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PTSD IN DELIBERATE SELF-POISONING PATIENTS

Post-Traumatic Stress Disorder among Deliberate Self-Poisoning Patients

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Abstract

This study explored PTSD among suicide attempters. Participants were 330 hospital-treated deliberate self-poisoning (DSP) patients. Twelve-month prevalence of PTSD and comorbid psychiatric disorders was determined using the Composite International Diagnostic Interview (CIDI-A). Standard disability measures and demographic information were also obtained. PTSD prevalence was 32% among women and 15% among men. The PTSD group had significantly higher levels of affective disorder, anxiety disorders other than PTSD, psychiatric disability and service utilization than DSP patients without PTSD. Logistic regression modeling showed that PTSD was associated with the type of traumatic event, number of events, affective disorder, and anxiety disorder other than PTSD.

Key Words:

- Suicide, Attempted
- Stress Disorders, Post-Traumatic
- Comorbidity
- Cost of Illness

Post-Traumatic Stress Disorder among Deliberate Self-Poisoning Patients

The American National Comorbidity Study found that a U.S. probability sample of study participants with PTSD had an increased risk of suicidal thoughts and behaviour compared with controls (Kessler, Borges, & Walters, 1999). However, few studies have examined the prevalence of PTSD among suicide attempters. Much of the research into anxiety disorders and suicidal behaviour has concentrated on panic disorders (Tanney, 2000). In one of the few studies that reported on PTSD in patients with suicidal behaviours or ideation, 66 cases of current PTSD were found among 209 psychiatric outpatients (32% of patients, 8% of diagnoses) (Rudd, Dahm, & Rajab, 1993).

Other studies of PTSD in suicidal populations have focused on a single type of traumatic event. For example, one study examined the relationship of partner abuse and PTSD among 119 suicide attempters compared with 85 non-attempters (Thompson et al., 1999). Attempters had a higher incidence of abuse and PTSD than non-attempters. Physical abuse (but not psychological or emotional abuse) was related to PTSD. Another study explored the relationship of past sexual abuse and PTSD among 100 deliberate self-poisoning (DSP) patients (Taylor, Kent, & Huws, 1994). They compared first-time attempters with repeat attempters. Repeaters had a significantly higher rate of reported past sexual abuse than first-time attempters (53% v 15% respectively). Repeaters also scored significantly higher on the number of PTSD symptoms (mean of 1.84 v 0.55 respectively). Coll, Law, Tobias and Hawton (1998) found that child sexual abuse was very prevalent among female DSP patients (72% reported some kind of abuse, and 51% reported attempted or actual sexual penetration).

In this paper we examined a population of hospital treated DSP patients in order to explore the factors associated with PTSD. The specific aims of this study were to: document the prevalence of exposure to traumatic events among DSP patients; document the prevalence of PTSD among DSP patients; compare psychiatric comorbidity, disability and health care utilisation for DSP patients with PTSD and those without PTSD; and develop logistic regression models to explore the multivariate correlates of PTSD among those DSP patients exposed to a traumatic event.

Methods

Study Population

All DSP patients aged 18 years or over who presented to the Newcastle Mater Hospital (Hunter Area Toxicology Service) during the study period (April 1998 - December 2001) were eligible for the study if they were capable of informed consent, were not considered to pose a threat to an interviewer, were not of “no fixed address” and spoke sufficient English to complete the interview.

The Hunter Area Toxicology Service (HATS) is a regional toxicology unit situated at the Newcastle Mater Hospital that serves a population of 350,000 people and is a tertiary referral center for a further 150,000 (Buckley, Whyte, Dawson, McManus, & Ferguson, 1995). All poisoning presentations to emergency departments in the region are either admitted to this unit or notified to HATS and entered prospectively into a clinical database (Whyte, Buckley, & Dawson, 2002). The Consultation-Liaison Psychiatry Department sees all DSP patients (Whyte, Dawson, Buckley, Carter, & Levey, 1997). A preformatted admission sheet is used by medical

staff to collect clinical data and, with additional information from the medical record, data are entered into the HATS database by two trained personnel blinded to any study hypotheses.

Instruments

Diagnostic and service utilisation measures.

The study used the same interview as the Australian National Survey of Mental Health and Wellbeing (Australian Bureau of Statistics, 1999). In this study, the Composite International Diagnostic Interview (CIDI) (World Health Organisation, 1997), a fully structured interview, was used to assess whether participants satisfied DSM-IV diagnostic criteria for anxiety, affective and substance use disorders within the 12 months prior to interview. The CIDI was developed by the World Health Organisation and has demonstrated reliability and validity (Andrews & Peters, 1998; Wittchen, 1994). A modified version of the CIDI was used to assess comorbid mental disorders in the American National Comorbidity Study (Kessler, Sonnega, Bromet, Hughes & Nelson, 1995).

The four interviewers attended three days of training at the WHO Collaborating Centre for Mental Health and Substance Abuse, Sydney, Australia, where they were required to demonstrate reliable administration of the interview using the course instructor as gold-standard. Specific inter-rater reliability scores were not computed. The automated (computer-based) version of the CIDI was administered. In addition to the CIDI, the demographic and Service-Utilization Instrument components of the Australian National Survey of Mental Health and Wellbeing (Australian Bureau of Statistics, 1999) were administered.

PTSD section.

The questions on traumatic events were presented in a list of “extremely stressful or upsetting events that sometimes occur to people.” Participants were asked to indicate whether or not they had experienced any of 11 items shown in Table 2. The items included experience of violence, cruelty, accidents, natural disasters and sexual abuse. The two questions on sexual abuse had the following definitions, which were read out to the participants. Rape was defined as “someone had sexual intercourse with you when you did not want to, by threatening you, or using some degree of force.” Sexual molestation was defined as “someone touched or felt your genitals when you did not want them to.” Participants were asked if they had experienced any other extremely stressful or upsetting event and asked to briefly describe it. Bereavement, chronic illness, business loss, marital or family conflict, and 'book, movie or television' were excluded from categorisation as traumatic events for this study.

After completing the list, participants who had experienced only one of the events were asked if it had happened more than once and if so, whether one of those events was more stressful or upsetting than any other. Participants who had experienced more than one of the events were asked to choose the most stressful or upsetting of the events. Questions related to PTSD were asked about the most stressful or upsetting (worst) event or the only event, if a participant had experienced only one event.

Disability measures.

Three measures of mental disability and two measures of physical disability were administered. All of the scales referred to the four weeks prior to interview. The scales used

were: the General Health Questionnaire-12 (GHQ-12, Goldberg & Williams, 1988); the Kessler Psychological Distress Scale-10 (Kessler, Andrews, Colpe et al., 2002); the Brief Disability Questionnaire (BDQ) (Australian Bureau of Statistics, 1999) and the SF-12 (Ware, Kosinski, & Keller, 1996). The Mental Component Summary (MCS) and the Physical Component Summary (PCS) scores from the SF-12 were calculated. The Likert method of scoring the GHQ-12 and the Medical Outcomes Study (MOS) method of scoring the BDQ were used (Australian Bureau of Statistics, 1999).

Procedure

The study was introduced to potential participants by the attending clinical toxicologist. Consenting patients were contacted for interview, to be conducted soon after discharge with an upper limit of eight weeks. Participants returned to the hospital or were interviewed at home depending on their preference.

Statistical Analysis

Results were analysed using SPSS V10.0. Univariate analyses employed Chi-square or Fisher's Exact test for categorical data and *t*-test or Mann-Whitney U test (*z*) for continuous data. Logistic regression was used to explore the independent associations between PTSD and socio-demographic or event-related variables. Variables associated with PTSD at the $p < .25$ level were considered for inclusion in the model (Hosmer & Lemeshow, 1989). A hierarchical model was developed using four blocks of variables: demographic, trauma-related, psychiatric comorbidity and disability. A second model was developed using a forward stepwise approach. This model used the same initial variables as the hierarchical model. SPSS uses the score statistic to enter

variables ($p < .05$ for entry) and likelihood-ratio statistic or Wald statistic to remove variables ($p < .10$). Categorical variables were collapsed where necessary to reduce the number of categories to no more than three, with minimum cell-sizes greater than 10 as smaller cell sizes can introduce a lack of reliability in logistic regression (Hosmer & Lemeshow, 1989).

Results

Study Sample

Nine hundred and twenty two patients were assessed for eligibility. Of these 145 (14%) were rated ineligible leaving a sample of 777 people eligible for the study. Reasons for ineligibility were: unable to consent ($n = 55/922$, 6%); posed a potential threat to interviewers ($n = 55$, 6%); no fixed address ($n = 15$, 2%); spoke insufficient English to complete the interview ($n = 2$, <1%) and 'other' reason ($n = 18$, 2%). Of the 777 patients approached regarding the interview, 330 (42%) commenced the interview with the remainder either declining to take part in the interview or initially agreeing but then dropping out.

Limited information was available from the HATS clinical database to compare interview participants and non-participants. Participants did not differ significantly from non-participants on gender (female = 71% and 66% respectively), age (median = 33 and 32 years respectively) or prior admissions for deliberate self-poisoning (16% and 17% respectively). Additionally, participants and non-participants did not vary on measures suggestive of medical seriousness of the attempt, such as admission to intensive care (16% and 14% respectively), or length of stay in hospital (median = 17 and 18 hours respectively). However, the interviewed sample contained more people discharged to home (74% and 66%) and consequently fewer discharged to a

psychiatric hospital (23% and 30%) or other destination (2% v 4%) $\chi^2 (2, N = 775) = 6.38, p < .05$ than the non-interviewed, eligible sample suggesting higher levels of acute psychiatric distress among those who did not participate.

Of the 330 who commenced the interview, seven did not complete the section on PTSD, leaving a sample of 323. This sample was predominantly female (71%). Participating men and women did not differ significantly on age with medians (inter-quartile range) of 30 (21-40) and 34 (22-44) years respectively. Additionally, men and women did not differ significantly in terms of education level, marital status, country of birth, language spoken at home or employment (Table 1).

Prevalence of Exposure to Traumatic Events

Most respondents ($n = 265, 82\%$) reported experiencing at least one of the eleven traumatic events in their lifetime. Multiple exposures were common with 44% ($n = 141$) reporting 2-4 events and 23% ($n = 73$) reporting 5-9 events. The median number of events was three with an inter-quartile range (IQR) of two to five.

The three most common event types for women were sexual molestation (51%), being seriously physically attacked or assaulted (41%) and rape (39%) (Table 2). The three most common events for men were witnessing someone being badly injured or killed (52%), a life-threatening accident (50%) and being seriously physically attacked or assaulted (40%). The least common event for both sexes was direct combat experience in a war (< 1% and 6%).

Prevalence of PTSD

The past 12-month prevalence of PTSD was 32% (73 of 228) among the total sample of women and 15% (14 of 95) among male DSP patients. The percentage of people meeting criteria for PTSD following exposure to the index event (the row percentage (RP)), is given in Table 3. Criteria for PTSD in the past 12 months were met by 69% of women whose index event was being threatened with a weapon, held captive or kidnapped, tortured or the victim of terrorists and 57% of women whose index event was rape. For men, 33% of those whose index event was rape and 33% of those whose index event was an ‘other’ extremely stressful event met criteria for PTSD in the past 12 months.

Gender differences in exposure to traumatic events and PTSD.

Exposure to traumatic events was examined by gender in terms of the number of events, type of events and age at which the worst event was experienced. There was no significant difference between men and women in the total number of events experienced; however, a different pattern of exposure between men and women was evident (Table 2). Four times as many women as men reported rape (39% women v 10% men), $\chi^2 (1, N = 323) = 26.35, p < .01$, and twice as many women reported being sexually molested (51% v 22%), $\chi^2 (1, N = 323) = 21.57, p < .01$. Conversely, significantly more men reported witnessing someone being badly injured or killed (52% men v 36% women), $\chi^2 (1, N = 323) = 5.78, p < .05$, a life-threatening accident (50% v 22%), $\chi^2 (1, N = 323) = 22.05, p < .01$, or combat experience (6% v <1%), Fisher’s Exact Test $p < .01$.

There was a significant difference between genders in the age at which the worst event was experienced, $Z = -3.72$, $p < .01$, with the median (IQR) age for women being 17 (10-26) years, compared with 23 (17-34) years for men.

Comparison of Psychiatric Comorbidity, Disability and Health Service Utilization among DSP Patients with PTSD and those without PTSD.

Psychiatric comorbidity.

There were only 14 men with PTSD, so the data are reported for the sample as a whole. The PTSD group had higher levels of psychiatric comorbidity than the non-PTSD group with a significantly higher percentage of patients with any affective disorder (89% v 64%) and any anxiety disorder other than PTSD (86% v 53%) in the past 12 months (Table 4). For the affective disorders, significantly more of the PTSD group had depression and dysthymia in the past 12 months (Table 4). For the anxiety disorders, significantly more of the PTSD group had Obsessive-Compulsive Disorder, Social Phobia and Generalised Anxiety Disorder (Table 4). There was no significant difference between the groups for Substance Abuse or Dependence; however, significantly more of the PTSD group were current smokers.

Disability.

The PTSD group had significantly worse mental health-related disability as measured by the GHQ, the SF-12 mental composite score (MCS) and the Kessler-10 (Table 5). The PTSD group also experienced higher levels of physical disability, with significantly different scores on the BDQ and the SF-12 physical composite score (PCS) (Table 5).

Health service utilization.

All of the patients in this study had been admitted to a general hospital in the last 12 months, as this was how they were recruited. The percentage (42%, $n = 35$) of patients with PTSD who had been admitted to a psychiatric hospital within the past 12 months was close to double the percentage (22%, $n = 49$) of those without PTSD, $\chi^2 (1, N = 303) = 10.93, p < .01$. Few patients had been admitted to a Drug and Alcohol Unit in a hospital ($n = 2$, 2% with PTSD and $n = 6$, 3% without PTSD).

The number of consultations undertaken outside of hospital in the past 12 months was asked for 15 types of health care provider (Table 6). The data were highly skewed, with the majority of patients having few consultations, whereas a small number of people had a large number of consultations. The PTSD group had a significantly higher number of consultations for mental health problems with all types of practitioner and overall (Table 6).

Factors Associated with PTSD Following Exposure to Traumatic Events

Comparisons were made between those with PTSD and those without PTSD among the group exposed to at least one traumatic event ($n = 265$). Two logistic regression models were developed to examine which variables were independently associated with PTSD. The first model was a hierarchical model with forced entry of all variables in four blocks. The first block was demographic variables: gender, age and employment status. The second block was trauma-related variables: worst event (as a categorical variable with three levels), number of traumatic events and years post-event. The third block was comorbid psychiatric disorder: affective

disorder, anxiety disorder (other than PTSD) and substance abuse or dependence and the fourth block was disability measures: SF-12 mental disability (MCS) and physical disability (PCS) scores. The same variables were also entered into a forward stepwise model.

Both models produced similar results (Table 7), with the type of worst event (deliberate/personal harm or being raped or molested), a higher number of traumatic events, having any affective disorder, and having any anxiety disorder (other than PTSD) all being independently associated with PTSD. The forward stepwise model also included female gender in the final model.

Discussion

This study found that, among our sample of deliberate self-poisoning patients, 82% reported exposure to one or more traumatic events in their lifetime and 27% satisfied the DSM-IV criteria for PTSD within the past 12 months. DSP patients with PTSD had a higher burden of illness, with significantly higher levels of psychiatric comorbidity, psychiatric disability, physical disability and health service utilisation than those without PTSD. Among those exposed to at least one event, logistic regression analyses identified independent associations between PTSD and the type of traumatic event, the total number of traumatic events experienced, affective disorder and anxiety disorder (other than PTSD).

A number of aspects of this study must be noted in interpreting these results. Firstly, the sample includes only DSP patients. That is, there is no comparison group without DSP and thus the pattern of associations with PTSD may not be observed in other populations.

Secondly, the study had a low response rate, with only 42% of approached patients participating in the interview and therefore these findings may not generalize to all DSP patients. While participants and non-participants did not differ on most of the variables examined, fewer participants were discharged to a psychiatric hospital, suggesting that they were experiencing higher levels of functioning than non-participants. Additionally, the exclusion criteria for the study also tended to exclude those who were likely to have lower levels of functioning, such as those who may have posed a threat to an interviewer, or were unable to consent. These two factors suggest that this study may underestimate levels of psychiatric morbidity and disability among DSP patients. It is not clear how this would affect the reported patterns of association with PTSD.

Thirdly, the study obtained lifetime exposure to traumatic events and restricted the exploration of PTSD to the worst (or only) event and symptoms within the past 12 months. The results may overestimate the likelihood of developing PTSD following a specific event by concentrating on the worst event. Conversely, the likelihood of developing PTSD after these events may have been underestimated as some people may have experienced PTSD subsequent to their worst event but have recovered before the past 12 months. A *post-hoc* analysis showed no association between the number of years elapsed since the event or a person's age at the time of the event and a diagnosis of PTSD suggesting that the associations observed were not simply an artifact of the amount of time elapsed since the traumatic event. The lack of association between the time since the event and PTSD suggests that many in this sample have not recovered spontaneously from PTSD. This is consistent with the suggestion that studies which use current

PTSD diagnosis (rather than lifetime PTSD) may have an over-representation of chronic cases of PTSD (Brewers, Andrews & Valentine, 2000).

The high prevalence of traumatic events is consistent with other studies. Two reviews from the United States (Hidalgo & Davidson, 2000; Kessler, 2000) note that exposure to traumatic experiences is common in the general population with a range of 39-90%. Nevertheless, the prevalence of most of the traumatic events among the DSP patients was higher than that observed in Australian surveys of random community samples (Creamer, Burgess, & McFarlane, 2001; Goldney, Wilson, Dal Grande, Fisher, & McFarlane, 2000). Most notably, rape was ten times more common (30% v 3%), and sexual molestation was five times more common (42% v 8%) among the DSP patients compared with the community sample (Goldney et al., 2000). Other events were 1.3 to 3.5 times more common among DSP patients than that community sample. Only direct combat experience and 'other' stressful events were less common among the DSP patients. It should be noted that these comparisons were not age or sex-adjusted.

The prevalence of PTSD (27%) among DSP patients in this study is comparable to that observed (32%) by Rudd et al. (1993) in their somewhat younger sample (18-37 years) which included both suicide attempters and suicidal ideators. The prevalence of PTSD among our DSP group is twenty times higher than the 12-month prevalence (1%) reported for the general Australian community in a national community sample of 10,641 people (Creamer et al., 2001).

There was a high level of comorbidity of PTSD with other psychiatric disorders, particularly affective disorders (89%) and non-PTSD anxiety disorders (86%). The presence of these disorders was associated with an increased odds ratio for PTSD of around two and a half times among subjects with at least one traumatic exposure. Other studies on PTSD have found similarly high rates of comorbidity (reviewed by Brady et al. 2000). This level of comorbidity combined with the high level of symptom overlap between PTSD and these disorders lends support to the suggestion that clinicians may be under-diagnosing PTSD if specific questions on exposure to traumatic events are not asked (Brady et al. 2000).

Although close to two thirds (62%) of patients with PTSD had comorbid substance abuse this was not significantly higher than among DSP patients without PTSD (53%). The finding that smoking was significantly more common in the PTSD group is of importance given that smoking is a major cause of preventable health problems.

The higher levels of disability and health service utilisation among the PTSD group emphasise the burden of illness associated with PTSD (Kessler, 2000; Hidalgo & Davidson, 2000). The higher level of service use among the PTSD patients is in accordance with other studies (Hidalgo & Davidson 2000) and has obvious resource implications. However, more detailed interpretation of this finding is difficult. It is not possible to determine whether higher use indicates that PTSD patients are getting an appropriately higher level of treatment or whether they are simply having more episodes of service without being helped effectively.

The logistic regression analysis suggested that among DSP patients who have been exposed to trauma, those with PTSD subsequent to exposure are characterised by the type of worst event (being rape/sexual molestation or deliberate or personal threat), the number of events, affective disorder, and anxiety disorder. After controlling for the other variables in the hierarchical model, gender was no longer significantly associated with PTSD. However, female gender was retained in the forward stepwise model. This is consistent with a meta-analysis which found that the degree of predictive effect associated with gender (among other variables) varied considerably between studies (Brewin et al., 2000). It should be noted that the number of men who satisfied the criteria for PTSD was small ($n = 14$) and interpretations of these data regarding gender differences must be made cautiously.

This study has demonstrated that PTSD is highly prevalent among DSP patients and is associated with greater disability and higher service utilization. The high levels of comorbidity and symptom overlap with affective and other anxiety disorders may be resulting in underdiagnosis of PTSD among DSP patients. A psychiatric assessment for all hospital-treated DSP patients has been recommended by the Royal Australian and New Zealand College of Psychiatrists in their Summary Clinical Practice Guidelines for Deliberate Self-harm (Boyce, Carter, Penrose-Wall, Wilhelm, & Goldney, 2003). One of the clinical implications of our findings is that specific enquiry for the relevant PTSD symptoms should be included in the psychiatric assessment of DSP patients.

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Table 1

Socio-demographic Characteristics of Participants

Characteristic	Women		Men	
	(n = 228)		(n = 95)	
	n	%	n	%
Education				
Still at school	6	3	1	1
Did not complete high school	75	33	32	34
Completed high school	38	17	7	7
Any post-school qualification	109	48	55	58
Marital Status				
Married/de facto	77	34	36	38
Widowed, separated or divorced	64	28	28	30
Never married	87	38	31	33
Country of birth				
Australia	207	91	83	87
Other English-speaking	9	4	5	5
Non-English speaking	12	5	7	7
Language spoken at home				
English	225	99	95	100
Other	3	1	0	0
Employment				
Employed	84	37	42	44
Unemployed	23	10	11	12
Not in labour force	121	53	42	44

Table 2

Lifetime Prevalence of Traumatic Events among DSP Patients by Gender

Traumatic Event	Women		Men	
	(n = 228)		(n = 95)	
	<i>n</i>	%	<i>n</i>	%
Sexually molested ^a	116	51	21	22
Seriously physically attacked or assaulted	93	41	38	40
Raped ^a	89	39	9	10
Witnessed someone being badly injured or killed ^a	83	36	49	52
Threatened with a weapon, held captive or kidnapped, tortured or the victim of terrorists	86	38	37	38
Life-threatening accident ^a	51	22	47	50
Fire, flood or other natural disaster	46	20	21	22
Great shock because one of the events happened to someone close to you	50	22	14	15
'Other' extremely stressful event	34	15	16	17
Direct combat experience in a war ^a	1	<1	6	6

^a Gender difference significant at $p < .05$

Table 3

Frequency of Index Event, Past 12 Month PTSD Prevalence, and Row Percentage (RP)

Index event	Women					Men				
	Event		PTSD			Event		PTSD		
	<i>n</i>	%	<i>n</i>	%	RP	<i>n</i>	%	<i>n</i>	%	RP
Sexually molested	42	18	14	19	33	4	4	1	7	25
Physically assaulted	17	8	8	11	47	9	10	2	14	22
Raped	44	19	25	34	57	6	6	2	14	33
Witnessed injury/death	20	9	6	8	30	19	20	2	14	11
Weapon, captive, tortured ^a	16	7	11	15	69	8	14	2	14	25
Life-threatening accident	9	4	0	0	0	13	8	1	7	8
Natural disaster	8	4	0	0	0	2	2	0	0	0

Index event	Women					Men				
	Event		PTSD		RP	Event		PTSD		RP
	<i>n</i>	%	<i>n</i>	%		<i>n</i>	%	<i>n</i>	%	
Trauma to someone close	18	8	5	7	28	9	10	2	14	22
'Other' stressful event	13	6	4	6	31	6	6	2	14	33
Direct combat experience	0	0				2	2	0	0	0
No events	41	18				17	18			
TOTAL	228	100	73	100		95	100	14	100	

^a Threatened with a weapon, held captive, tortured or the victim of terrorists

Table 4

Comorbidity of PTSD and Psychiatric Disorders (past 12 months)

Psychiatric Disorder	No PTSD		PTSD		χ^2
	(n = 236)		(n = 87)		
	n	%	n	%	
Any affective	150	64	77	89	17.80**
Depression	130	55	69	79	14.80**
Dysthymia	22	9	23	26	14.10**
Bipolar ^a	12	5	4	5	^a
Any non-PTSD anxiety	124	53	75	86	29.10**
GAD	83	35	42	48	4.10*
Social Phobia	46	20	39	45	19.80**
OCD	20	9	30	35	30.90**
Panic with agoraphobia	9	4	11	13	7.10*
Panic without agoraphobia ^a	12	5	4	5	^a
Agoraphobia without panic ^a	7	3	4	5	^a
Any substance abuse or dependence	125	53	54	62	1.78
Alcohol	88	37	40	46	1.66
Cannabis	38	16	11	13	0.36
Sedative	37	16	19	22	1.28
Amphetamine	20	9	5	6	0.34
Opioid	14	6	8	9	0.61
Current smoker	121	51	57	66	4.70*

Note. $df = 1$ throughout

^a Fisher's Exact test

* $p < .05$. ** $p < .01$.

Table 5

Current (Past Four Weeks) Disability among DSP patients with PTSD v without PTSD

			No PTSD	PTSD	
			(<i>n</i> = 236)	(<i>n</i> = 87)	
Scale	Range	More disability	Median (IQR) ^a	Median (IQR) ^a	<i>Z</i>
Mental					
GHQ	0-36	Higher score	20 (12-27)	26 (18-32)	-4.35**
Kessler-10	0-50	Lower score	30 (23-37)	24 (19-29)	-5.52**
SF-12 MCS	0-100	Lower score	28 (22-36)	23 (17-30)	-3.46**
Physical					
SF-12 PCS	0-100	Lower score	49 (38-57)	45 (35-53)	-2.18*
BDQ	0-16	Higher score	4 (1-7)	7 (3-11)	-4.37**

^a Inter-quartile range (25th and 75th percentiles)* $p < .05$. ** $p < .01$.

Table 6

Number of Consultations (Past 12 Months) for Mental Health Problems: PTSD v non-PTSD

Clinician	No PTSD	PTSD	Z
	(n = 236)	(n = 87)	
	Median (IQR) ^a	Median (IQR) ^a	
General Practitioner	2 (0-6)	5 (0-15)	-3.20*
Psychiatrist	0 (0-1)	0 (0-6)	-3.48*
Other mental health practitioner ^b	1 (0-5)	5 (0-15)	-4.00**
Other health professional ^c	0 (0-1)	1 (0-4)	-3.07*
Total consultations for mental health	6 (1-17)	19 (9-58)	-5.28**

^a Inter-quartile range (25th and 75th percentiles)^b Psychologist, Social Worker/Welfare Officer, Drug and Alcohol Counselor, Other Counselor, Mental Health Team^c Nurse, Chemist, Ambulance Officer, Medical Specialist other than a Psychiatrist, Other health professional* $p < .05$. ** $p < .01$.

Table 7

Variables Associated with PTSD in the Logistic Regression Models

Variables	<i>n</i>	Unadjusted (<i>n</i> = 265)		Hierarchical (<i>n</i> = 261)		Stepwise (<i>n</i> = 261)	
		<i>OR</i>	<i>95% CI</i>	<i>OR</i>	<i>95% CI</i>	<i>OR</i>	<i>95% CI</i>
Gender							
Male	78	1.00		1.00		1.00	
Female	187	2.93	1.53 - 5.60*	1.90	0.87 - 4.14	2.13	1.01 - 4.50
Age	265	0.98	0.96 - 1.00*	0.99	0.96 - 1.03	Removed	
Employment						Removed	
Employed	101	1.00		1.00			
Unemployed	29	1.02	0.38 - 2.68	0.69	0.21 - 2.26		
Other	135	2.27	1.28 - 4.03*	1.88	0.93 - 3.78		
Worst event							
Accident ^a	117	1.00		1.00		1.00	
Deliberate ^b	52	3.43	1.67 - 7.02*	4.45	1.93 - 10.26**	3.63	1.63 - 8.11*
Raped ^c	96	3.36	1.82 - 6.21**	3.41	1.53 - 7.60*	2.55	1.27 - 5.14*
No. of events	265	1.38	1.20 - 1.59**	1.28	1.08 - 1.53**	1.29	1.10 - 1.51*
Time elapsed ^e	261	0.99	0.97 - 1.01	0.98	0.94 - 1.01	Removed	

		Unadjusted (<i>n</i> = 265)		Hierarchical (<i>n</i> = 261)		Stepwise (<i>n</i> = 261)	
Variables	<i>n</i>	<i>OR</i>	<i>95% CI</i>	<i>OR</i>	<i>95% CI</i>	<i>OR</i>	<i>95% CI</i>
Any Affective							
Negative	74	1.00		1.00		1.00	
Positive	191	4.32	2.09 - 8.93**	2.47	1.00 - 6.12	2.67	1.17 - 6.13*
Any Anxiety ^f							
Negative	95	1.00		1.00		1.00	
Positive	170	5.46	2.78 - 10.74**	2.30	1.03 - 5.13*	2.74	1.26 - 5.96*
Any Substance							
Negative	120	1.00		1.00		Removed	
Positive	145	1.56	0.93 - 2.64	0.94	0.50 - 1.79		
SF-12 MCS	265	0.96	0.94 - 0.99*	0.98	0.95 - 1.02	Removed	
SF-12 PCS	265	0.99	0.96 - 1.01	1.00	0.97 - 1.03	Removed	

^a Non-deliberate / other person events: Life threatening accident, natural disaster, witnessed someone being badly injured or killed, event happened to someone close, other event

^b Deliberate/personal harm events: Combat; serious physical assault; threatened with a weapon; kidnapped/tortured/victim of terrorists

^c Raped or molested

^e Time elapsed in years since index event

^f Any Anxiety Disorder other than PTSD

* $p < .05$. ** $p < .01$.