

Predicting Response to Exposure Treatment in PTSD: The Role of Mental Defeat and Alienation

Anke Ehlers,^{1,3} David M. Clark¹, Emma Dunmore,¹ Lisa Jaycox,² Elizabeth Meadows,² and Edna B. Foa²

Not all patients with posttraumatic stress disorder benefit from exposure treatment. The present paper describes two cognitive dimensions that are related to inferior response to exposure in rape victims. First, individuals whose memories during reliving of the trauma reflected mental defeat or the absence of mental planning showed little improvement. Second, inferior outcome was correlated with an overall feeling of alienation or permanent change following the trauma. These results are based on blind ratings of transcripts of exposure treatment sessions from 10 women with good outcome and 10 women with inferior outcome. Patients in the two groups were matched for initial symptom severity and were comparable in many aspects of the assault. Patients who experienced mental defeat, alienation, or permanent change may require cognitive restructuring in addition to exposure.

KEY WORDS: posttraumatic stress disorder; exposure treatment; predictors of outcome; mental defeat; alienation.

Many behavioral treatments of posttraumatic stress disorder (PTSD) involve some form of imaginal reliving of the traumatic event (e.g., Boudewyns, Hyer, Woods, Harrison, & McCranie, 1990; Keane, Fairbank,

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¹Department of Psychiatry, University of Oxford, U.K.

²Department of Psychiatry, The Center for the Treatment and Study of Anxiety, Allegheny University and Hahnemann University, Philadelphia, Pennsylvania 19129.

³To whom correspondence should be addressed at Department of Psychiatry, University of Oxford, Warneford Hospital, Oxford OX3 7JX U.K. e-mail: ANKE.EHLERS @ PSYCHIATRY.OX.AC.UK.

Cadell, & Zimering, 1989) and it is widely believed that reliving is an important component of treatment. The exposure treatment developed by Foa and colleagues (Foa, Rothbaum, Riggs, & Murdock, 1991) represents the most systematic application of this therapeutic principle. Controlled trials have demonstrated that exposure treatment is an effective treatment for PTSD (Keane et al., 1989; Richards, Lovell, & Marks, 1994) and is more effective than supportive counselling, and in the long-term, also more effective than stress inoculation training (Foa et al., 1991).

Although exposure treatment is effective, not all patients benefit from this approach. For example, Foa et al. (1991) found that of the patients treated with exposure 45% continued to meet diagnostic criteria for PTSD and 44% failed to achieve clinically significant improvement at 3-month follow-up. This raises the question of whether it is possible to identify factors that predict treatment outcome. The analysis of reasons for inferior treatment response may also help in developing more effective treatment procedures.

The present study was designed to explore cognitive differences between individuals who respond well to exposure and those who show less marked improvement. Two clinical observations guided the search for possible predictors. First, we had observed that women who had been raped differed widely in their reported thought processes during the trauma (see also Burgess & Holmstrom, 1976). Some reported that they continued to plan in their own mind how they could influence the situation (even though these plans were often not successful) and retained a sense of psychological autonomy despite the fact that the assailant could physically overpower them. In contrast, others reported that they felt completely defeated during the rape and did not feel they were a human being any longer. We expected that while reliving the former experience should be therapeutic, repeatedly reliving the latter experience without any cognitive restructuring may not be.

Second, some patients report post-rape experiences that they perceived to be negative. These experiences sometimes cause significant distress and may be traumatic in their own right. We expected poorer outcome for these patients because exposure treatment does not usually address post-trauma experiences.

To assess the relationship of thought processes during trauma and post-trauma experiences with treatment outcome, we obtained narratives of the traumatic event (rape) from exposure treatment sessions of patients with good and with inferior outcome. Based on a manual developed for the purposes of this study, transcripts of these narratives were analyzed by raters who were blind to treatment outcome. Previous studies have also used narratives to study variables related to treatment outcome. In contrast to

the study reported here, the focus of those investigations has been on structural aspects of the narratives such as fragmentation of memories, and not on the content (see Foa, Molnar, & Cashman, 1995, for results and a review).

Method

Participants

Twenty women who had been sexually assaulted and received exposure treatment in the context of a study investigating the efficacy of cognitive-behavioral treatment for PTSD (Foa et al., 1994) comprised the sample for the present study. Participants with good and inferior outcome were selected on the basis of their PTSD symptoms at the beginning and end of treatment, as assessed with the PTSD Symptom Scale (PSS; Foa, Riggs, Dancu, & Rothbaum, 1993). Groups were matched for initial PSS scores. Ten participants showed large improvement with treatment (good outcome group); the other ten showed only modest improvement (inferior outcome group). Half of the subjects in each group had received prolonged exposure only (PE, seven sessions), the other half received stress inoculation training in addition to six sessions of prolonged exposure (PE/SIT). Table 1 shows participant and assault characteristics for the two groups. The groups did not differ in age, ethnic background, marital status, education, employment, pretreatment PSS, depression (Beck Depression Inventory, BDI, Beck, Ward, Mendelsohn, Mock, & Erbaugh, 1961), anxiety (State-Trait Anxiety Inventory, STAI-trait and STAI-state, Spielberger, Gorsuch, & Lushene, 1970), months since the assault, percentage of participants who thought that they would be killed during the assault, percentage of assaults in which a weapon was used, percentage completed rapes, relationship to assailant, previous treatment, percentage of participants who reported child sexual abuse, previous or subsequent rape, or treatment expectancy ratings. The only significant difference between the groups was that the inferior outcome group had experienced longer assaults than the good outcome group, $t(10.55) = 3.22, p = .009$. As intended by the selection procedure, the good outcome group showed a much larger reduction in PSS scores with treatment than the inferior outcome group, Group \times Time interaction, $F(1,18) = 11.71, p = .003$. There were no effects of treatment condition (PE vs. PE/SIT) or interactions. On the BDI and STAI, both the good and inferior outcome groups improved with treatment, time effects, $F(1,18) = 23.91, p < .001$ for the BDI, $F(1,18) = 12.78, p = .002$ for STAI-trait, $F(1,18) = 6.88, p = .017$ for STAI-state.

Table 1. Participants and Assault Characteristics

	Good Outcome (<i>n</i> = 10)	Inferior Outcome (<i>n</i> = 10)
Age	36.5 (12.2)	32.2 (9.1)
Pre PSS	30.4 (10.5)	32.2 (8.5)
Post PSS	4.0 (3.2)	19.5 (3.7)
Pre BDI	20.3 (12.9)	23.4 (14.4)
Post BDI	6.2 (4.8)	15.3 (10.7)
Pre STAI-trait	51.7 (15.5)	59.2 (10.7)
Post STAI-trait	39.5 (15.0)	49.4 (13.5)
Pre STAI-state	47.9 (15.8)	54.8 (11.5)
Post STAI-state	35.4 (16.4)	46.2 (10.7)
Ethnic group		
Caucasian	80%	60%
Black	20%	40%
Marital status		
Single	50%	50%
Married	10%	10%
Co-habiting	0%	10%
Divorced/separated	40%	30%
Employment		
Not working	30%	50%
Part time	20%	0%
Full time	50%	50%
Education		
High school	10%	50%
College	70%	30%
Graduate school	20%	20%
Months since assault	37.2 (43.6) Median: 22.5	107.4 (133.5) Median: 40
Duration of assault (min)	16.9 (11.0)	56.5 (37.3)
% Participants with completed rape	80%	100%
% Participants who thought they would be killed	80%	80%
% Assaults with weapon	50%	60%
Assailant		
Stranger	80%	40%
Acquaintance	10%	50%
Relative	0%	10%
Other	10%	0%
% Participants with previous treatment	50%	50%
% Participants reporting child sexual abuse	30%	20%
% Participants with previous rape/attempted rape	0%	30%
% Participants raped again subsequently	10%	10%
Expectancy—treatment logical	7.5 (1.3)	8.4 (1.1)
Expectancy—confident treatment successful for self	7.3 (1.1)	7.2 (1.5)
Expectancy—confident treatment successful for others	6.6 (2.0)	7.5 (1.7)

Materials

Transcripts were obtained for each participant for one early and one late exposure session. Anxiety ratings and any other possible indicators of treatment outcome were deleted from the transcripts. The reason for choosing one early and one late treatment session was that participants varied widely in how much information they included in the narratives of the trauma. The postrape events in particular were sometimes only included in either the early or the late session. Each session included between two and three relivings.

Raters

Raters were two Ph.D. level clinical psychologists and two B.A. level psychologists. The raters were blind with respect to treatment outcome.

Rating Manual

A 10-page manual developed by A.E., D.M.C., and E.B.F. described criteria for the rating scales. Raters were instructed to read the transcripts once to familiarize themselves with the story. They then read the transcript again highlighting any material relevant to the concept of mental planning vs. mental defeat, and overall feeling of alienation/permanent change. The evidence was then summarized on a separate sheet of paper. After reviewing the evidence from the transcripts of the two treatment sessions, raters gave the overall ratings.

The bipolar concept "mental planning vs. mental defeat" refers to the victims' thoughts during the assault. *Mental planning (coping)* is defined as thinking about or planning in one's mind about what she might be able to do to minimize physical or psychological harm, to make the experience more tolerable, or to influence the response of the assailant (irrespective of whether the plan is successful or not). Evidence for mental planning is taken from planning thoughts and statements that a particular action was taken intentionally. *Mental defeat* refers to the victim's perception that she gave up in her own mind and was completely defeated. Evidence for mental defeat is taken from direct statements that the victim gave up, her description of feeling completely at the will of the assailant, her description that she lost the sense of being a person with her own will, statements that she did not feel like a human being any longer, her wish/acceptance that she was dying, or a sexual response during the rape which she perceived as defeat. Mental defeat is rated conservatively and goes beyond helplessness

and hopelessness. Even if a victim cannot do anything to prevent the rape she may retain a sense of her own will and of being psychologically independent of the assailant's will.

Evidence for mental planning and mental defeat is summarized in an overall rating scale with "0" meaning strong evidence for mental planning and no evidence for mental defeat, "1" meaning some evidence for mental planning and no evidence for mental defeat, "2" meaning neither evidence for mental planning nor mental defeat, and "3" clear evidence for mental defeat, irrespective of whether or not mental planning was present at other times. Pairwise interrater-reliabilities (Pearson correlations, $n = 20$ ratings) between the four raters ranged from .73 to .90 for the Mental Planning/Defeat scale (mean: .83).

The concept of "overall feeling of alienation/permanent change" refers to negative post-rape experiences. Patients who score high on this scale report that they could not return to their normal lives after the rape. They felt alienated from themselves, their world, and their future. Evidence for an *overall feeling of alienation* is taken from the victim's description of her interaction with others after the assault and her feelings about these interactions. The types of experiences that are likely to give the victim an overall feeling of alienation are, e.g., being blamed, being mistreated, or not being believed. These statements are only taken as evidence if it is clear that victims experienced them as negative and did not discount the person as not relevant, not competent, etc. Further examples for experiences relevant to the concept of alienation are the victim's report that she was unable to relate to other people after the assault or that other people did not meet her needs. Statements or descriptions which indicate that the victim felt supported or safe with other people after the rape are rated as evidence against an overall feeling of alienation. Higher ratings on overall feeling of alienation reflect the impression that the victim lost the sense of being supported by her social network and of herself as a member of the network. The rating of an overall feeling of alienation is not identical with the DSM-criterion and PSS-item "feeling detached and estranged from others" because it requires the victim to feel alienated in general, not just in relationship to some people. Furthermore, the Overall Alienation/Permanent Change rating was concerned with immediate post-trauma experiences whereas the PSS assesses current symptoms. The correlation between the Overall Alienation/Permanent Change scale and the PSS detachment item was nonsignificant ($\rho = -.17$). Evidence for *permanent change (damage)* is taken from statements indicating that victims see themselves or their lives as having been changed forever in a negative way, e.g., statements conveying a sense that life is over, a sense that they have been damaged forever, a sense that they died inside, a sense that their body has been permanently

damaged or spoilt, or a sense that relationships with others will never be the same again. Statements that indicate that the victim saw the assault as an isolated bad experience are rated as evidence against permanent change.

Evidence on negative post-assault experiences is summarized in a rating scale ranging from "0" meaning no evidence to "4" meaning very strong evidence for an overall feeling of alienation/permanent change (with "1" meaning weak evidence, "2" moderate evidence and "3" strong evidence). Pairwise interrater-reliabilities between the four raters for the Overall Alienation/Permanent Change scale ranged from .46 to .80 (mean: .66, $n = 19$ ratings). Reasons for discrepancies were twofold: First, raters identified the same experiences as relevant but gave them a different weight. This rating was especially difficult because sometimes there was only one reliving phase in which post-rape experiences were included. Second, raters sometimes missed evidence discounting a person who had acted in a negative way towards the victim as not relevant (e.g., "they are idiots," "they were not doing their job properly"). In these cases they overrated alienation.

Results

Relationship of Treatment Outcome to Mental Planning/Defeat and Overall Alienation/Permanent Change

Table 2 shows the mean ratings of the four raters for the good and inferior outcome groups. Participants with inferior outcome received higher scores on the Mental Planning/Defeat scale than participants with good outcome, $t(11.59) = 4.06, p = .002$. The inferior outcome group showed very little evidence of mental planning and approximately half experienced mental defeat. None of the participants with good outcome were rated as having experienced mental defeat and all of them reported evidence of mental planning. There was a significant negative correlation between the Mental Planning/Defeat scale and percent improvement in the PSS during treatment, $r(18) = -.66, p = .002$.

Table 2. Mean Ratings of Four Raters Blind to Treatment Outcome

	Good Outcome	Inferior Outcome
Mental planning vs. defeat (0–3)	0.45 (0.41)	1.90 (1.06)
Overall feeling of alienation/permanent change (0–4)	1.65 (1.16)	2.65 (1.12)

For the Overall Alienation/Permanent Change scale, a trend for a significant group difference was observed, $t(17) = 1.91, p = .07$. The scale correlated negatively with the percent improvement in PTSD symptoms, $r(17) = -.48, p = .04$.

The inferior and good outcome groups differed in duration of assault, which in turn correlated with Mental Planning/Defeat, $r = .59, p = .006$. This raised the possibility that assault duration might account for the relationship between Mental Planning/Defeat and outcome. Analysis of covariance (ANCOVA) excluded this possibility as the inferior outcome group continued to score higher on Mental Planning/Defeat when assault duration was covaried out, $F(1,17) = 6.31, p = .02$. Relationship to the rapist (stranger vs. known) also correlated with Mental Planning/Defeat, $r = .65, p = .002$, such that those raped by strangers showed more mental planning and less mental defeat. Another ANCOVA tested whether this variable could explain the relationship between Mental Planning/Defeat and outcome. Once again the group difference in Mental Planning/Defeat remained significant when this potentially confounding variable was covaried out, $F(1,17) = 10.12, p = .005$. ANCOVAs were not performed on the Overall Alienation/Permanent Change data as this variable was not correlated with assault duration or relationship to the rapist.

Relationship of Other Variables to Treatment Outcome

Table 3 shows the correlations between percent improvement in PSS score and each of the patient/assault characteristics in Table 1. As expected from the group analysis, assault duration was significantly negatively correlated with outcome. There were also trends for attempted vs. completed rape and the PSS-item "detachment/estrangement from others" to correlate with outcome. Neither of the latter variables correlated with Mental Planning/Defeat ($\rho = .18$ and $.15$) or Overall Alienation/Permanent Change ($\rho = .11$ and $-.17$).

Discussion

The results obtained with blind ratings of patients' recollection of the assault confirmed our clinical impression that patients' thoughts during rape as well as their perception of post-rape experiences are related to their response to exposure treatment. Inferior outcome was related to presence of mental defeat or absence of mental planning. Patients who did not plan or who gave up thinking about how they could minimize harm during

Table 3. Correlations between Patient and Assault Characteristics and Treatment Outcome^a

	Percentage change in PSS
Age	.13
Months since assault (rho)	-.16
Duration of assault (<i>r</i>)	-.49*
Ethnic group (Black vs. Caucasian, rho)	.11
Marital status (single/divorced vs. married/co-habiting, rho)	-.30
Employment (rho)	.06
Years of education (<i>r</i>)	.15
Depression (BDI pre, <i>r</i>)	.06
Detachment from others (PSS item 9, rho)	-.42**
Attempted vs. completed rape (rho)	-.40**
Expectation to be killed (no vs. yes, rho)	-.09
Presence of weapon during assault (rho)	.06
Assailant stranger vs. known (rho)	-.35
Previous treatment (rho)	-.02
Child sexual abuse (no vs. yes, rho)	.27
Previous rape/attempted rape (no vs. yes, rho)	-.35
Subsequent rape (rho)	-.26
Expectancy—treatment logical (<i>r</i>)	-.32
Expectancy—confidence self (<i>r</i>)	.16
Expectancy—confidence others (<i>r</i>)	-.14

^a*r*: Pearson correlation; rho: Spearman correlation; **p* < .05; ***p* < .10.

the rape and especially those who felt completely defeated and lost the sense of being a person with their own will responded less well to repeated imaginal reliving of the traumatic event.

One may argue that giving up planning or experiencing mental defeat during rape may reflect differences in other comorbid symptoms such as depression, objective characteristics of the assault, or be due to previous negative experience such as child sexual abuse. However, a large number of possibly relevant patient and assault characteristics were assessed, and the only significant difference between the groups was in assault duration. Although the experience of mental defeat was correlated with duration of the assault and relationship to assailant, its relationship with treatment outcome could not fully be explained by these variables. These results make it highly unlikely that the cognitive differences between the good and inferior outcome groups were simply epiphenomena of objective differences in trauma history. The analysis of correlation patterns with percent improvement in posttraumatic symptoms underscores this conclusion.

When interpreting the low correlations between assault and previous trauma characteristics with PSS change scores, one has to bear in mind that all the patients in the sample had experienced a very severe trauma:

the vast majority of the participants thought they would be killed, and nearly all experienced completed rape. The impact of pre-rape experiences and assault characteristics would probably be larger in samples with a wider range of trauma severity. In addition, although many of the correlations were nonsignificant, some were in the expected direction of a relationship between overall severity of trauma history (e.g., previous and subsequent rape) and outcome. It is possible that participants who had been raped repeatedly and those who experienced longer assaults may have benefited from a larger number of exposure sessions. However, the pattern of results may also point to the need to distinguish between factors predicting the initial occurrence of PTSD symptoms and those predicting chronicity of symptoms or poor response to treatment (Ehlers & Steil, 1995; Rothbaum, Foa, Riggs, Murdock, & Walsh, 1992).

There are several ways in which mental defeat/absence of mental planning may undermine the efficacy of exposure therapy. The experience of mental defeat may impede recovery by preventing the patient from seeing that the trauma was a single, time-limited, past event which does not necessarily have global implications for oneself or one's future. Reliving the event in exposure therapy may be less effective and possibly retraumatizing because the patient is repeatedly reminded of his/her inability to cope. This may confirm some negative views the victim holds about herself (e.g., "I am worthless," "I deserved it," "I am to blame for what happened," "I am disgusting," "I am a bad person") and about her ability to cope with future adverse events or the symptoms triggered by the assault (e.g., "I am a lousy copier," "It will happen again and I will not be able to prevent it," "Bad things will always happen to me"). Reliving may thus fail to disconfirm the belief that the traumatic event has serious implications for the future, and maintain rather than change the patient's sense of ongoing threat. In line with our results, Pitman et al. (1991) observed that six veterans with PTSD who experienced complications such as depression or relapse of alcoholism during exposure treatment were characterized by negative appraisal of their actions during the combat events they were exposed to. Repeated reliving of the combat events seemed to confirm rather than change these negative appraisals.

This raises a general issue about the use of exposure therapy in PTSD. According to Foa and Kozak (1986) and Foa, Steketee, and Rothbaum (1989), exposure therapy leads to the incorporation of new corrective information into the fear network. Foa and Jaycox (in press) have outlined several ways in which this might occur in patients with chronic PTSD. Repeated reliving of the trauma lowers anxiety by habituation. Reliving of the trauma in a safe environment incorporates safety information into the traumatic memory. Facing the trauma helps patients to discover they will not

go mad or lose control and to distinguish the memory from present reality. Finally, traumatic memories tend to be disorganized and repeated reliving helps patients to construct a coherent narrative which assists in putting the experience behind them. Exposure therapy was initially developed for the treatment of phobias and obsessive-compulsive disorder. It may apply best to those symptoms and cognitions connected with PTSD that most closely resemble those in these disorders, namely those related to excessive perception of danger. For example, a woman who was raped may think afterwards "All men are dangerous." Exposure may help change this cognition in a way similar to changing a phobic's belief "All dogs are dangerous." However, exposure may be less effective at changing cognitions related to negative self-evaluation such as those targeted in this study. These cognitions may need to be addressed directly with cognitive therapy procedures. It remains to be investigated whether individuals who experienced mental defeat during rape will respond better to a combination of exposure and cognitive restructuring, to cognitive restructuring alone, or to a larger number of exposure treatment sessions than used in the present study. We would hypothesize that the combination of these methods will be most effective because reliving the event facilitates the assessment and modification of the idiosyncratic meaning of the trauma, and cognitive restructuring may be most effective in changing cognitions related to negative self-evaluation.

One may argue that the relationship between mental planning and treatment outcome reflects the role of perceived uncontrollability which is a crucial variable in determining the aversiveness of a negative event (e.g., Foa et al., 1989; Foa, Zinbarg, & Rothbaum, 1992; Mineka, 1985). Mental planning can be understood as attempts to exert control over the situation (see also Burgess & Holmstrom, 1976), even if the control was minimal or symbolic, such as a patient not wanting to show the rapist that she was crying. Lack of mental planning may therefore reflect the patients' perception that the situation is totally uncontrollable. However, mental defeat may go *beyond* uncontrollability. In the present study, there was no difference between the groups in their ability to prevent the rape and 80% were convinced they would be killed during the rape. All patients described feeling helpless, hopeless, and humiliated. The difference seemed to be that those with good outcome continued to retain a sense of autonomy. The importance of retaining a sense of personal autonomy may explain Resnick, Kilpatrick, Dansky, Saunders, and Best's (1993) finding that completely uncontrollable events like natural disasters are less likely to lead to PTSD than trauma inflicted by other people such as rape, physical assault, or torture.

It is interesting to note that DSM-IV (American Psychiatric Association [APA], 1994) emphasizes the role of perceived threat to physical integrity in the development of PTSD. The two groups were equated on this variable. The role of mental defeat in predicting treatment response in the present study as well as persistence of PTSD in a study comparing patients with persistent vs. recovered PTSD (Dunmore, Clark, & Ehlers, 1997) suggest that threat to psychological integrity may be of additional importance.

Results for Overall Alienation/Permanent Change were less clear-cut but nevertheless pointed in the expected direction. There was a trend for a difference between the good and inferior outcome groups and the scale correlated significantly with degree of change in posttraumatic symptoms. Patients whose recollected posttrauma experiences indicated an overall feeling of alienation from self or others, or permanent negative change, benefited less from exposure to their rape memories than patients without these characteristics. These results were not a reflection of an overlap between Overall Alienation/Permanent Change and the PTSD symptom "detachment and estrangement from others" because there was no correlation between these measures. These aspects of alienation were independently related to treatment outcome. The present study may underestimate the true effects of Overall Alienation/Permanent Change because little relevant material was available for each patient and some patients may not have volunteered relevant information because they were not asked to talk about posttrauma experiences during reliving.

Several mechanisms may underlie the relationship between Overall Alienation/Permanent Change and inferior treatment response. First, the reliving used in this study mainly focused on the traumatic event and paid little attention to post-rape experiences. Therapists often interrupted patients when their reliving of the rape was finished and asked them to start again. As a consequence, treatment did not directly address patient perceptions of Overall Alienation/Permanent Change. Second, some distressing memories of the rape which occur during exposure may be interpreted by some patients as further evidence that they are permanently changed. Third, alienation from others may be linked to the patients' preoccupation with feelings such as guilt, anger, or shame. Prospective studies of posttraumatic symptoms after trauma have shown that preoccupations with these feelings are related to inferior long-term outcome (Amir, Foa, & Cashman, 1996; Riggs, Dancu, Gershuny, Greenberg, & Foa, 1992) and there is other evidence that they are linked to poor treatment response (Foa, Riggs, Massie, & Yarcower, 1995; Jaycox & Foa, 1996; Vaughan & Tarrier, 1992). There are several possible explanations for the role of preoccupations with guilt and anger. Ehlers and Steil (1995) have argued that these preoccupations are functionally similar to avoidance in that they pre-

vent exposure to the emotions experienced *during* the trauma. Riggs et al. (1992) have proposed that the activation of anger networks inhibits fear responses which would be necessary to achieve changes in the fear network representing the trauma.

In line with our finding of a relationship between alienation and treatment outcome, several recent studies have obtained results suggesting post-trauma social interactions that are perceived as negative hinder post-trauma recovery in untreated victims of trauma. Davis, Brickman, and Baker (1991) and Ullman (1996) found that reports of negative social interaction were associated with poor adjustment. Dunmore et al. (1997) found that negative appraisals of other people's responses after assault distinguished between individuals with persistent versus recovered PTSD.

The material used for the current study does not allow one to decide whether patients who experienced alienation actually received more negative responses or less support from other people than patients who did not feel alienated. However, the coding instructions for alienation emphasized patients' interpretations of others' responses. Some patients seemed to be unaffected by negative responses because they discounted them as not relevant whereas others were very upset about similar instances. Furthermore, some patients felt alienated because of sympathetic responses which they interpreted as other people looking down on them. It is therefore likely that the patients' interpretation of others' responses plays a crucial role. It is also likely that beliefs patients hold about what response they can expect from others will actually have an impact on their social interactions in that it will influence their behavior and thus the response they will receive from other people. When interpreting the results of the present study, one has to bear in mind that the inferior outcome group did not represent treatment *failures* because they also showed improvement with exposure. Compared to the good outcome group, however, their progress was much less impressive. Thus, the predictor variables should be interpreted as impeding rather than preventing therapeutic change during exposure.

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