20 times* [recoded to 15], and *more than 20 times* [recoded to 25]). The physical IPV score was the sum of the 12 CTS-2 items of the assault subscale (e.g., pushed, kicked, choked), $\alpha = 0.89$. To gain comprehensive information about sexual and psychological IPV, these constructs also were measured by the Sexual Experiences Survey (SES; Koss and Gidycz, 1985) and the Psychological Maltreatment of Women Inventory (PMWI; Tolman, 1989, 1999), respectively. The severity of sexual IPV was the sum of the 10 SES items (e.g., forced to have sex or do sexual acts, attempted forced sex); the coding scheme for these items was identical to the coding scheme described above for physical IPV and showed good reliability, $\alpha = 0.89$. The severity of psychological IPV was the sum of the 48 PMWI items (e.g., put down, insulted, criticized) with response options ranging from 1 (*never*) to 5

(*very often*), $\alpha = 0.96$. As per inclusion criteria, all women had experienced physical IPV; all women also had experienced psychological IPV and 56.1% sexual IPV.

Childhood abuse—Childhood emotional, physical, and sexual abuse were assessed using three of the five subscales of the Childhood Trauma Questionnaire (CTQ; Bernstein and Fink, 1998). Items were rated on a 5-point scale from 1 (*never true*) to 5 (*very often true*). Childhood emotional abuse (e.g., insulted, degraded, ignored) was computed by summing its five subscale items ($\alpha = 0.86$), physical abuse (e.g., hit, beaten, punished with hard object) by summing its five subscale items ($\alpha = 0.85$), and sexual abuse (e.g., forced to watch sexual things, molested, touched sexually) by summing its five subscale items ($\alpha = 0.96$). According to the CTQ scoring categories, 59.9% of women experienced low to severe emotional abuse, 47.2% low to severe physical abuse, and 45.3% low to severe sexual abuse.

1.4. Data analysis

Study variables were assessed for assumptions of normality. To correct for excessive skewness, statistical transformation were applied choosing the most conservative transformation: physical and sexual IPV variables were log10 transformed, and childhood abuse variables were square root transformed. Transformed variables displayed skewness values within the acceptable range (Tabachnick and Fidell, 2007) and transformed scores were used in statistical analyses. Raw scores are noted in Table 1 presenting the means and standard deviations of scores by DSH groups.

To ascertain whether a statistically significant linear composite of the study's independent variables (i.e., posttraumatic stress, depression, IPV, and childhood abuse) differentiated between the three DSH groups, a one-way multivariate analysis of variance (MANOVA) was conducted. Univariate *F* tests (one-way ANOVAs) were conducted to examine univariate differences between the groups, followed by computation of effect sizes using Cohen's *d* (Tabachnick and Fidell, 2007). Next, to determine which of the victimization and mental health variables contributed most strongly to the differentiation of the three DSH groups, a descriptive discriminant analysis (DDA; Huberty and Olejnik, 2006) was performed. Combining DDA and univariate *F* tests in follow-up analyses, as recommended by Field (2005), provides a more comprehensive examination of the data than the univariate *F* tests alone since these ignore the correlations between variables and are associated with increased Type 1 error rates. Variable selection in the DDA was performed with a stepwise approach entering at each step the variable that minimizes the overall Wilks' Lambda. A stepwise approach was chosen to select an optimal set of discriminating variables that tended to separate the three DSH groups to a maximum degree, as suggested by both the correlations among the predictor variables and the expected similarities between the groups of women reporting past and current DSH. Variables were chosen to enter the discrimination model based on a less conservative significance level of an *F* test ($p = 0.20$) as recommended with stepwise approaches (Costanza and Afifi, 1979).

2. Results

Among IPV-victimized women, 13.7% ($n = 29$) reported current DSH, 16% ($n = 34$) reported past DSH only, and 70.3% ($n = 149$) reported no DSH. Overall, the mean scores of posttraumatic stress and depression symptoms were higher among women who reported current DSH; women who reported current DSH also had higher mean scores for each type of IPV and childhood abuse (Table 1). The prevalence of posttraumatic stress disorder was higher among women reporting current DSH, as was the proportion of women scoring above the depression threshold. All but two correlations among study variables were significant;

childhood sexual abuse was not correlated with posttraumatic stress avoidance symptoms or physical IPV.

The MANOVA revealed differences between the three DSH groups on a linear composite of mental health problems and IPV and childhood abuse variables, $F(22, 398) = 2.79, p < 0.001$, Wilks' Lambda = 0.75. Follow-up one-way ANOVAs with Bonferroni correction ($p < 0.004$) indicated significant differences of severity among the three DSH groups for posttraumatic stress re-experiencing, numbing, and hyperarousal symptoms, and for depression symptoms. Both sexual IPV and childhood emotional abuse were significantly different across groups. Next, to identify which variables best differentiated the three DSH groups, a stepwise DDA was conducted that calculated two statistically significant discriminant functions (Table 2). Three variables were retained: childhood emotional abuse, posttraumatic stress numbing symptoms, and sexual IPV (Table 3). Correlations of predictor variables with both discriminant functions (i.e., function structure matrix) are presented in Table 4. These findings combined with the examination of the group centroids (Table 5) suggested that Function 1 discriminated between women reporting no DSH and women reporting past or current DSH. All independent variables were positively related to Function 1, but childhood emotional abuse and posttraumatic stress numbing symptoms contributed most strongly to group discrimination. Function 2 discriminated between women reporting DSH currently and in the past, with the former group displaying greater severity of both sexual IPV and posttraumatic stress numbing symptoms and lower scores of childhood emotional abuse.

Consistent with the DDA, planned contrasts comparing women reporting current versus past DSH indicated that the two groups significantly differed on the severity of their posttraumatic stress numbing symptoms ($p = 0.02$) and the severity of their sexual IPV ($p = 0.02$). Women with current DSH reported greater severity of numbing symptoms and sexual IPV compared to women with past DSH only. No other variables demonstrated significant difference between these two groups.

3. Discussion

This study is the first to examine DSH among IPV-victimized women in the community and found that 13.7% of women reported current DSH. This rate is higher than rates found in the general population (4-8%, Brown et al, 2007), yet lower than rates found among women with comorbid posttraumatic stress and substance use disorders (e.g., 20%, Harned et al., 2006) or among women psychiatric inpatients (e.g., 64%, Sansone et al., 2007).

Posttraumatic stress, depression, and childhood abuse are highly prevalent among two populations of women: those who deliberately self-harm (e.g., Boudewyn and Liem, 1995; Campbell et al., 2007; Harned et al., 2006; Nada-Raja and Skegg, 2011) and those who experience IPV (e.g., Caetano and Cunradi, 2003; Desai et al., 2002; Golding, 1999; Sullivan et al., 2009). Despite these well-documented relationships, ours is the first study to examine DSH, posttraumatic stress and depressions simultaneously with types of IPV and childhood abuse among IPV-victimized women in the community. Further, examining posttraumatic stress symptom severity by cluster and IPV and childhood abuse by type allowed us to understand (a) which elements of these co-occurring problems were most salient in differentiating DSH groups, (b) which elements were associated with current DSH, and (c) which elements might be an appropriate target of intervention to reduce or eliminate DSH in this population. Posttraumatic stress numbing symptoms and childhood emotional abuse most strongly differentiated women who reported current or past DSH from those who reported no DSH. Further, sexual IPV and, to a lesser extent, posttraumatic stress numbing symptoms differentiated among DSH groups: women who reported current DSH reported

greater severity of both constructs compared to women who reported past DSH. These findings suggest that service providers across fields should attend to the presence of numbing symptoms and sexual IPV in their risk assessments for DSH.

Group differences among this population of IPV-victimized women are consistent with emotion regulation deficits. In this case, addressing these potential underlying deficits might be key to successfully engage complex, high risk women in first line treatments for mental health problems (Harned et al., 2010b; Johnson et al., 2011). Depression, numbing, and hyperarousal clusters have each been characterized in the literature as representative of core deficits at emotion regulation (Flack et al., 2000; Litz et al., 1997). That said, a precursor to addressing emotion regulation deficits is successfully identifying high risk behaviors and related mental health problems and abuse histories such as those identified in this study. Women who deliberately self-harm are often reluctant to disclose those behaviors to health care professionals (Briere and Gil, 1998). Moreover, while women appear willing to disclose sexual IPV in a safe and caring environment, they are unlikely to spontaneously disclose these experiences (Battaglia et al., 2003; Zeitler et al., 2006). Screening for IPV within health care settings is done infrequently and inconsistently (Edin et al., 2010; Liebschutz et al., 2008; Littleton et al., 2007; MacMillan et al., 2009; Stayton and Duncan, 2005). It appears similarly unlikely that women will be asked about DSH in such settings, further limiting their access to appropriate mental health care. Thus, the subgroup of women who are both currently experiencing IPV and self-harming represent a highly complex, high-risk population that may necessitate more thorough screening and assessment, and unique mental health treatment approaches (Johnson and Zlotnick, 2006).

Several factors limit the generalizability of this study. The cross-sectional design prevents us from examining the development of mental health problems and DSH over time and from making causal inferences regarding the relationship of women's IPV and childhood abuse experiences, co-occurring mental health problems, and DSH. Furthermore, preventative factors such as current and past resource utilization, substance abuse, and stable personality traits that may influence the relationships found in this study were not examined. All data were collected via self report and are subject to self-report bias, but also self-report assessment of mental health problems cannot be considered equivalent to a diagnostic assessment. Future studies would benefit from using longitudinal and, if possible, prospective designs and from examining the mediating or moderating influence of third variables not examined here. For example, including variables that directly assess emotion regulation will allow testing hypotheses regarding the function of DSH. Further, we did not control whether women's current IPV met posttraumatic stress disorder Criterion A nor did we assess prior exposure to Criterion A trauma that might influence the relationships among study variables. Future studies might benefit from assessing a larger number of potentially traumatic events utilizing diagnostic interview methods to more comprehensively examine their interplay in women's trajectories.

This study's findings highlight the critical role of posttraumatic stress numbing symptoms on DSH among IPV-victimized women and raise awareness of the unique IPV and childhood abuse experiences that may heighten women's risk for DSH. Future studies should further examine IPV-victimized women's motivations for self harm. Namely, the extent to which women self-harm because (a) their victimization experiences and co-occurring mental health problems are overwhelmingly distressing and DSH provides them a method of coping with their distress (i.e. self-harm *to cope*), and (b) the severity of their numbing symptoms inhibits their experience of emotion and they desire to increase that capacity (i.e. self-harm *to feel*). If replicated, our findings may help to guide professionals who work with IPV-victimized women in their screening, clinical decision making, and

intervention planning by further advancing their knowledge of the differential clinical profiles of the groups of women delineated in this study.

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Table 1

Means and Standard Deviations of Scores by Deliberate Self-Harm Group

| Variables | Current deliberate self-harm (n = 29) | | Past deliberate self-harm only (n = 34) | | No deliberate self-harm (n = 149) | | F(2, 209) | p | d |
|---------------------------------------------|---------------------------------------|-------|-----------------------------------------|-------|-----------------------------------|-------|-----------|-------|------|
| | M | SD | M | SD | M | SD | | | |
| Symptom severity for mental health problems | | | | | | | | | |
| Posttraumatic stress re-experiencing | 7.24 | 4.35 | 5.79 | 3.82 | 4.27 | 3.54 | 8.97 | >.001 | 0.08 |
| Posttraumatic stress avoidance | 3.21 | 1.78 | 2.32 | 1.97 | 2.15 | 1.99 | 3.55 | .030 | 0.03 |
| Posttraumatic stress numbing | 8.21 | 3.77 | 6.09 | 4.01 | 4.53 | 3.57 | 13.29 | >.001 | 0.11 |
| Posttraumatic stress arousal | 9.14 | 4.10 | 7.65 | 3.76 | 5.98 | 3.88 | 9.25 | >.001 | 0.08 |
| Depression | 33.28 | 12.50 | 28.03 | 10.74 | 22.55 | 11.37 | 12.21 | >.001 | 0.10 |
| Current intimate partner violence | | | | | | | | | |
| Psychological | 143.10 | 33.61 | 127.44 | 33.21 | 124.19 | 34.81 | 3.67 | .027 | 0.03 |
| Physical ^a | 50.72 | 59.38 | 38.25 | 47.06 | 31.47 | 43.93 | 2.20 | .111 | 0.02 |
| Sexual ^a | 24.24 | 43.37 | 7.44 | 18.93 | 8.46 | 23.80 | 6.49 | .002 | 0.06 |
| Childhood abuse | | | | | | | | | |
| Emotional ^b | 14.10 | 5.45 | 13.91 | 5.01 | 9.81 | 5.02 | 16.29 | >.001 | 0.13 |
| Physical ^b | 10.64 | 5.22 | 10.06 | 4.62 | 8.55 | 4.46 | 4.23 | .016 | 0.04 |
| Sexual ^b | 11.32 | 7.06 | 12.50 | 7.69 | 8.83 | 6.48 | 5.15 | .007 | 0.05 |

Note. Means and standard errors are untransformed scores; statistical analyses were run with:

^a log₁₀-transformed scores;

^b squared scores. Significance level with Bonferroni correction, $p < .004$; $d =$ Cohen's d .

Table 2

Wilks' Lambda and Canonical Correlation for Deliberate Self-Harm Groups

| Function | Wilks' Lambda | χ^2 | df | p | R_c |
|----------|---------------|----------|----|------|-------|
| 1-2 | .79 | 48.77 | 6 | .000 | .43 |
| 2 | .97 | 6.89 | 2 | .032 | .18 |

Note. R_c = Canonical correlations

Table 3

Predictor Variables in Stepwise Discriminant Function Analysis

| Step | Predictor variable | Variables in discriminant function | Wilks' Lambda | Exact <i>F</i> | <i>p</i> |
|------|----------------------------------|------------------------------------|---------------|--------------------|----------|
| 1 | Childhood emotional abuse | 1 | .87 | 16.29 ^a | .000 |
| 2 | Posttraumatic stress numbing | 2 | .81 | 11.50 ^b | .000 |
| 3 | Sexual intimate partner violence | 3 | .79 | 8.58 ^c | .000 |

^a *df*1 = 2, *df*2 = 209.

^b *df*1 = 4, *df*2 = 416.

^c *df*1 = 6, *df*2 = 414.

Table 4

Correlation of Predictor Variables With Discriminant Functions (Function Structure Matrix)

| Variable | Function 1 | Function 2 |
|---------------------------------------------|------------|------------|
| Symptom severity for mental health problems | | |
| Posttraumatic stress re-experiencing | .507 | .243 |
| Posttraumatic stress avoidance | .489 | .193 |
| Posttraumatic stress numbing | .742 | .360 |
| Posttraumatic stress hyperarousal | .541 | .174 |
| Depression | .566 | .238 |
| Current intimate partner violence | | |
| Psychological | .395 | .249 |
| Physical ^a | .323 | .252 |
| Sexual ^a | .469 | .623 |
| Childhood abuse | | |
| Emotional ^b | .808 | -.551 |
| Physical ^b | .560 | -.312 |
| Sexual ^b | .348 | -.086 |

Note. Statistical analyses were run with:

^a log10-transformed scores;

^b squared scores.

Table 5

Group Centroids

| | Function 1 | Function 2 |
|--------------------------------|-------------------|-------------------|
| Current deliberate self-harm | .945 | .273 |
| Past deliberate self-harm only | .480 | -.373 |
| No deliberate self-harm | -.294 | .032 |