

Trauma and Women: Course, Predictors, and Treatment

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Posttraumatic stress disorder (PTSD) resulting from aggravated assault, rape, or noncrime trauma affects over 4 million women in the United States, according to retrospective studies. Prospective studies reviewed here found that 3 months post assault the prevalence of PTSD was 48% in rape victims and 25% in nonsexual crime victims. Prolonged exposure treatment and stress inoculation training are both effective psychotherapeutic treatments for PTSD. Prolonged exposure involves having the patient relive the traumatic memory and recount the event in detail. This description is audiotaped and the patient is asked to listen to it as part of assigned homework. In vivo exposure to feared objects or situations is also assigned as homework. Stress inoculation training consists of teaching patients a variety of techniques for managing anxiety, including controlled breathing, deep muscle relaxation, thought-stopping, cognitive restructuring, preparation for stressors, covert modeling, and role-play. Both treatments have been proven to be effective alone and in combination in ameliorating chronic PTSD in women after traumatic sexual or nonsexual assault. This efficacy was maintained for 3 months of follow-up.
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THE SCOPE OF THE PROBLEM

The incidence of traumatic and posttraumatic stress disorder (PTSD) is substantial. From a 1989 retrospective telephone survey, Resnick and colleagues extrapolated that current PTSD could be diagnosed in over 4 million women in the United States (Table 1).¹ There is a difference in pathogenicity of different events: female victims of aggravated assault are five times more likely to develop PTSD than female victims of noncrime trauma.

The findings from prospective research are even gloomier. Our center has done two studies:^{2,10} Using *Diagnostic and Statistical Manual III* (DSM-III) criteria, the first study assessed female victims of rape and nonsexual assault for PTSD and related pathology at weekly intervals, starting within 2 weeks of their first assault and continuing for 3 months. The second study used DSM-III-R criteria to assess a similar population once a month for 3 months. In both studies, victims were 17 to 65 years old,

literate in English, and had not been assaulted by a current spouse or partner.²

As shown in Figure 1, the results indicated that 95% of rape victims showed symptoms of PTSD within 1 to 2 weeks of the crime. Among victims of nonsexual assault, 75% showed symptoms of PTSD in the same time frame. Although the percentage diminished over time, 3 months after, 48% of rape victims and 25% of victims of nonsexual assault still met criteria for PTSD. In the second study, monthly assessment demonstrated an identical result. At the initial assessment, 90% of the rape victims and 62% of the nonsexual assault victims met DSM-III-R symptom criteria (but not the 1-month duration criterion) for PTSD. Four weeks later, the incidence was 60% for rape victims and 44% for nonsexual assault victims. At the 12-week assessment, 51% of rape victims and 21% of nonsexual assault victims were diagnosed with PTSD.

These results imply an urgent need for short-term effective treatments for the millions of people who have PTSD—both for their own well-being and to spare them and our society the costs of chronic PTSD.

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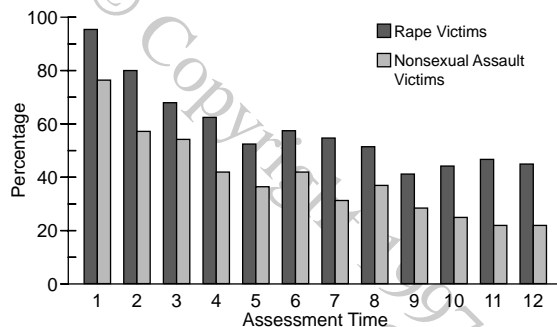
COGNITIVE BEHAVIORAL TREATMENTS

Two kinds of cognitive behavioral treatments have been extensively studied in female victims of sexual and nonsexual assault. Prolonged exposure treatment requires the patient to relive the trauma repeatedly and confront feared situations and objects related to the trauma—situations and objects the patient avoids, not because they are dangerous, but because they remind her of the trauma. Stress

Table 1. Estimated Prevalence of PTSD in Women*

Traumatic Event	No. of Victims (in millions)	% With Current PTSD	No. With Current PTSD (in millions)
Aggravated Assault	9.9	17.8	1.7
Rape	12.0	12.4	1.5
Noncrime trauma	32.0	3.4	1.1

*Adapted with permission from Resnick.¹ Based on U.S. Bureau of the Census 1989 Estimate of the Population of U.S. Adult Women (age 18 or older) of 96.1 million.

Figure 1. Percentage of Victims With PTSD Diagnosis: Rape Versus Nonsexual Assault, Assessed Weekly

inoculation training programs teach patients a number of techniques that help to reduce their anxiety, whenever it occurs.³

A Comparative Study of Two Therapies

We used both techniques in a study involving 96 female victims of sexual or aggravated assault who fully met criteria for PTSD. Patients were randomized to a prolonged exposure program, a stress inoculation training program, or a program combining both treatments. A fourth group of patients, who were on a waiting list for treatment, served as control subjects. All treatments included nine sessions conducted over 5 weeks.³

The mean age of the patients was 34.9 years; 63% were white and 37% black; 27% had attended or graduated from high school, 61% had attended or graduated from college, 12% had attended or completed graduate school. The trauma was rape for 72% and aggravated assault for 28% of the patients. These patients had chronic PTSD: the mean time since the trauma was 5 years (range, 3 months to 29 years). In 48%, it was from 3 months to 1 year; in 31%, from 1 to 5 years; in 21%, more than 5 years.

The majority of these women had a history of multiple traumas. More than half had suffered trauma in childhood, either physical or sexual assault, or both (Table 2). More than half had suffered adulthood traumas prior to the index trauma for which they sought therapy.

After prolonged exposure treatment, only 32% of the patients still had full PTSD, although the others may have

Table 2. Trauma History of Female Victims of Sexual or Aggravated Assault (N = 96)*

Time of Trauma	Childhood	Adulthood
Physical abuse only	12%	40%
Sexual abuse only	23%	12%
Both physical and sexual abuse	13%	19%

*Data from reference 11.

retained some symptoms. Stress inoculation training and combination therapy produced similar results. In contrast, all of the control subjects still retained the PTSD diagnosis. A 3-month follow-up showed that on the whole the women who received treatment retained their gains.

We then applied more stringent criteria. To achieve good end-state functioning, patients had to show a 50% reduction in PTSD symptoms, plus normal scores on depression (< 7 on the Beck Depression Inventory) and anxiety (< 35 on State-Trait Anxiety Inventory-State Version) scales. Almost half the patients who received prolonged exposure met these stringent criteria. Other treatments showed smaller response rates, but results approached those for prolonged exposure at last available follow-up (mean 10.7 months).⁴

Prolonged Exposure Treatment

Prolonged exposure treatment is not only effective, it is easy to teach to rape and assault victim counselors and mental health professionals. The greatest challenge in teaching it is overcoming the doubts of mental health providers concerning the possible cruelty of asking patients to confront painful memories and reminders. This can be done by showing that prolonged exposure treatment works. It not only reduces PTSD symptoms, but also teaches the victim to confront and conquer difficulties rather than avoid them and continue to suffer.

A prolonged exposure treatment program involves four techniques: education about common reactions to trauma; breathing retraining to promote relaxation; repeated reliving of the trauma and recounting it aloud in the present tense to promote emotional engagement; and in vivo confrontation with safe situations that evoke anxiety and are avoided because they are reminders of the trauma.

Indications and contraindications. Prolonged exposure treatment helps patients who exhibit pervasive anxiety and avoidance. It is also helpful for those who express anxiety about the PTSD symptoms themselves because they fear loss of control or "going crazy."

Contraindications include current psychosis and severe dissociative symptoms, such as multiple personality disorder. Such patients often become overwhelmed during reliving, rather than learning from it. If substance abuse is present, it should be treated first, before the PTSD is treated. Persons with PTSD symptoms derived from realistic guilt and shame—for example, a war criminal who has

committed murder or rape—do not respond to prolonged exposure treatment. Perpetrators of trauma may actually become worse, perhaps because their symptoms stem from realistic guilt, rather than fear or unrealistic guilt or shame.

Conducting prolonged exposure treatment. The prolonged exposure treatment program includes nine 90-minute sessions. In the first two, the therapist forms an alliance with the patient and expresses the importance of caring for her. The therapist describes the program, discusses the trauma history, and introduces breathing retraining in the first session. The second session includes discussion of common reactions to trauma, introduction of the rationale for confronting the memory of trauma and repeating exposure in the patient's daily life, compilation of a list of situations avoided by the patient, and assignment of in vivo exposure exercises.

The therapist must emphasize the rationale for confronting, rather than avoiding, painful memories of the trauma. Patients are told that confronting memories promotes recovery while avoiding them impedes it. In addition, full discussion of common reactions to trauma will help the patient understand PTSD and its chronicity and multiplicity of symptoms, including those often considered medical- rather than mental-health related. Because patients often think that everyone else rebounds from trauma quickly, and therefore blame themselves for not recovering, they need reassurance that chronic PTSD is common and not a sign of character failure.

In the remaining sessions, the therapist reviews the homework, guides a 60-minute reliving experience, discusses exposure-related thoughts and images with the patient, and assigns another in vivo exposure as homework. Homework, an essential component of the program, consists of listening to taped recounting of the trauma at home and in vivo exposure—confronting safe situations that remind a patient of her trauma.

Patients must understand the rationale behind imaginal treatment: they are told that confronting these memories is painful in the short run but, in the long run, reduces the pain associated with the memory. This change results from the fact that repeated reliving of the traumatic memory helps the patient organize the memory and reevaluate mistaken interpretation of the trauma. For example, the opportunity to relive and reflect enabled one patient to realize, after 18 years of blaming herself, that her rape was not her fault. In addition, it enhances feelings of competence: by confronting the trauma, the patient learns that the memory does not control her. She controls the memory.

The reliving must be repeated until the memory no longer causes disruptive anxiety. During repeated reliving, patients realize that thinking about the trauma is not dangerous and that remembering is not actually being revictimized.

Conducting imaginal exposure. We instruct patients to recount the trauma vividly, with their eyes closed, to use

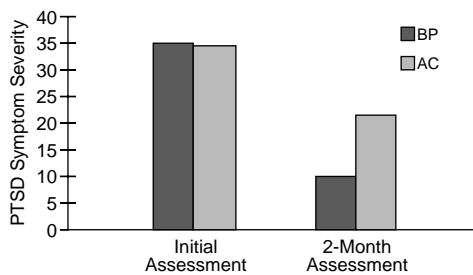
the first person and present tense, to include details, thoughts, and feelings of the event in the narrative, and to engage in the emotions elicited by the memory. Meanwhile, the therapist expresses empathy with the patient's distress (e.g., "I know this is difficult"), reassures the patient periodically that she is safe ("You're doing fine"), and titrates the patient's emotions. This forms a key therapist/patient alliance during reliving. The therapist also encourages the patient to become emotionally engaged in the narrative on the one hand and to avoid overwhelming anxiety on the other. Without emotional engagement, patients are less likely to improve, but the patient overwhelmed by anxiety will not process the memory properly. If the patient dissociates, the procedure is changed to prevent recurrence of dissociation. This may be as simple as asking a patient to relive the trauma with her eyes open, or reminding her of the therapist's presence by frequent comments. The therapist must allow sufficient time after the reliving experience to calm the patient and discuss the exposure.

Stress Inoculation Training

Stress inoculation training consists of teaching patients a variety of techniques for managing anxiety. Developed by Kilpatrick et al. for rape victims with long-term disturbances, it comprised 20 therapy hours plus homework assignments focused on the acquisition and application of coping skills.⁵ Following Meichenbaum's work,⁶ stress inoculation training includes deep muscle relaxation training,⁷ breathing control,⁸ role-playing, covert modeling, thought-stopping, and guided self-dialog. Resick and colleagues compared the efficacy of six 2-hour sessions of stress inoculation training with the same format of assertion training and supportive psychotherapy for reducing rape-related difficulties.⁹ The three treatments were compared with follow-up in a naturally occurring wait-list control group. Cognitive restructuring, assertiveness training, and role-playing were excluded, since they were used in the comparative treatment, and in vivo exposure was added to the application phase. All three treatments were equally effective in reducing symptoms. Gains were measured at 6-month follow-up on rape-related fear measures, but not on depression, self-esteem, and social fears. No improvements were found in the wait-list control group.

Two studies, described earlier in the section on prolonged exposure treatment, examined the efficacy of stress inoculation training in female victims of rape and nonsexual assault who met criteria for PTSD.^{3,10} The stress inoculation training program in both studies was adapted from the Kilpatrick et al.⁵ program described above. In the first study, stress inoculation training produced significantly more improvement in PTSD symptoms immediately after treatment than the wait-list treatment. At follow-up, prolonged exposure treatment pro-

Figure 2. The Brief Prevention Program and Assessment Control Compared*



*Adapted with permission from Foa et al.¹¹
Abbreviations: BP = brief prevention program; AC = assessment control.

duced superior outcomes on PTSD symptoms but not on other measures. Patients who received prolonged exposure treatment continued to improve after the end of treatment, whereas patients in the stress inoculation training and supportive counseling programs showed no change between posttreatment and follow-up.¹⁰ In the second study, stress inoculation training, prolonged exposure, and the combination of both showed immediate and long-term (6-month) treatment effects, compared with the wait-list control group. However, prolonged exposure appeared to be superior on a broad measure of end-state functioning.³

PREVENTION

The great number of people exposed to trauma led us to investigate the possibility of preventing PTSD before it becomes chronic. As discussed, almost 60% of rape victims and almost 40% of victims of nonsexual assault met the criteria for PTSD 2 months after the assault. Could early short-term treatment bring these percentages down?

In a small study, we instituted a very brief program comprised of four 2-hour weekly sessions.¹¹ During the sessions, therapists discussed normal reactions to assault and taught breathing retraining and deep muscle relaxation. Patients relived the assault, learned cognitive restructuring, and took home in vivo exposure assignments.

Twenty female patients with PTSD were divided into two matched groups: 10 received the brief prevention program and 10 received assessment control. Assessment control involved paying attention to victims by assessing

their symptoms for the same amount of time, but providing no active treatment.

After 2 months, women in the brief prevention program were less symptomatic than the control group (Figure 2). All 10 patients in each group had PTSD at first assessment. Two months later, only one patient in the brief prevention program still had PTSD, compared with seven in the assessment control group.

Low-cost prevention programs warrant further investigation; their value is underscored when the emotional and economic devastation caused by PTSD is considered.

SUMMARY

Cognitive behavioral treatments are effective and efficient in ameliorating chronic PTSD in many female victims of assault and rape. A brief cognitive behavioral intervention shortly after the trauma can prevent chronic PTSD in many assault victims, thus diminishing emotional and physical suffering.

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