

THE ROLE OF NEGATIVE BELIEFS IN POSTTRAUMATIC STRESS DISORDER: A COMPARISON OF ASSAULT VICTIMS AND NON VICTIMS

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Abstract. The aim of this study was to compare the trauma sensitive beliefs of individuals who had never experienced an assault with the preassault and postassault beliefs of assault victims. Seventy-two individuals who had never experienced an assault completed a questionnaire designed to assess trauma sensitive beliefs (including beliefs about self-worth, safety and the trustworthiness of others). The beliefs of this group were then compared with the preassault and postassault beliefs of assault victims with persistent PTSD and assault victims who had never experienced PTSD, recruited for previous studies (Dunmore, Clark, & Ehlers, 1999, 2001). Results showed that victims who did not develop PTSD following assault reported significantly more positive preassault beliefs in comparison with those who had never been assaulted. The postassault beliefs of the persistent PTSD group were significantly more negative than the beliefs of the never assaulted group and the no PTSD assault group. Findings support evidence that suggests a relationship between negative beliefs after assault and the development of PTSD. In addition, positive preassault beliefs might play a ‘buffering’ role, minimizing the impact of assault for those assault victims who do not subsequently develop PTSD.

Keywords: Posttraumatic Stress Disorder, assault, beliefs.

Introduction

Several investigators have argued that posttrauma psychopathology is related to individual differences in pretrauma beliefs and to individual differences in the way these beliefs change following a traumatic event (e.g. Ehlers & Clark, 2000; Foa & Riggs, 1993; Resick & Schnicke, 1992; McCann & Pearlman, 1990; Janoff-Bulman & Frieze, 1983). The beliefs implicated by these authors include beliefs about self-worth, the safety of the world, and the trustworthiness of other people. Janoff-Bulman and Frieze (1983) propose that the more

positive and unquestioned an individual's pretrauma beliefs, the more vulnerable they will be to subsequent psychopathology as these positive beliefs will be more susceptible to being shattered. This position has been modified by Foa and Riggs (1993) who argue that individuals who hold extremely negative pretrauma beliefs may also be vulnerable to PTSD as these beliefs are confirmed by the trauma.

In both of the instances above, the net result of the trauma for these vulnerable individuals is highly negative posttrauma beliefs. There is now a growing body of evidence suggesting that negative posttrauma beliefs are associated with PTSD (Foa, Ehlers, Clark, Tolin, & Orsillo, 1999; Resick, Schicke, & Markway, 1991; Wenninger & Ehlers, 1998). Less is known about the relationship between the beliefs held by victims before a traumatic event and subsequent PTSD. A preliminary attempt to address this was made by Dunmore, Clark and Ehlers (1999, 2001) who asked assault victims to think back to how they would have responded to a questionnaire assessing trauma sensitive beliefs before, as well as after the assault. The findings provided partial support for both the "shattering" and "confirmation" positions, but in their strong form neither position accurately represented the data. The results suggested that those with more negative beliefs before the assault experienced more severe and long lasting PTSD. This does not fit with Janoff-Bulman's argument that vulnerability to psychopathology will be related to more positive preassault beliefs. Instead, it provides some support for Foa and Riggs' observation that vulnerability may be linked to holding more negative beliefs before a trauma. However, the research also found that the degree of discrepancy between pretrauma and posttrauma beliefs (i.e. the degree of shattering) was related to later psychopathology.

It must be noted that in the above studies preassault beliefs could only be assessed retrospectively. Therefore, we cannot rule out the possibility that recollections of preassault beliefs were influenced by knowledge of subsequent reactions to the assault. However, the group differences that emerged from these studies are, at the very least, of interest in terms of "perceived" or "reconstructed" preassault beliefs, which may then contribute to the maintenance of PTSD.

The finding that victims who did less well after the assault reported relatively more negative preassault beliefs than those who did better afterwards raises the question of how these preassault beliefs may have differed from those of non-victims. Were the preassault beliefs of victims who subsequently suffered persistent PTSD unusually negative in comparison with the beliefs of non-victims? Conversely, were the preassault beliefs of victims who did not suffer PTSD unusually positive in comparison with the beliefs of non-victims?

To distinguish between these two possibilities the preassault beliefs of victims who suffered persistent PTSD and victims who did not experience PTSD after an assault were compared with the beliefs of individuals who had never been assaulted. The beliefs of the never assaulted individuals were also compared with the postassault beliefs of victims with persistent PTSD and victims who never developed PTSD, to provide further evidence regarding the extent to which the beliefs of traumatized individuals change as a result of trauma.

Method

Design

A questionnaire, designed to assess trauma sensitive beliefs, was distributed to a group of individuals who had never experienced an assault. The beliefs of this group were then

compared with the preassault and postassault beliefs of a persistent PTSD assault group and a no PTSD assault group, recruited for previously reported studies (Dunmore et al., 1999, 2001).

Participants

Never assaulted group. Seventy-two (42 female, 30 male) adults who had never experienced or witnessed a physical or sexual assault, as a child or as an adult, formed this group. They were selected from a larger sample of 190 participants to demographically match both the assaulted groups as closely as possible.

Assault group. One hundred assault victims recruited for previously reported studies (Dunmore et al., 1999, 2001) were included in the current study. Participants were categorized into a persistent PTSD group and a no PTSD group. Participants were considered to suffer from PTSD if they met DSM-IV criteria for PTSD and scored at least 18 on the PTSD Symptom Scale – Self Report (PSS-SR: Foa, Riggs, Dancu, & Rothbaum, 1993).

The persistent PTSD group. This group consisted of 57 (37 female, 20 male) individuals who met the above requirements for PTSD in the month immediately after assault and at the time of assessment. Mean PSS-SR score at assessment: 28.93 (*SD* 7.63). The mean time since the assault was 14.4 months.

No PTSD group. This group consisted of 43 (15 female, 28 male) individuals who failed at least one of the above requirements for PTSD both in the month following assault and at assessment. Mean PSS-SR score at assessment: 5.24 (*SD* 4.10). The mean time since assault was 14.0 months.

Measures

The self-report questionnaires used in this study were based on the structured interview and questionnaires used with assault victims in the previous studies (Dunmore et al., 1999, 2001). Demographic characteristics were assessed using a *background information questionnaire*, which also asked participants to indicate whether or not they had ever experienced any psychological difficulties and, if so, whether they had ever received psychological treatment. Participants were also asked if they had experienced any of 12 possible traumatic experiences, including physical and sexual abuse as a child or as an adult.

A 63-item *trauma-sensitive beliefs questionnaire* ($\alpha = 0.96$) assessed beliefs potentially affected by the experience of assault. Participants were asked to rate how strongly they agreed with each belief on a 6-point scale ranging from strongly agree to strongly disagree. These included beliefs about being alienated from other people (i.e. “I feel isolated and set apart from others”); being unable to trust others (i.e. “I cannot rely on other people”); being unable to trust oneself (i.e. “I cannot trust I will do the right thing”); beliefs about the safety and fairness of the world (i.e. “The world is a dangerous place”, “There is no justice in the world”); beliefs relating to the self (i.e. “I am no good”, “I am disgusting”); beliefs about victims and emotional problems (i.e. “People who are assaulted are weak”, “People who have emotional difficulties are inferior”); and beliefs about being invulnerable to assault (i.e. “No-one will ever harm me”). Chronbach’s Alpha was calcu-

lated for each subscale and ranged between .83 and .94. The questionnaire was constructed on the basis of theoretical considerations and clinical observation, and has been found to discriminate between assault victims with and without PTSD and to have satisfactory reliability (Dunmore et al., 1999). Whereas the never assaulted group was asked to complete this version of the questionnaire, the assault groups were asked to complete "postassault" and "preassault" versions. The postassault beliefs questionnaire was identical to that described above, with the exception that the four items relating to beliefs about invulnerability to assault were omitted. The preassault questionnaire differed only in that it instructed participants to rate how much they would have agreed with each belief *before* the assault.

The PTSD Symptom Scale – Self Report (PSS-SR – Foa et al., 1993). This 17-item scale corresponds to the PTSD symptoms listed in DSM-IV (APA, 1994) and was used with the assault groups to assess the severity of PTSD symptoms. Foa et al. (1993) have demonstrated that this questionnaire has acceptable levels of reliability and validity for use with assault victims and the questionnaire also showed good agreement with the Structured Clinical Interview for DSM-III-R (SCID; Spitzer, Williams, Gibbon, & First, 1990).

Procedure

Never assaulted group. Self-report questionnaires were distributed to individuals attending job centres, to members of a social support group for divorcees, to students at local universities and to staff at a London medical school. Questionnaires were completed anonymously and returned by post or via a sealed box. A sample was then selected to match the assault group on demographic characteristics. Any participants who reported having experienced or witnessed physical or sexual abuse as an adult or as a child were excluded.

Assault groups. Participants were recruited via public notices, adverts in a mental health newsletter, victim support groups, local police stations and accident and emergency departments. Assessment was via semi-structured interview and questionnaires.

Results

Demographic variables

Table 1 shows the demographic characteristics of the never assaulted group and the two assault groups. No significant differences were found between the groups for marital status, ethnicity, employment, education, religious affiliation, income, experience of trauma other than assault, previous psychological difficulties, or age. There was a significant group difference on gender, with the no PTSD group having significantly more men than either the persistent PTSD or never assaulted groups. Subsequent group comparisons were therefore carried out using analysis of covariance controlling for gender.

The results of comparisons of the beliefs held by the never assaulted group and the preassault and postassault beliefs of the persistent and no PTSD groups are shown in Table 2. The table shows that the three groups differed significantly on all subscales and on total scores. Post hoc comparisons were then conducted using ANCOVA. The comparisons of key interest were those between each assault group and the never assaulted group.

Table 1. Background characteristics of the never assaulted group and the assault groups

	Persistent PTSD	No PTSD	Never assaulted	Statistic	<i>p</i> -value
Gender <i>N</i> (%)					
Female	37 (65)	15 (35)	42 (58)	$X^2 (2,172) = 9.60$	.008
Male	20 (35)	28 (65)	30 (42)		
Ethnic group <i>N</i> (%) ^a				Fishers	
Caucasian	52 (91)	42 (98)	70 (99)		
Non-caucasian	5 (9)	1 (2)	1 (1)		
Age (yrs) (<i>SD</i>)	40.02 (15.5)	36.10 (15.2)	34.02 (12.56)	$F (2,169) = 2.80$	.064
Marital Status <i>N</i> (%)				$X^2 (4,172) = 3.46$	.485
Single	24 (42)	23 (54)	36 (50)		
Married/cohabiting	20 (35)	12 (28)	27 (38)		
Divorced/widowed	13 (23)	8 (19)	9 (13)		
Accommodation status <i>N</i> (%)				$X^2 (6,172) = 4.44$	.618
Alone	13 (23)	13 (30)	14 (19)		
Partner/spouse	20 (35)	10 (23)	29 (40)		
Children/parents	14 (25)	11 (26)	14 (19)		
Shared house	10 (18%)	9 (21)	15 (21)		
Education <i>N</i> (%) ^a				$X^2 (4,171) = 4.72$	.317
Degree or above	11 (19)	11 (26)	22 (31)		
School exams	32 (56)	26 (61)	40 (56)		
No exams	14 (25)	6 (14)	9 (13)		
Employment <i>N</i> (%)				$X^2 (4,172) = 7.72$	.103
Full/part time work	27 (47)	25 (58)	40 (56)		
Studying	4 (7)	8 (19)	11 (15)		
Not working	26 (46)	10 (23)	21 (29)		
Income <i>N</i> (%) ^b				$X^2 (4,153) = 4.43$	.351
Less £5,000	19 (33)	14 (33)	16 (30)		
£5,000–£15,000	24(42)	11(26)	23(43)		
over £15,000	14 (25)	17 (41)	15 (28)		
Religious affiliation <i>N</i> (%)				$X^2 (2,172) = 3.88$	.824
No affiliation	35 (61)	29 (67)	46 (64)		
Some affiliation	22 (39)	14 (33)	26 (36)		
Experience of trauma other than assault <i>N</i> (%) ^c				$X^2 (2,166) = 3.02$	.221
No	16 (30)	19 (46)	29 (41)		
Yes	38 (70)	22 (54)	42 (59)		
Prior psychological difficulties <i>N</i> (%)	24 (43)	12 (28)	22 (31)	$X^2 (2,171) = 3.05$	.217

Note. *N*: Persistent = 57, No PTSD = 43, Never assaulted = 72 (unless otherwise specified).

^aPersistent = 57, No PTSD = 43, Never assaulted = 71.

^bPersistent = 57, No PTSD = 42, Never assaulted = 54.

^cPersistent = 54, No PTSD = 41, Never assaulted = 71.

Table 2. Comparison of beliefs of the never assaulted group and the preassault and postassault beliefs of the persistent and no PTSD groups. Means, and Standard Deviations (in parentheses)

Pre assault beliefs	Persistent PTSD	No PTSD	Never assaulted	Statistic	p-value
Alienation	1.33 ^{ab} (1.06)	1.01 ^a (0.82)	1.45 ^b (0.83)	F (2,167) = 3.04	.050
Lack of trust of others	2.19 ^{ab} (0.80)	1.89 ^a (0.76)	2.22 ^b (0.73)	F (2,167) = 3.19	0.44
Lack of trust in self	1.35 ^a (0.92)	0.88 ^b (0.78)	1.36 ^a (0.84)	F (2,167) = 3.75	.025
World as unsafe/unjust	1.99 ^a (0.77)	1.63 ^b (0.75)	2.01 ^a (0.78)	F (2,167) = 3.89	.022
Negative view of self	1.24 ^a (1.14)	0.56 ^b (0.69)	0.93 ^a (0.72)	F (2,167) = 5.82	.004
Negative appraisal of victims	1.79 ^a (1.17)	1.08 ^b (0.81)	1.34 ^b (0.88)	F (2,167) = 6.94	.001
Invulnerability	2.93 ^a (1.14)	2.71 ^a (1.03)	2.25 ^b (0.89)	F (2,167) = 10.75	.000
Total score	1.60 ^a (0.82)	1.13 ^b (0.60)	1.52 ^a (0.66)	F (2,167) = 5.78	.004
Post assault beliefs					
Alienation	2.48 ^a (1.42)	1.30 ^b (0.98)	1.45 ^b (0.83)	F (2,166) = 17.02	.000
Lack of trust in others	3.33 ^a (1.15)	1.98 ^b (0.76)	2.22 ^b (0.73)	F (2,166) = 31.63	.000
Lack of trust in self	2.44 ^a (1.38)	1.22 ^b (1.09)	1.36 ^b (0.84)	F (2,166) = 17.84	.000
World as unsafe/unjust	3.11 ^a (1.11)	2.01 ^b (0.90)	2.01 ^b (0.78)	F (2,166) = 24.73	.000
Negative view of self	2.18 ^a (1.68)	0.78 ^b (0.99)	0.93 ^b (0.72)	F (2,166) = 21.41	.000
Negative appraisal of victims	2.15 ^a (1.35)	1.22 ^b (0.77)	1.34 ^b (0.88)	F (2,166) = 11.84	.000
Total score	2.62 ^a (1.22)	1.39 ^b (0.78)	1.52 ^b (0.66)	F (2,166) = 29.70	.000

Note 1. For all subscales higher scores indicate more negative beliefs. On the Invulnerability subscale, higher scores indicate greater endorsements of beliefs about invulnerability.

Note 2. Means with different superscripts are significant at $p < .05$.

Note 3. *N*: Never assaulted = 70, Persistent = 55, No PTSD = 40.

Note 4. For comparison purposes, preassault total scores do not include the invulnerability subscale. Never assaulted group data are therefore the same for both preassault and postassault comparisons.

Preassault beliefs

In comparison with the never assaulted group, the persistent PTSD group differed on two of the preassault subscales. The persistent PTSD group reported more negative appraisals of victims before the assault, and greater endorsements of beliefs regarding invulnerability to

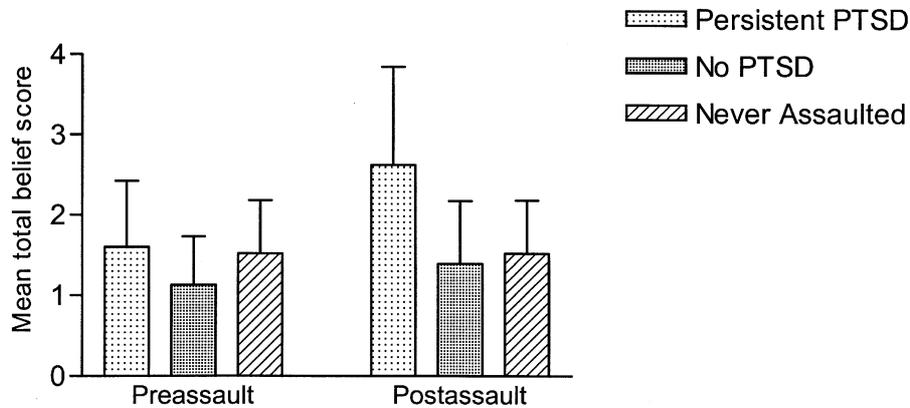


Figure 1. Graph showing preassault and postassault total belief scores for each group

harm than the never assaulted group. No significant differences were found for the remaining subscales or for the total score.

In contrast, the no PTSD group reported more positive preassault beliefs overall (i.e. total score) than the never assaulted group. The no PTSD group also reported more positive preassault beliefs about themselves, the safety and fairness of the world and about being invulnerable to harm, and were less likely to endorse beliefs about being alienated and unable to trust themselves and others, in comparison with the never assaulted group.

Post hoc comparisons also revealed that the persistent PTSD group reported more negative preassault beliefs overall (i.e. total score) when compared with the no PTSD group. The persistent PTSD group also reported more negative appraisals of victims before the assault and were more likely to endorse beliefs regarding a lack of trust in others, a negative view of themselves and an unsafe world, in comparison with the no PTSD group.

Postassault beliefs

It can be seen from Table 2 that after the assault, the three groups differed significantly on all subscales and on the total score. Post hoc comparisons revealed that the persistent PTSD group had significantly more negative beliefs on every subscale and on the total score, compared with the never assaulted group and the no PTSD group. In contrast, the no PTSD group no longer differed from the never assaulted group on any subscales nor on the total score.¹ The mean total scores for preassault and postassault beliefs for each of the three groups are presented in Figure 1.

Discussion

Perhaps one of the most interesting findings to emerge from the comparison of the beliefs of victims and non-victims was that prior to the assault, participants who did not suffer

¹ When the entire (unmatched) sample was used, identical group differences were obtained for all pre and postassault beliefs except preassault trust in others. On this variable no difference was found between the groups.

PTSD afterwards held significantly more positive beliefs than those who had never been assaulted. This suggests that, at least in part, the no PTSD group may have been protected from developing PTSD by their more positive preassault beliefs. This would not fit with Janoff-Bulman's proposal that the shattering of excessively positive pretrauma beliefs is associated with increased vulnerability to PTSD. Instead, it suggests that these positive beliefs may have played a helpful role, cushioning the impact of the assault. It is also worth noting that none of the subscales of Janoff-Bulman's World Assumptions Scale correlated substantially with PTSD severity in Foa et al.'s (1999) study. This suggests that the beliefs that Janoff-Bulman proposes are affected by trauma are not necessarily those posttrauma beliefs that are related to the development of PTSD (Foa et al., 1999).

Participants with persistent PTSD were significantly more likely than those who had never experienced an assault, and those who did not develop PTSD following assault, to have negatively appraised victims and emotional distress prior to the assault. Preassault beliefs such as "people who have emotional difficulties are inferior" or "people who are assaulted are weak" would make it particularly hard for these victims to tolerate both the fact that they have been assaulted and their subsequent experience of emotional distress. As a consequence, these victims may be more likely to engage in strategies to try to control distressing thoughts and emotions, and may be more reluctant to seek support from others, both of which impair recovery.

Preassault beliefs of both assault groups about being unlikely ever to come to harm ("invulnerability") were stronger than the beliefs of the never assaulted group. Such beliefs about invulnerability may have been shattered after the assault. As noted in the introduction, preassault beliefs were assessed retrospectively. It is therefore possible that, in light of having experienced an assault, the extent to which a victim's preassault beliefs are perceived as having been "naïve" may become exaggerated. This is frequently expressed by victims as "I never thought it would happen to me". Interestingly, the two assault groups did not differ in their endorsements of beliefs relating to invulnerability, suggesting that the shattering of these beliefs was not predictive of PTSD.

As preassault beliefs were assessed retrospectively it is possible that the victim's knowledge of the way they reacted following the assault caused them to reconstruct their preassault beliefs. For instance, those that suffer few distressing symptoms of PTSD afterwards may begin to think that there must have been something special about them as a person. As mentioned in the introduction, this alternative explanation for the observed results could only be ruled out with a large scale prospective study.

The current study was primarily interested in the impact of assault on beliefs and the relationship of these beliefs with PTSD. Participants, including those in the never assaulted group, had often experienced other types of trauma, particularly sudden bereavement. As the never assaulted group was not screened for PTSD we cannot rule out the possibility that some PTSD symptomatology may have been present in this group. Therefore, more pronounced group differences may be seen if traumatized groups were compared with a group that was entirely free of trauma and PTSD symptomatology.

The postassault beliefs of the persistent group were significantly more negative than the beliefs of the never assaulted group. In addition, the postassault beliefs of the no PTSD group were no longer more positive than those of the never assaulted group. These results illustrate the negative impact that assault has on an individual's beliefs and are consistent with evidence suggesting a relationship between negative beliefs after trauma and severity

of PTSD (Wenninger & Ehlers, 1998; Foa et al., 1999; Dunmore et al., 1999, 2001). An alternative explanation for the persistent PTSD group reporting more negative beliefs might be expressed in terms of general psychopathology, and not PTSD in particular. A comparison of individuals who have been assaulted with a psychiatric control group would therefore be helpful in highlighting the factors relating specifically to PTSD versus those pertaining to psychopathology in general.

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