The aim of this research was to test the comparative effectiveness of two therapeutic modalities in the treatment of chronic posttraumatic stress disorder in victims of sexual aggression: (a) self-exposure and cognitive restructuring and (b) progressive relaxation training. The sample consisted of 20 patients (victims of rape in adulthood or adult victims of childhood sexual abuse) selected according to *DSM-III-R* criteria. A multigroup experimental design with repeated measures (pretreatment, posttreatment, and 1-, 3-, 6-, and 12-month follow-up) was used. Most treated patients improved, but the success rate was higher in all measures in the exposure and cognitive restructuring group immediately on posttreatment and at follow-up. Implications of this study for clinical practice and future research in this field are commented on.

Psychological Treatment of Chronic Posttraumatic Stress Disorder in Victims of Sexual Aggression

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According to the *DSM-IV* (American Psychiatric Association [APA], 1994), posttraumatic stress disorder (PTSD), which comes under the category of anxiety disorders, appears when one has experienced or been witness to physical aggression or a threat to one's own life or that of another and when the emotional response experienced is one of intense fear, horror, or helplessness. The symptoms include cognitive and emotional reexperience of the event, behavioral and cognitive avoidance of what took place, and autonomic arousal, along

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with a loss of interest in pleasurable activities and a certain affective stunting for holding and expressing feelings of intimacy and tenderness (Foa, Riggs, & Gershuny, 1995). All of the above lead to a profound lack of well-being and to significant interference in daily life, both socially and work related (Echeburúa, 1995; Echeburúa & Corral, 1995).

The diagnostic criteria of the *DSM-IV* (APA, 1994) establish a distinction between the acute and chronic forms of the syndrome according to the duration of symptoms. Specifically, to be considered chronic PTSD, the symptoms must last longer than 3 months.

The percentage of women who are victims of sexual aggression at some point in their lives accounts for as much as 15% to 25% of the female population. Sexual assault appears to be so common in clinical populations that routine screening for sexual assault history should be conducted with all female clients presenting for treatment (Kilpatrick, 1983). Results of epidemiological studies in Spain are not available. However, the occurrence of sexual assault—sexual abuse in children, especially—might be lower than in North America and Northern Europe due to a greater family cohesion.

More than 50% of the victims of sexual aggression (up to 70%, according to the study by Bownes, O'Gorman, & Sayers, 1991) experience PTSD. Rape victims make up the population group most affected by this syndrome (Kilpatrick, Saunders, Veronen, Best, & Von, 1987; Resnick, Kilpatrick, Best, & Kramer, 1992). Furthermore, in the specific case of chronic PTSD, the symptoms do not disappear with the passage of time. Thus, a fine-tuning of effective intervention programs is required.

A wide variety of therapeutic techniques have been tested. Stress inoculation training was used for the first time in the study by Veronen and Kilpatrick (1983) with an individual program of 10 sessions using female therapists. The results of this program have been encouraging in the reduction of depression, anxiety, and the fears associated with sexual aggression. The limitations of this study are that the assessment measures do not specifically include PTSD and that long-term results are lacking.

A more recent innovation in stress inoculation is its application in groups, directed by both a male and a female therapist, with six 2-hour

sessions (Resick, Jordan, Girelli, Hutter, & Marhoefer-Dvorak, 1988). This therapeutic procedure has proven superior to the waiting-list control group, but the results are no different than those obtained by assertiveness training or support therapy plus information: a significant improvement in fears and in the symptoms of intrusion and avoidance, but a certain stagnation in the measures of depression, self-esteem, and social fears. The limitations of this study are that it does not directly assess posttraumatic stress and that there is a certain uncontrolled overlapping in the therapeutic modalities (e.g., exposure is present in all of them). On the other hand, the factor of success may be stress inoculation, but it could also be the group character of therapy or even certain unspecific factors (such as the presence of two therapists of both sexes or the mere contact with therapy itself).

In the best controlled study published up to now, Foa, Rothbaum, Riggs, and Murdock (1991) randomly assigned 45 victims of sexual aggression suffering from PTSD to one of the following four therapeutic modalities: (a) prolonged exposure, both imagined and in vivo; (b) stress inoculation training; (c) support therapy (with the objective of controlling the nonspecific factors of therapy); and (d) waiting-list control group. The victims had been raped at least 3 months before participation in the study. The range of time since assault was 3 months to 12 years, with a mean of 6.2 years (SD = 6.7 years). The treatment program, carried out by a female therapist, was individual and was made up of nine 90-minute sessions, two times a week. Both stress inoculation and exposure were shown to be more effective than the support therapy and the control group in the reduction of PTSD symptoms (but not in symptoms of depression and anxiety, in which all four groups improved equally). In the short term, stress inoculation was superior to exposure; in the medium term (at the 3.5 month follow-up), however, exposure is superior to stress inoculation. These results suggest that stress inoculation is useful in the short term because it is composed of a group of techniques oriented to anxiety control, but precisely because of their complexity, the patients tend to abandon them in the medium term. On the other hand, exposure can generate a certain degree of discomfort in the short term, but in the long term it constitutes an effective coping strategy.

A limitation common to the studies on stress inoculation conducted by the groups of Kilpatrick, of Resick, and of Foa is that the differential effectiveness of each one of the components of this quite complex cognitive-behavioral program was not described (Corral, Echeburúa, Sarasua, & Zubizarreta, 1992).

In addition to stress inoculation, other techniques have been tested. In the study by Frank et al. (1988), 24 not-recent rape victims were assigned to either a systematic desensitization group or a cognitive therapy group (inspired by Beck's model). In both groups there was significant improvement, but there were no differences between the two. Finally, in the most recent study by Resick and Schnicke (1992), the results of cognitive therapy applied to 19 victims and based on information processing theory (made up of exposure and cognitive therapy) were compared to a group of 20 women on the waiting list. The experimental group was superior to the control group in the measures of posttraumatic stress and symptoms of depression, both in posttreatment and in the 6-month follow-up.

In conclusion, behavioral treatments, particularly those that involve some type of exposure, seem to be effective therapy for PTSD, but no one treatment has been proven unequivocally superior to any other (Echeburúa, Corral, Zubizarreta, & Sarasua, 1995; Foa, Rothbaum, & Steketee, 1993; Vaughan et al., 1994).

For this reason, the principal aim of this study is to test the long-term effects of a therapeutic program of exposure and cognitive restructuring and to contrast it with relaxation, which in this study is used as a psychological placebo.

In selecting the treatment used, the following criteria were taken into account: It is a brief psychological therapy, it has a sound theoretical background, and it lacks empirical support in its application to this disorder.

With respect to the type of measures used, a scale for specifically evaluating PTSD was designed, similar to that used in some other studies (Foa et al., 1991; Kusher, Riggs, Foa, & Miller, 1992; Resick & Schnicke, 1992). At the same time, other self-reports have been used to evaluate certain psychopathological variables associated with this disorder (depression, anxiety and fears, and inadaptation).

METHOD

SUBJECTS

The sample of subjects for this study was made up of adult victims of nonrecent sexual aggression seeking psychological treatment at the Psychological Counseling Centers for Women of the Basque Country (San Sebastian, Bilbao, and Vitoria, Spain) from April to December 1993.

The criteria of admission to the study were the following: Participants must (a) be a female more than 16 years of age and have experienced some form of sexual aggression; (b) meet the *DSM-III-R* (APA, 1987) diagnostic criteria for PTSD, according to the ADIS-R structured interview (DiNardo & Barlow, 1988); (c) have passed a period of 3 months since the time of the aggression and still be suffering symptoms of the disorder; and (d) not be suffering from an organic illness or a behavioral disorder of a severe nature. The goal of the sample selection was to attempt to form a homogeneous group of patients who were suffering from a chronic PTSD and who were not affected by other syndromes.

Once this previous study was carried out with the 34 patients who sought treatment for sexual assault in the therapeutic program during this time frame, the sample of victims finally selected was composed of 20 subjects. The reasons for leaving the other 14 women out of the study were the following: (a) they were suffering from a behavioral disorder of a severe nature (mainly schizophrenia, mental deficiency, or substance abuse, $n = 8$), or (b) they did not suffer from PTSD ($n = 6$).

Regarding the most significant demographic characteristics and the most significant types of aggressions in the selected sample (see Table 1), the victims were young women, with an average age of 20 years (SD = 7.09 years), and the majority were single students. There are, notwithstanding, two subtypes of patients: (a) victims of childhood sexual abuse ($n = 9$), in which usually more than 10 years have passed since the traumatic event, the sexual aggression persisted over time, penetration was not realized, and the aggressors were generally relatives or acquaintances; and (b) victims of rape in adult life ($n = 11$), in which

TABLE 1
Demographic Characteristics of the Two Types of Samples and Variables Related to Sexual Aggression

	Group A[a] *(n = 9)* n *(%)*	*Group B*[b] *(n = 11)* n *(%)*
Mean age	20	20
Range	(15-35)	(15-41)
Marital status		
Single	8 (89%)	8 (73%)
Married	1 (11%)	2 (18%)
Separated		1 (9%)
Level of education		
Elementary school	3 (34%)	5 (46%)
Vocational school	2 (22%)	1 (9%)
High school	2 (22%)	3 (27%)
College graduation	2 (22%)	2 (18%)
Average time in months passed since the rape	114	39
Range	(12-240)	(6-204)
Type of aggression		
Consummated rape	2 (22%)	8 (73%)
Sexual aggression without penetration	7 (78%)	3 (27%)
Physical lesions	—	2 (18%)
Use of weapons	—	7 (64%)
Relation to the perpetrator		
Acquaintance	9 (100%)	3 (27%)
Stranger	—	8 (73%)
Charges pressed	3 (33%)	5 (45%)
Previous sexual experience	—	3 (27%)

a. Victims of sexual abuse in childhood.
b. Victims of rape in adulthood.

usually 3 years have passed since the trauma, the rapes were consummated in most of the cases, and the aggressors were strangers. The index of charges pressed is low in both subsamples, but it is even lower in the case of women who were accosted during childhood. The probability that a victim of sexual aggression will press charges is lower when the aggressor is an acquaintance (Echeburúa, Corral, Zubizarreta, Sarasua, & Páez, 1993).

It is especially significant, from the point of view of the psychological consequences, that in almost the entire sample, except for in three cases, the sexual aggression constituted the victim's first sexual experience.

TABLE 2
Principal Reasons for Seeking Delayed Help

Reasons	n
Experiences problems in social contact with men and, more specifically, in affective-erotic relationships	7
Sees that her problems do not resolve themselves with the passage of time	5
Is forced to make a court appearance	2
Experiences important life changes (separation or breakup, withdrawal of social support, etc.)	2
Lets the aggression be known for the first time	2
Is affected by phobias	2
Total	20

It is notable that many women seek help long after the abuse occured; no fewer than 52% of the patients treated by the authors at the Psychological Counseling Centers for Women sought delayed help. The basic reasons for seeking delayed help, similar to those given in other studies (Stewart et al., 1987), are shown in Table 2.

EXPERIMENTAL DESIGN

The design used was a 2-group experimental design with repeated measures. Evaluation of all the participants was carried out in pretreatment, posttreatment, and in the 1-, 3-, 6-, and 12-month follow-ups. Patients were randomly assigned to the two experimental conditions in the order of their arrival at the Psychological Counseling Centers for Women. Likewise, the two subtypes of participants were distributed randomly in both groups. The two therapeutic modalities used were (a) gradual self-exposure and cognitive restructuring and (b) training in progressive relaxation.

In this study, there was no control group of untreated victims or of waiting-list patients for a number of reasons. First, in victims of nonrecent sexual aggression, the symptoms are localized and have become chronic, and the probability of spontaneous recovery is scant (Kilpatrick & Calhoun, 1988). Second, it is difficult to keep patients motivated to return by subjecting them to repeated evaluations with no therapeutic intervention (Becker & Abel, 1981). Third, the mere repeated application of assessment measures is in itself therapeutic

and tends to facilitate a regression toward the mean (Atkeson, Calhoum, Resick, & Ellis, 1982). Fourth, the context in which this study was undertaken (the Psychological Counseling Centers for Women, which are social service agencies of municipal and state governments) made it impossible to keep victims on a waiting list or to have them go untreated for the purpose of constituting a control group.

To provide a control group, gradual self-exposure and cognitive restructuring was compared to relaxation, which, at least for victims of chronic PTSD, is not an adequate treatment; thus, it functions as a psychological placebo that from the standpoint of motivation serves as a guarantee that the patients remain in the study.

ASSESSMENT MEASURES

Interviews

A structured interview, based on the Scale of Severity of Posttraumatic Stress Disorder Symptoms (Echeburúa, Corral, Sarasua, Zubizarreta, & Sauca, 1994), took place in all the evaluations and served to assess the symptoms and the intensity of the PTSD according to the diagnostic criteria of the *DSM-III-R* (APA, 1987).

This scale, structured according to a Likert-type format of 0 to 3 according to the frequency and intensity of the symptoms, is made up of 17 items, 4 of which refer to reexperience symptoms, 7 to avoidance, and 6 to autonomic arousal. The range is from 0 to 51 on a global scale, from 0 to 12 on a subscale of reexperience, from 0 to 21 on a subscale of avoidance, and from 0 to 18 on a subscale of autonomic arousal.

Diagnosis of PTSD requires a minimum global score of 12, with a distribution of 2 points on the scale of reexperience (at least 1 symptom is required), 6 on the avoidance scale (3 symptoms are required), and 4 on the arousal scale (2 symptoms).

Evaluation of Other Associated Psychopathological Symptoms

In addition to measuring PTSD symptoms, other psychopathological indicators usually associated with sexual aggression were as-

essed: fears, anxiety, depression, and inadaptation to daily life. The nstruments used have proven to be very sensitive to therapeutic hange.

The Modified Fear Survey (MFS-III; Veronen & Kilpatrick, 1980), based on the Survey of Fears by Wolpe and Lang (1964), includes a specific subscale of 45 items of fears related to rape and was used in his study. It is structured according to a Likert-type format (from 1 to 5) as a function of the level of discomfort produced by each situation. The total range for this subscale is from 45 to 225. The test-retest reliability ranges from 0.60 to 0.74, with a 2.5-month interval. The internal consistency ranges from 0.81 to 0.94. From the point of view of discriminatory validity, this tool discriminates adequately between victims and nonvictims during a period of at least 3 years after the rape (Kilpatrick & Veronen, 1984).

The State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, & Lushene, 1970) consists of 20 items related to anxiety traits and another 20 related to anxiety states. The range of scores is from 0 to 50 on each scale. The test-retest reliability is 0.81 on the anxiety trait scale and, as is to be expected, quite a bit lower on the anxiety state scale (0.40). The internal consistency ranges from 0.83 to 0.92.

The anxiety trait scale was not included in this study as modification of a stable personality variable was not a goal for our brief therapeutic intervention.

The Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) consists of 21 items and measures the intensity of symptoms of depression. The range of scores is from 0 to 63. The reliability coefficient by the split-half method is 0.93. From the point of view of convergent validity, the correlation with clinical evaluation of depression ranges from 0.62 to 0.66.

The Scale of Adaptation (Echeburúa & Corral, 1987) reflects the degree to which sexual aggression affects different areas of daily life: work, social life, free time, relationship with one's partner, and relationship with one's family. This instrument, with six items that range from 1 to 6 on a Likert-type scale, also includes a global subscale that reflects the degree of global inadaptation to daily life. The range of the total scale is from 6 to 36 (the higher the score, the greater the degree of inadaptation).

In both modalities, presented in individual formats, emotional support is initially offered to facilitate the expression of negative feelings in the victim, develop an empathetic relationship, and finally, establish the bases for undergoing therapy.

Gradual self-exposure and cognitive restructuring. Exposure is focused on four fundamental aspects: (a) gradual recovery of activities the patient tends to avoid (mainly of social and pleasure-seeking natures) that are rewarding, (b) exposure to stimuli (e.g., erotic scenes and/or TV violence) that evoke responses of anxiety and of avoidance and are frequent in daily life (cf. Echeburúa & Corral, 1993), (c) exposure through imagination to nightmares or intrusive thoughts (if they exist) related to the traumatic occurrence, until habituation to such thoughts is produced (cf. Foa et al., 1993), and (d) in the case of sexual dysfunction, guided gradual exposure together with training in the specific abilities required (cf. Becker & Skinner, 1983).

As opposed to the study by Foa et al. (1991), exposure in this study is related to the stimuli patients tend to avoid and to intrusive thoughts more than to traumatic memories. In our point of view, what is less adaptive for almost all victims is not so much the defective processing of information as are the avoidance of feared stimuli and the presence of intrusive thoughts. It is for this reason that the exposure treatment focuses on these target behaviors.

Cognitive restructuring focuses first on explaining what the normal reactions toward sexual aggression are and the process of acquiring and maintaining fears (Foa, Steketee, & Rothbaum, 1989). Second, it focuses on modifying negative thoughts associated with the rape along with possible feelings of guilt about what the victim could have done but did not, substituting them for more adaptive types of thinking. Finally, the traumatic event is resituated in its proper dimension and the positive aspects of the new situation are stressed: the social support obtained, the discovery of coping strategies available for use in difficult situations, the possibilities that the future holds in the case of a young patient, and so on.

Progressive relaxation training. Following general indications about the psychological impact of sexual aggression, the victim receives training in progressive relaxation after Jacobson (according to the method proposed by Bernstein & Borkovec, 1973), with instructions to practice it at home two times a day: once before bedtime and at another time during the day when the patient desires (e.g., when she feels most anxious).

PROCEDURE

The program of evaluation and treatment, elaborated jointly by the directors of the study (the first and second authors of this article) and the therapist, was piloted with a sample of 5 patients before the study itself was initiated to verify the adequacy of the assessment measures and the therapeutic techniques.

Assessment

First, a selection interview was carried out. For ethical reasons, the patients excluded from the study also received therapy, but were not included in the protocol.

The assessment tools were administered to the patients at pretreatment and the content of the therapy was explained. Retesting in the context of a personal interview took place at posttreatment and at 1-, 3-, 6-, and 12-month follow-up.

Treatment

The therapist who carried out the evaluations and the treatment of all patients (the third author of this article) is a clinical psychologist with 5 years experience in cognitive/behavioral treatment of victims of sexual aggression. The general characteristics of the therapeutic procedure in each of the clinical modalities are set forth in Table 3.

TABLE 3
Characteristics of Therapeutic Modalities

Treatment	*Modality*	*Duration*	*Weekly Sessions*	*Total Hours*
Self-exposure and cognitive restructuring	Individual	6 weeks	1	7
Progressive muscular relaxation training	Individual	6 weeks	1	4.15

RESULTS

The total sample was made up of 20 participants, 10 of whom were assigned to each of the therapeutic modalities. The intensity of PTSD in the victims studied is high. In fact, the mean score on the Scale of Severity of Posttraumatic Stress Disorder Symptoms was 32.5 (*SD* = 4.97). From a psychophysiological perspective, the most commonly experienced symptoms were increased heart rate (90%), sweating (70%), and shortness of breath or the feeling of suffocation (65%); from a cognitive perspective, the sensation of unreality or strangeness regarding oneself (55%) and the fear of going crazy or losing control (50%).

The mean score obtained on the subscale of fears related to sexual aggression on the Survey of Fears was high (mean = 124.6; *SD* = 26.56). According to the frequencies analysis, the situations most feared are related to vulnerability to aggression and to fears of a sexual nature.

Table 4 shows the target behaviors most often selected for treatment by the patients in this study. In general, the goals are related, on the one hand, to decreasing both their irritability and their fears associated to aggression, and on the other hand, to the recovery of habitual and rewarding activities in their daily life.

Regarding the two subsamples (victims of sexual abuse in childhood and rape victims in adult life), there are no differences between them, either in intensity of PTSD or in the rest of the psychopathological variables (see Table 5).

TABLE 4

Target Behaviors Most Frequently Selected by the Victims

Target Behaviors	n	*Percentage*
To be less irritable	9	45%
To overcome my fear of social and/or sexual relationships with men	7	35%
To stop thinking about the aggression	7	35%
To improve my relationship with my partner	5	25%
To go alone at night	5	25%
To stop having nightmares	4	20%
To recover my sense of satisfaction in daily activities	4	20%
Not to feel distressed when I talk about the aggression	3	15%

TABLE 5

Means and Standard Deviations in the Global Scale of Posttraumatic Stress Disorder (PTSD) and in the Other Psychopathological Variables in the Two Types of Samples in the Pretreatment

	Group A[a] *(n = 9)*		*Group B*[b] *(n = 11)*		
	Mean	*(SD)*	*Mean*	*(SD)*	t
Global scale of PTSD (0 - 51)	33	(4.63)	32.18	(5.43)	0.35
Depression (BDI) (0-63)	23.38	(7.59)	20.45	(9.11)	0.90
Anxiety (STAI-S) (0-60)	44.55	(10.12)	46.75	(5.84)	0.60
Fears (MFS-III) (45-225)	125.88	(23.97)	123.54	(29.63)	0.19
Inadaptation (Scale ofAdaptation) (1 - 6)	5.33	(0.86)	4.72	(1.01)	1.42

NOTE: BDI = Beck Depression Inventory. MFS-III = Modified Fear Survey. STAI-S = State-Trait Anxiety Inventory.
a. Victims of sexual abuse in childhood.
b. Victims of rape in adulthood.

BETWEEN-GROUP ANALYSIS

The distribution of the sample follows a normal curve. The two groups were homogeneous before treatment regarding the subtypes of victims, demographic variables, and psychopathological measures.

TABLE 6
Rate of Success (absence of posttraumatic stress disorder) in the Therapeutic Modalities in Posttreatment and Follow-Ups

Assessment	*Group A*[a] *(n = 10)* n *(%)*	*Group B*[b] *(n = 10)* n *(%)*	χ^2
Posttreatment	9 (90%)	1 (10%)	12.80***
1 month	10 (100%)	2 (20%)	13.33***
3 months	10 (100%)	4 (40%)	8.57**
6 months	10 (100%)	4 (40%)	8.57**
12 months	10 (100%)	4 (40%)	8.57**

a. Self-exposure and cognitive reestructuring.
b. Progressive muscular relaxation training.
**$p < .01$. ***$p < .001$.

Notably, the groups were equivalent on the Scale of Severity of Posttraumatic Stress Disorder Symptoms (the central measure of the syndrome experienced; $t = 0.66$, n.s.). There were no dropouts or refusals of treatment.

In this study, we defined therapeutic success to be the disappearance of PTSD according to the diagnostic criteria of the *DSM-III-R*. From a categorical point of view, the self-exposure and cognitive restructuring group is clearly superior to the relaxation group at the end of treatment and in all follow-up periods (see Table 6).

A dimensional point of view (the degree of global intensity of PTSD symptoms) allows for more subtle analysis than the categorical analysis. There were significant differences between the groups at posttreatment and at each follow-up, to the benefit of the self-exposure and cognitive restructuring group, both on the global scale and on the specific subscales of reexperience, avoidance, and arousal (see Table 7).

Where psychopathological measures (fears, anxiety, depression, and inadaptation) are concerned, the self-exposure and cognitive restructuring group was superior to the relaxation group in all variables, except for in the anxiety variable in the 12-month follow-up. The differences in this variable in the previous assessments are not, however, significant (see Table 8).

TABLE 7

Means, Standard Deviations, and *t* Values in the Global Scale of Posttraumatic Stress Disorder (PTSD) and in the Subscales of Reexperience, Avoidance, and Autonomic Arousal

	Group A[a] (n = *10*)		*Group B*[b] (n = *10*)		
	Mean	(SD)	*Mean*	(SD)	t
Global scale of PTSD (0-51)					
Pretreatment	31.8	(4.89)	33.3	(5.21)	0.66 (n.s.)
Posttreatment	12.0	(5.54)	22.0	(7.61)	3.36**
1 month	7.6	(1.43)	20.4	(10.67)	3.76**
3 months	5.9	(1.85)	19.9	(12.11)	3.61**
6 months	5.0	(1.56)	18.5	(10.95)	3.86**
12 months	4.2	(2.70)	16.9	(9.30)	4.14***
Subscale of reexperience (0-12)					
Pretreatment	7.4	(2.06)	8	(1.82)	0.69 (n.s.)
Posttreatment	3	(1.33)	5.3	(2.00)	3.02**
1 month	2	(0.82)	4.5	(2.37)	3.15**
3 months	1.8	(0.92)	4.3	(2.16)	3.36**
6 months	1.4	(0.70)	4.4	(2.17)	4.29***
12 months	1.3	(0.82)	3.9	(1.91)	3.95***
Subscale of avoidance (0-21)					
Pretreatment	12.1	(3.11)	13.5	(1.51)	1.28 (n.s.)
Posttreatment	4.2	(2.48)	9.5	(3.17)	4.16***
1 month	2.9	(1.20)	8.6	(3.40)	4.99***
3 months	2.2	(0.92)	8.3	(5.03)	3.77**
6 months	1.8	(0.63)	7.2	(4.26)	3.96***
12 months	1.3	(0.95)	7.1	(4.31)	4.16***
Subscale of arousal (0-18)					
Pretreatment	11.6	(3.06)	11.7	(3.16)	0.07 (n.s.)
Posttreatment	4.8	(2.44)	8.4	(4.16)	2.36*
1 month	3.3	(1.70)	7.3	(5.23)	2.30*
3 months	2.5	(1.58)	7.3	(5.25)	2.77*
6 months	1.8	(1.13)	6.8	(5.20)	2.97**
12 months	1.5	(1.27)	5.9	(3.60)	3.64**

a. Self-exposure and cognitive restructuring.
b. Progressive muscular relaxation training.
*$p < 0.05$. **$p < .01$. ***$p < .001$.

WITHIN-GROUP ANALYSIS

Table 9 shows the *F* and *t* values of the various evaluation periods on repeated-measures ANOVAs related to the global severity of PTSD and to the other psychopathological measures of all the groups. The evolution of said measures over the entire treatment time is shown in Figure 1.

TABLE 8

Means, Standard Deviations, and *t* Values in the Psychopathological Variables

	Group A[a] (n = *10*)		*Group B*[b] (n = *10*)		
	Mean	(SD)	*Mean*	(SD)	t
Anxiety (STAI-S) (0-60)					
Pretreatment	46.7	(4.78)	44.8	(10.34)	0.53
Posttreatment	17.6	(9.45)	26.5	(15.31)	1.56
1 month	20.2	(8.27)	23.6	(15.21)	0.62
3 months	18.9	(10.67)	25	(17.16)	0.95
6 months	14.9	(8.70)	23.6	(16.92)	1.45
12 months	13.8	(4.71)	24	(14.89)	2.06
Depression (BDI) (0-63)					
Pretreatment	23.2	(6.89)	20.8	(9.96)	0.63
Posttreatment	6.2	(3.19)	10.8	(8.90)	1.54
1 month	7.4	(5.25)	9.3	(7.41)	0.66
3 months	6.7	(4.83)	11.3	(6.62)	1.77
6 months	5.7	(4.45)	12	(8.38)	2.10
12 months	4.4	(3.27)	12.4	(9.35)	2.55*
Fears (MFS-III) (45-225)					
Pretreatment	120.7	(15.84)	128.5	(34.71)	0.65
Posttreatment	97	(24.06)	101	(38.70)	0.28
1 month	98.3	(26.61)	100.4	(34.3)	0.15
3 months	89.8	(22.42)	99.6	(33.58)	0.77
6 months	87.6	(20.12)	103	(35.83)	1.18
12 months	76.7	(15.84)	102.8	(30.35)	2.41*
Inadaptation (Scale of Adaptation) (1-6)					
Pretreatment	5.2	(1.03)	4.8	(0.92)	0.91
Posttreatment	2.3	(1.16)	3.3	(1.64)	1.58
1 month	2.3	(0.82)	3.1	(1.45)	1.52
3 months	2.1	(1.10)	3.3	(1.89)	1.74
6 months	2	(0.82)	3.4	(1.71)	2.33*
12 months	1.5	(0.53)	3.2	(1.75)	2.94**

NOTE: BDI = Beck Depression Inventory. MFS-III = Modified Fear Survey. STAI-S = State-Trait Anxiety Inventory.

a. Self-exposure and cognitive reestructuring.

b. Progressive muscular relaxation training.

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

In the global severity of PTSD, a clear improvement can be seer between the pre- and posttreatment ratings in both therapeutic modalities. Nevertheless, in the self-exposure and cognitive restructuring group, this improvement continued to increase up to and including the 3-month follow-up ($t = 3.61$; $p < .01$), after which time the result

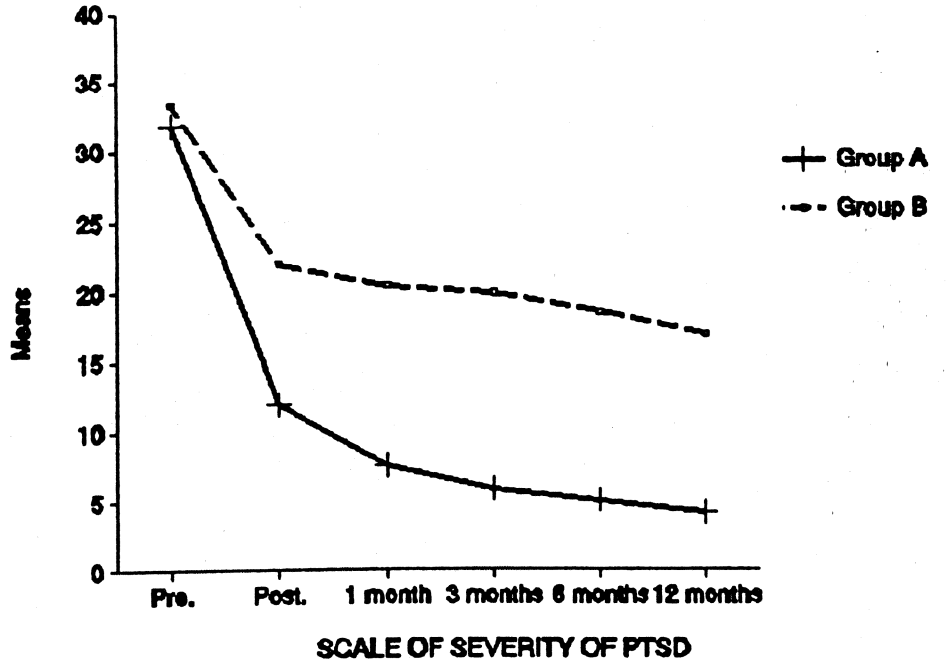
TABLE 9
Within-Group Comparisons (*F* and *t* values) in the Psychopathological Variables

	Group A[a] (n = *10*)		*Group B*[b] (n = *10*)	
	F	t	F	t
Posttraumatic stress disorder	137.17***		15.22***	
Pre-Post		13.93***		7.81***
Pre-12 months		18.40***		6.08***
Post-1 month		2.64*		0.81
Post-12 months		4.48**		2.40*
Anxiety (STAI-S)	37.84***		12.53***	
Pre-Post		8.80***		4.52***
Pre-12 months		13.34***		4.44*
Post-1 month		1.16		1.33
Post-12 months		1.29		0.85
Depression (BDI)	29.35***		7.01***	
Pre-Post		6.21***		3.87**
Pre-12 months		8.23***		2.75*
Post-1 month		0.66		1.28
Post-12 months		1.35		0.88
Fears (MFS-III)	18.35***		3.97**	
Pre-Post		4.51***		2.27*
Pre-12 months		7.56***		4.17**
Post-1 month		0.60		0.05
Post-12 months		3.94**		0.17
Inadaptation (Scale of Adaptation)	45.1***		6.79***	
Pre-Post		7.66***		3.73**
Pre-12 months		17.33***		4.31**
Post-1 month		0		1
Post-12 months		2.75*		0.23

NOTE: BDI = Beck Depression Inventory. MFS-III = Modified Fear Survey. STAI-S = State-Trait Anxiety Inventory.
a. Self-exposure and cognitive reestructuring.
b. Progressive muscular relaxation training.
*$p < .05$. **$p < .01$. ***$p < .001$.

tended to stabilize; in the relaxation group, on the other hand, the leve of improvement obtained by posttreatment was merely maintained ir the follow-ups.

Concerning psychopathological variables (fears, anxiety, depres sion, and inadaptation), the course of illness in both groups is simila to what is expected with PTSD. That is, there is improvement in botl



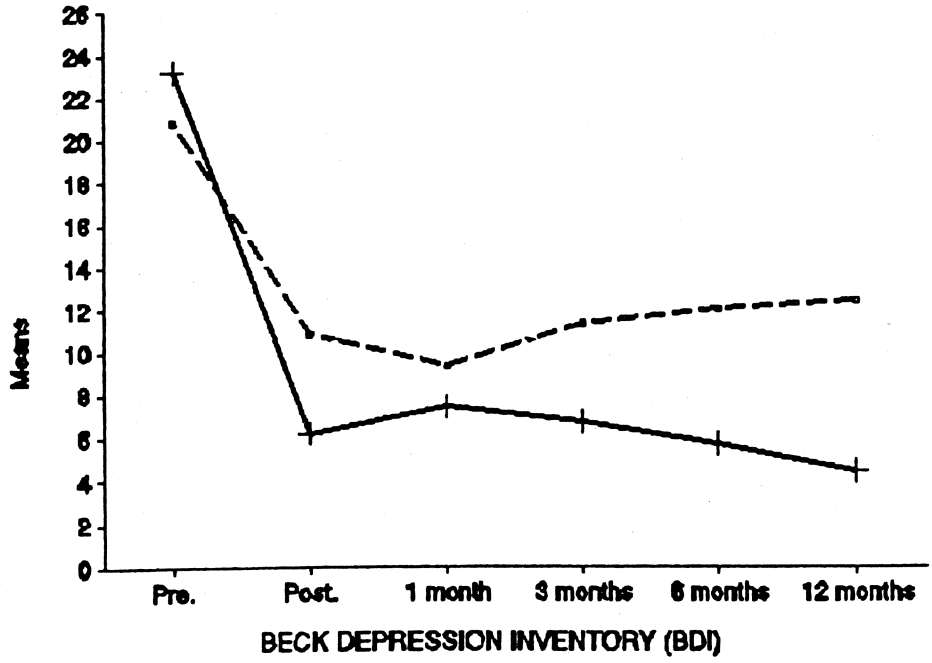
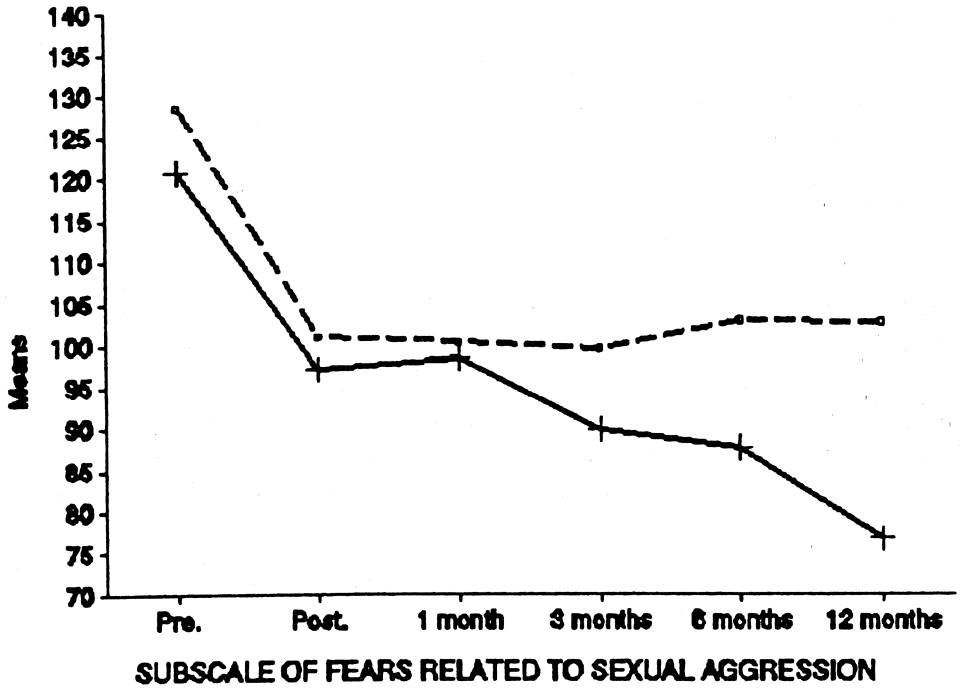


Figure 1. **Evolution of psychopathological variables.**



(Figure 1 continued)

groups in all the variables between pre- and posttreatment, which in the case of the self-exposure and cognitive restructuring group, continues to increase after posttreatment, whereas in the relaxation group, it is limited to maintaining the level reached at posttreatment.

DISCUSSION

The validity of this study is derived from the equivalence of the groups at pretreatment in all the assessment measures and from the consistency of the results obtained in the different variables measured, as well as from the homogeneity of the sample.

From a psychopathological perspective, the victims in this study suffer from chronic PTSD of a serious nature, with intense psychophysiological symptoms and with a great number of fears, especially

related to vulnerability to aggression and to sexual situations. There are no differences, however, between the victims of rape in adulthood and the adult victims of repeated childhood sexual abuse either in PTSD or in the rest of the variables studied.

The lack of differences between these two subtypes of patients may be understood within a PTSD framework. Although there are no known relationships between the characteristics of childhood sexual abuse and risk for PTSD, several factors seem to be involved in the development of PTSD: the chronic nature of the abuse, the relationship between abuser and abused, the reactions of others to disclosure, and the child's perception of the abuse and thoughts about herself. The persisting feelings and cognitive effects associated with these dynamics contribute to the intrusive thoughts and avoidance seen in adults who develop PTSD after sexual assault in childhood (Lipovsky, 1992).

As is shown by this study (the first to make this distinction between victims), there are two subtypes of patients, but their psychopathological profile is similar. For this reason, the application of the same clinical intervention program to both subsamples is justified. This finding is extremely important and needs further research.

This is the first study to evaluate PTSD in victims of nonrecent sexual aggression that employs a 1-year follow-up period. In other studies, indirect psychopathological measures for rape, such as anxiety, fears, or depression, are evaluated (for example, Resick et al., 1988; Veronen & Kilpatrick, 1983) or, in those studies that do evaluate PTSD, the follow-up periods are too short: from 3 months in the study by Foa et al. (1991) to 6 months in the study by Resick and Schnicke (1992). In our opinion, in a chronic behavioral disorder, the conclusions remain very limited if there is not a follow-up period of at least 12 months.

As far as the differential effectiveness of the therapeutic modalities is concerned, an improvement was observed in both groups. However, in the self-exposure and cognitive restructuring group, the improvement was clearly superior to the relaxation group both in posttreatment and in the different follow-ups of the main dependent variable. Regarding the rest of the psychopathological measures, this superiority began to appear incrementally in posttreatment and acquired statisti-

cal significance at the 12-month follow-up. Only in the variable of anxiety were there no differences between the two groups in any of the evaluation periods, perhaps because in this case, relaxation acted as an active treatment and not merely as a psychological placebo. On the other hand, the effectiveness of the treatment was independent of the type of patients treated (adult victims of childhood sexual abuse or adult victims of rape).

Regarding the therapeutic course, the profile in both groups was characterized by a clear improvement between pre- and posttreatment. Nonetheless, although in the relaxation group, this improvement was merely maintained in the follow-ups, in the self-exposure and cognitive restructuring group, the improvement continued up through the 3-month follow-up, after which point the results tended to stabilize.

Unlike the Foa et al. (1991) study, where nearly half of the victims scheduled for initial evaluations did not attend their appointments and 19% of those offered treatment declined, the degree of acceptance of treatment on the part of the victims in this research was high. In fact, there were no dropouts or refusals of treatment. Family and social support, which is usual in Spain due to societal values, may contribute to a better compliance with therapeutic demands. On the other hand, in other types of patients suffering from chronic PTSD (for example, war veterans), the rate of refusals and dropouts is usually high: 39% in the Albuquerque study (1992).

We may conclude that the cognitive-behavioral treatment tested has been proven effective, with a success rate of 100% by the 12-month follow-up, and that this effectiveness goes beyond the nonspecific effects of treatment. The effectiveness of relaxation, with a success rate of 10% in posttreatment and 40% in the 12-month follow-up, can be related to the nonspecific effects of therapy (particularly to the expression of negative feelings and the patient-therapist relationship) and to the continued use of this technique as a coping strategy in problems of anxiety in daily life.

However, there are still some unknowns to be resolved. If indeed the self-exposure and cognitive restructuring treatment has proven to be an effective intervention program, it has not been compared to other therapeutic modalities, such as stress inoculation training, systematic desensitization, or assertiveness training, all of which have achieved

some positive results with nonrecent victims. Only through such comparisons could a choice therapy be determined (cf. Echeburúa, Corral, Sarasua, & Zubizarreta, 1990; Foa et al., 1993). On the other hand, the specific weight of each of the components of this program is still undetermined. It would be advisable to replicate the results of this study with a large sample of victims and with more groups, thus affording answers to these queries.

Unfortunatley, it is difficult to make extensive generalizations of our results due to small sample size, but the sample is specific (with chronic PTSD) and homogenous. It should be noted that it has been very difficult and it has taken a long time (5 years) to select a homogeneous sample of patients who have undergone sexual assault suffering from a chronic PTSD and not being affected by other syndromes. Optimum statistical requirements are not always in accordance with clinical practice.

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