

# Assessment of the Efficacy of a Stress Management Program for Informal Caregivers of Dependent Older Adults

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**Purpose:** The majority of dependent older adults receive care at home from a family member. Caregiving places enormous demands on these caregivers and the negative consequences associated with caregiving are well documented. In this study we compared the effectiveness of two active interventions to a waiting-list control condition to improve emotional well-being in family caregivers. **Design and Methods:** We randomized distressed caregivers ( $N = 91$ ) of physically impaired older adults to one of three conditions: traditional weekly sessions, minimal-therapist-contact sessions, or a waiting-list control group. These manual-guided interventions took place over a 2-month period. **Results:** Caregivers in the traditional weekly sessions experienced the highest reduction in depressive and anxious symptoms. Compared with control participants, caregivers in the traditional weekly sessions had lower posttreatment levels of depression and anxiety. They had also lower levels of depression than did caregivers in the minimal-therapist-contact intervention. **Implications:** These data suggest that traditional weekly sessions may be effective in reducing caregiver anxiety and depression. They further suggest that traditional weekly sessions are better than no intervention, and they are also better than a minimal-therapist-contact intervention.

**Key Words:** Anxiety, Caregiving, Depression, Psychological treatment, Randomized clinical trial

The world's population is growing older and this is no doubt good news. Life expectancy is increasing, as is the number of older people. Most older people are able to live independently with minimal assistance, but an important part of the older population needs assistance and supervision by others to perform diverse daily life activities. Most of the time, these individuals are helped by family members (Schulz, Gallagher-Thompson, Haley, & Czaja, 2000; United Nations, 2002).

People who take on the task of caring for a dependent older person in their own home are exposed to a stressful situation that increases their risk of developing various physical problems, as well as important emotional alterations, especially anxiety and depression (Livingston, Manela, & Katona, 1996; Schulz, O'Brien, Bookwala, & Fleissner, 1995). Moreover, the mere passing of time does not seem to contribute to a reduction of these problems (Bodnar & Kiecolt-Glaser, 1994; Pot, Deeg, & van Dyck, 1997). Therefore, it seems likely that these caregivers would benefit from intervention programs that would help them to minimize the stress inherent to their situation and the distress it involves.

A wide variety of interventions have been designed to assist caregivers: (a) formal support through community respite services (e.g., day centers, home care services, and temporary sojourns at residences); (b) educational programs in which information about the older adult's illness is provided and skills to deal with care-related problems are taught; (c) mutual help groups that provide caregivers with a meeting place where they feel understood, listened to, and supported; and (d) psychotherapeutic interventions focusing on caregivers' adaptation to the situation and on the reduction of their emotional distress (Brodsky, Green, & Koschera, 2003; Knight, Lutzky, & Macofsky-Urban, 1993; Sörensen, Pinquart, & Duberstein, 2002).

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Psychotherapeutic interventions have been seen as particularly promising when the goal of treatment is to reduce the caregiver's emotional distress, although the effects are sometimes small or at best moderate (Acton & Kang, 2001; Brodaty et al., 2003; Knight et al., 1993; Schulz et al., 2000; Sörensen et al., 2002; Thompson & Briggs, 2000; Vernooij-Dassen & Rikkert, 2004; Whitlatch, Zarit, & von Eye, 1991). One reason for the small effect of treatment is that, in some studies, caregivers were recruited for samples without regard to whether they had the problems for which the treatment was intended. Specifically, many treatments have sought to reduce depression and other symptoms of emotional distress, yet caregivers were recruited into the samples without regard to their level of emotional distress at baseline. A significant proportion of these samples could not show improvement, because their scores on the dependent measures were already at or near the floor or ceiling. The result would be a reduced effect size for the whole sample, failure to reach statistical significance, or both (Knight et al.).

Another problem is that caregivers often feel stretched to the limit, and they may not have time and energy even for an individualized weekly session, which leads to high rates of rejection of treatment, absences from sessions, and dropouts before completion of the treatment (Monahan, Greene, & Coleman, 1992). One alternative approach that has been successfully used for a variety of other health problems (e.g., hypertension, cephalas, and panic) is minimal-therapist-contact (MTC) interventions, which are based on the use of manuals, audiovisual material, phone contacts, and brief session meetings. This type of intervention requires less time and effort from clients, which makes it especially relevant for people already laboring under a chronic burden (Rowan & Storey, 2002). Nevertheless, despite their potential, MTC programs have rarely been used with caregivers.

Our purpose in present study is to assess the efficacy of a psychological intervention program for stress management that is adapted to the needs and specific circumstances of informal caregivers of dependent older adults. Moreover, the study involves a comparison of the application of the program in a standard traditional weekly session (traditional) format with its application in a MTC format, which may be especially appropriate for caregivers because it places less time pressure on them. The content of the program is drawn from prior treatments (López & Crespo, 2007) that have shown to be the most effective for improving the emotional situation of caregivers who are assisting a dependent older relative, as well as previous findings about the factors related to their emotional status.

## **Design and Methods**

### *Participants*

We recruited a sample of caregivers of dependent relatives from organizations and institutions in

Madrid (Spain) that offered programs for older people. Eligibility criteria included the following: being 18 years of age or older; caring for a dependent person aged 60 or older who had a score equal to or exceeding 1 on the Katz Index of Activities of Daily Living (Katz, Ford, Moskowitz, Jackson, & Jaffe, 1963); living at the same residence as the care recipient; being the sole or main person responsible for the older person's care; having provided care for a minimum of 6 months; and receiving no other current treatment. All caregivers also had to have evidence of current emotional distress, namely scores over 9 on the Beck Depression Inventory (BDI; Beck, Rush, Shaw, & Emery, 1979) or scores over 7 on the Anxiety subscale of the Hospital Anxiety and Depression Scale (HAD-A; Zigmond & Snaith, 1983). We did this because the treatment was designed to lower symptoms of emotional distress; the inclusion of people who did not have these symptoms would reduce the likelihood of demonstrating improvement, and it could even lead to worsening of symptoms in those individuals who were receiving treatment for problems they did not have.

We assessed a total of 123 caregivers for participation in the study. Fourteen (11%) did not meet the inclusion criteria, and 18 (15%) declined to participate for various reasons. The final sample was made up of 91 caregivers. Participation in the treatment was voluntary and was always carried out after we informed the caregiver of the goal of the study and guaranteed the confidentiality of the information provided.

### *Design and Variables*

We used a multigroup (three-group) experimental design, with repeated pretreatment and posttreatment measures. The independent variable was the psychological intervention program, with three levels: program administered in a traditional format, program administered in an MTC format, and a waiting-list control group.

There were two levels of randomization. In the first one, we assigned the professionals (social workers, nurses, doctors, and psychologists) who would provide treatment to the MTC group or the traditional group. Professionals who were assigned to the traditional group could offer only this treatment format to the caregivers, and, likewise, professionals who were assigned to the MTC group could offer only this kind of intervention. In a second randomization, we assigned the caregivers who had agreed to participate in the study to one of the immediate treatment groups (traditional or MTC) or to the waiting-list group. Suicidal ideation was an exclusion criterion for caregivers randomly assigned to the MTC group. Although this exclusion criterion may introduce a selection bias, our main concern was the safety of acutely suicidal individuals during the MTC period, as in other reduced-therapist-contact

studies (Cuijpers, 1997; Jamison & Scogin, 1995). As a result of these randomizations, we assigned 39 caregivers to the waiting-list group, 24 to the traditional group, and 28 to the MTC group.

We assessed the effects of treatment for the following dependent variables: anxiety symptoms, depressive symptoms, burden, and maladaptation. The two main dependent measures were anxiety and depression, which were targeted in the treatment. We also included other measures relevant to caregivers' distress to determine generalization of treatment to other areas.

### Measures

We administered the assessment battery before treatment and we readministered it at posttreatment. It included the following instruments.

*Sociodemographic Information and History of Caregiving.*—This history included information about the caregiver's characteristics (age, gender, marital status, work situation, and relation to family associations), the care recipient's characteristics (age, gender, and diagnoses received), and their relationship (kinship). We also obtained information about the caregiving situation (duration of the caregiver's role, time dedicated to caregiving, type of caregiver—sole vs main caregiver—informal help received, and use of formal help services).

*The Katz Index of Activities of Daily Living.*—We used the Katz index (Katz et al., 1963) to measure the patient's disability in six basic self-care activities (e.g., bathing, dressing) as a measure of functional impairment. Limitation in one or two items indicates moderate dependency, whereas limitation in three or more items is considered severe dependency. The internal consistency of the Spanish version is satisfactory, with Cronbach's alpha at  $\alpha = 0.91$  (Izal, Montorio, Márquez, & Losada, 2005).

*HAD-A.*—We assessed anxiety symptoms by using the Anxiety subscale of the HAD-A (Zigmond & Snaith, 1983). According to the authors of the scale, scores between 0 and 7 indicate the absence of anxiety symptomatology, scores between 8 and 10 are doubtful cases, and scores between 11 and 21 indicate the presence of anxiety symptomatology. In a recent review of 747 studies that used the HAD-A (Bjelland, Dahl, Haug, & Neckelmann, 2002), researchers verified that at a cutoff point of 8, the sensitivity and specificity of the subscale is 80%. The mean alpha across these studies was  $\alpha = 0.83$ . Although the scale targets hospitalized patients, it can also be used in community samples (Bjelland et al.).

*BDI.*—We assessed depressive symptoms by using the BDI (Beck et al., 1979), which identifies the

global level of depression and the changes occurring over time. The published BDI manual (Beck & Steer, 1993) proposes a cutoff point of 17 to 18 to differentiate minimum or slight levels of depression from moderate or severe levels. Thus, scores over 17 are indicators of a possible depressive disorder. Administered to caregivers, the BDI has shown a sensitivity of 70% and a specificity of 79% at a cutoff point of 9 to 10 (slight depression; see Gallagher, Rose, Rivera, Lovett, & Thompson, 1989). In studies carried out with the Spanish version of the inventory (Sanz & Vázquez, 1998), test-retest reliability ranged between .60 and .72, whereas the internal consistency was .83 with subclinical samples and .90 with patients presenting diverse disorders.

*The Zarit Burden Interview.*—This interview (ZBI; Zarit, Reeve, & Bach-Peterson, 1980) evaluates feelings of burden specific to an individual's role as caregiver. With Spanish samples, Martín and colleagues (1996) found a specificity of 84.4% and a sensitivity of 85.1% at a cutoff point of 46 to 47, and of 93.3% (both for specificity and for sensitivity) at a cutoff point of 55 to 56. These cutoff scores identify family caregivers at risk for psychological distress and in need of further assessment and intervention. Test-retest reliability was .86, and Cronbach's alpha reached the value of  $\alpha = 0.91$ .

*The Maladaptation Scale.*—This scale (MS; in Spanish, Escala de Inadaptación; see Echebura, Corral, & Fernández-Montalvo, 2000) assesses the extent to which people's current problems affect various areas of their daily lives: work, social life, leisure (e.g., travels, sport practice, and dinners), couple relations, and family life. It also has a total score that reflects the degree of global maladaptation to daily life. The criteria sets for most mental disorders include a clinical significance criterion (usually worded as "causes clinically significant distress or impairment in social, occupational, or other important areas of functioning"), and the MS tries to assess such distress or impairment caused by caregivers' problems. Maladaptation represents the level of maladjustment in everyday life, that is, the environmental and psychosocial impact. Caregivers have to cope with everyday difficulties and the MS reflects the impact of these problems in important areas of daily life. The scale has been validated with a Spanish population. It has an internal consistency index (Cronbach's alpha) of  $\alpha = 0.94$ , and a specificity of 86% and sensitivity of 100% at a cutoff point of 12, which differentiates between adaptation and maladaptation.

### Procedure

On the basis of the specific needs of caregivers that have been identified in a prior work (Crespo,

López, & Zarit, 2005), and through a review of prior treatment studies, we determined the characteristics of the treatment program. We also consulted experts who were knowledgeable about stressful situations and their treatment or specifically about caregivers of older dependent adults. Once we had designed the treatment program and prepared the materials and instruments, we carried out a pilot study ( $n = 4$ ; 2 in the traditional format and 2 in the MTC format). Once we analyzed the treatment implementation and process in the pilot study, we prepared a revised program.

Lawton, Moos, Kleban, Glicksman, and Rovine (1991) and Pearlin, Mullan, Semple, and Skaff (1990) developed particularly helpful and extensively used stress process models of caregiving that propose some series of interrelated conditions. From this perspective, primary stressors, such as the number of activities for which the impaired person is dependent on the caregiver, create the conditions under which emotional distress may occur, but the extent to which caregivers experience distress depends on their appraisal style and the resources they may have to assist in managing stressors. In other words, the type of stressors may matter less than how caregivers react to them and the resources they have to modulate their impact. Specifically, our prior work (Crespo et al., 2005) showed that low self-esteem, high subjective burden, frequent use of emotion-focused coping strategies, and low satisfaction about social support were the more important predictors of worse emotional state.

According to these data, we designed the treatment to consist of a multicomponent cognitive-behavioral program, called "Workshop for Caregivers: How to Maintain Your Well-Being." It includes the following elements: introduction to the ABC Model, that is, a didactic presentation of relationships among activating events (A), beliefs (B), and consequences (C), and cognitive restructuring to change burden appraisal; training in assertive communication skills to improve social support; problem-solving training in order to increase problem-focused coping that conversely would mean a decrease in the use of emotion-focused coping; and techniques to improve self-esteem. In addition, the program introduces exercises to control arousal by diaphragmatic breathing and planning to increase pleasant activities. In order to ensure the homogeneity of the interventions, we produced the materials for the therapist and a workbook for the caregivers.

In all cases, we had the intervention carried out individually during 8 weeks. The traditional format consisted of eight 60-minute weekly sessions in which the caregivers were in direct contact with the therapist. Between sessions, the caregivers received written material that outlined the material from the session, as well as exercises to be done as homework. During the first session, caregivers were evaluated and received some information about

usual caregiving emotional problems and about the intervention format. The other sessions started with a brief "check in" and review of the homework (5 minutes), followed by a new element (a new cognitive-behavioral skill) to discuss and practice, and ended with 5 minutes of diaphragmatic breathing. Therefore, diaphragmatic breathing was practiced during six sessions (Sessions 2–7), but increased pleasant activities were developed during three sessions (Sessions 3–5), the ABC Model and cognitive restructuring during three sessions (Sessions 5–7), assertive communication in two sessions (Sessions 6 and 7), problem-solving training in one session (Session 4), and techniques to improve self-esteem in one session (Session 7).

In the MTC format, there were three 90-minute sessions with an interval of 4 weeks between sessions. The three sessions with the therapist included evaluation (Sessions 1 and 3), exercises of diaphragmatic breathing (Session 1), introduction to the ABC Model, and assertive communication skills (Session 2). During the intervals between sessions, the caregivers were requested to go over the strategies addressed with the therapist and work on new ones (i.e., cognitive restructuring techniques, techniques to increase pleasant activities; problem-solving training; and techniques to improve self-esteem) by using the psychotherapeutic material. For each week between sessions, several pages of reading materials were provided. There were also three phone contacts of about 10 minutes before the third, fourth, and seventh week. The schedule of this format is almost the same as the previous one (i.e., caregivers had to increase pleasant activities in 3 weeks, they had to improve self-esteem in 1 week, etc.), except for the diaphragmatic breathing training that started in the first week because it is important to practice this skill in session.

Thus, both formats had exactly the same cognitive-behavioral skills and similar schedules, but the traditional format had more contacts with the therapist.

The participants assigned to the waiting-list control group were evaluated on two occasions with a 2-month interval, without receiving any kind of contact or help between assessments. After the second assessment, they were offered the chance to join one of the two intervention formats. However, the analyses presented herein do not include the data of these individuals.

We monitored caregivers' performance of trained skills by counting the number of completed homework sheets returned by each caregiver over the duration of the study.

### *Data Analysis*

As long as they did not exceed 15% of the total data of each test, we replaced missing data with data obtained from the same participants in the



pretreatment measurement. We used chi-square analyses and analyses of variance (ANOVAs) for independent measures to verify the homogeneity of the groups. We analyzed changes between pretest and post-test measurements by means of repeated measures ANOVAs in each of the groups. To determine posttreatment differences between the two experimental groups and with the second assessment of the control group, we used a multivariate analysis of variance with treatment condition as the independent variable and the HAD-A, BDI, ZBI, and MS posttreatment scores as dependent measures. We used Pillai's criterion to evaluate the significance of main effects. We performed post hoc comparisons to test for differences between pairs of means according to the Games-Howell method, which is robust in situations with unequal sample sizes and suspected heterogeneity of variance (Games & Howell, 1976).

Lastly, regarding the clinical significance of the results, we performed McNemar tests to determine the changes from pretest to post-test in the percentages of caregivers with scores over the cutoff point for the different variables in the two experimental groups, and we calculated the effect size.

We replaced missing data with data obtained from the same participants in the pretreatment measurement. This could bias the results, but in fact we replaced data only if missing data did not exceed 15% of the total data of each test. We did not include caregivers in our analyses if they had more than this percentage of missing data. Thus, we did not include 6.6% of the total caregivers on ZBI analyses (6 caregivers from the control group) and 17.6% on MS analyses (16 caregivers from the control group). We replaced less than 0.0005% of the data with previous measurements.

## Results

### *Adherence to Treatment*

All the caregivers completed the treatment, which means there was a null dropout rate. However, after concluding the waiting-list time, 3 caregivers refused to join the group to which they had been assigned and 5 could not be treated according to the intervention protocol for timing difficulties.

Compliance with task performance can be considered average, although we noted a significantly higher proportion of people who carried out their tasks (range 0–18) among the caregivers who participated in the traditional format ( $M = 12.5$ ,  $SD = 4.47$ ) than among those in the MTC format ( $M = 6.79$ ,  $SD = 5.17$ ),  $F(1, 50) = 17.851$ ,  $p < .001$ .

### *Sample Characteristics and Group Homogeneity*

As one can observe in Table 1, there was a predominance of women among the participants;

**Table 1. Characteristics of Caregivers, Care Recipients, Caregiving Situation, and Emotional Status and Experimental Group Homogeneity**

Characteristics	$n = 91$	$F(df)/\chi^2(df)$
Caregiver age in years: $M$ ( $SD$ )	53.9 (11.6)	$F(2, 88) = 0.446$
Caregiver gender (% women)	86.8	$\chi^2(2) = 5.931$
Caregiver marital status (%)		
Single	16.5	
Married	72.5	$\chi^2(6) = 9.430$
Widowed	2.2	
Divorced	8.8	
Caregiver job (% active)	49.5	$\chi^2(2) = 0.015$
Member of Alzheimer's Association (%)	40.7	$\chi^2(2) = 4.680$
Kinship with patient (%)		
Spouse	33.0	
Child	60.4	$\chi^2(4) = 2.472$
Other	6.6	
Care-recipient age in years: $M$ ( $SD$ )	77.3 (8.4)	$F(2, 88) = 1.196$
Care-recipient gender (% women)	69.2	$\chi^2(2) = 1.017$
Care-recipient diagnosis (% dementia)	80.2	$\chi^2(2) = 2.130$
Care-recipient functional status: $M$ ( $SD$ )	3.6 (1.7)	$F(2, 88) = 0.948$
Months providing care: $M$ ( $SD$ )	64.1 (75.2)	$F(2, 88) = 0.293$
Weekly hours providing care: $M$ ( $SD$ )	98.1 (59.4)	$F(2, 88) = 1.870$
Type of caregiver (%)		
Sole	18.7	$\chi^2(2) = 3.189$
Main	81.3	
Informal help received (%)	69.2	$\chi^2(2) = 0.138$
Formal services utilization (%)	48.4	$\chi^2(2) = 4.461$
Anxiety: $M$ ( $SD$ )	10.8 (3.9)	$F(2, 88) = 0.463$
Depression: $M$ ( $SD$ )	14.6 (8.3)	$F(2, 88) = 2.106$
Burden: $M$ ( $SD$ )	64.2 (13.8)	$F(2, 79) = 0.745$
Maladaptation: $M$ ( $SD$ )	16.8 (6.6)	$F(2, 72) = 0.318$

*Notes:* Care-recipient functional status refers to the number of impairments in activities of daily living.  $SD$  = standard deviation.

most were middle aged, and most of them were married. Nearly one half of the caregivers worked outside the home; several of them, an important percentage (40.7%), were members of an Alzheimer's association. The care recipient's children were predominant among the caregivers (60.4%). Most of the care recipients were women; their mean age was around 77 years old, they presented with a diagnosis of dementia, and they needed assistance for an average of more than three daily life activities. Concerning the history and characteristics of the support provided, the caregivers had been taking care of the relative for an average of more than 5 years. They spent a weekly average of almost 100 hours attending their relatives, which works out to more than twice the customary working day. Most

Table 2. Results of Treatment Efficacy (in the Two Formats) Compared With a Control Group

Variables	CG ( <i>n</i> = 39)		TT ( <i>n</i> = 24)		MTC ( <i>n</i> = 28)		Posttreatment intergroup differences	Significant post hoc comparisons
	Before	After	Before	After	Before	After	<i>F</i> (2, 88)	
Anxiety	10.92 (4.21)	11.26 (3.92)	11.21 (3.45)	6.96*** (2.80)	10.21 (3.84)	8.93* (4.20)	10.05***	CG > TT
Depression	14.23 (8.76)	15.69 (9.16)	17.29 (8.19)	6.62*** (5.74)	12.68 (7.31)	11.46 (8.25)	9.39***	CG > TT MCT > TT
Burden	61.87 (14.84)	62.07 (15.43)	66.37 (12.53)	59.50* (13.38)	64.79 (13.86)	61.28* (14.33)	0.48	—
Maladaptation	17.35 (7.40)	16.96 (7.09)	17.17 (6.23)	12.58* (6.87)	16.00 (6.31)	14.43 (7.26)	2.91	—

Notes: Variable ranges are as follows: anxiety, 0–21; depression, 0–63; burden, 28–112; and maladaptation, 0–30. Means and standard deviations are shown in parentheses. CG = waiting-list control group; TT = traditional treatment group; MTC = minimal-therapist-contact group. For the after-treatment columns, statistical significance is based on the comparison between pretreatment and posttreatment scores.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

of them were the main caregivers, and they received some sort of informal help (69.2%). The percentage of those who used formal services was somewhat lower (48.4%).

In regard to their emotional status, as required by the inclusion criteria, all the participants presented at least a minimal problem of anxiety or depression. As one can see in Table 1, the caregivers' mean anxiety was higher than the cutoff point that indicates the presence of possible anxiety problems, and the mean depression score was moderately high. The mean score in feelings of burden was also over the cutoff point that indicates problems in this area. Overall, these problems affect caregivers' functioning, as the levels of maladaptation were high.

In order to assess the homogeneity of the three groups, we analyzed group differences in sociodemographic variables, in care characteristics, and in emotional problems. None of these differences reached statistical significance.

### Treatment Efficacy

As one can see in Table 2, the changes in the control group did not reach significance in any variable, which indicates that the symptoms did not improve with the mere passing of time. In the experimental groups, there was a tendency toward an improvement of symptoms after treatment. In the case of the traditional treatment, there was a significant reduction in levels of anxiety,  $F(1, 23) = 37.134$ ,  $p < .001$ ; depression,  $F(1, 23) = 25.129$ ,  $p < .001$ ; burden,  $F(1, 23) = 7.226$ ,  $p < .05$ ; and maladaptation,  $F(1, 23) = 7.560$ ,  $p < .05$ . The MTC format treatment achieved statistically significant decreases in anxiety,  $F(1, 27) = 4.344$ ,  $p < .05$ ; and burden,  $F(1, 27) = 4.358$ ,  $p < .05$ . However, we observed no significant differences between pre-

treatment and posttreatment measures in depression and level of maladaptation in this group.

The multivariate analysis of variance comparing the three conditions on the anxiety, depression, burden, and maladaptation measure was significant,  $F(8, 172) = 2.899$ ,  $p < .01$ , and we found significant univariate effects for anxiety and depression. The comparison of the posttreatment evaluations of the two intervention groups and the control group's second assessment revealed statistically significant differences for anxiety and depression. The burden and maladaptation scores were lower in the treatment groups than in the control group, but without reaching statistical significance.

Our post hoc analyses revealed that the anxiety scores of the control group were significantly higher than those of the traditional treatment group (Games–Howell = 4.298,  $p < .001$ ). We observed the same pattern in the case of depression (Games–Howell = 9.067,  $p < .001$ ). Moreover, the MTC group's scores in depression were significantly higher than those of the traditional treatment group (Games–Howell = 4.8393,  $p < .05$ ).

### Clinical Significance

From the clinical point of view, as one can observe in Table 3, there were important improvements in emotional status, with significant reductions in the percentages of possible problems of anxiety and depression in the traditional format. In the remaining variables (burden and maladaptation), there was also a reduction of possible problems after treatment, in both formats, although without reaching statistical significance. The only exception was depression in the MTC group, for which these possible problems were stable during the study period.

In order to quantify the clinical impact of the intervention, we determined the effect size for each

**Table 3. Clinical Significance of Treatment Effects (in the Two Formats): Percentages of Participants Who Exceed the Cutoff Point of Each Test**

Variables	Traditional Treatment ( <i>n</i> = 24)		MTC Treatment ( <i>n</i> = 28)	
	Before	After	Before	After
Anxiety	54.2	8.3***	57.1	35.7
Depression	45.8	4.2**	25.0	25.0
Burden	87.5	75.0	89.3	82.1
Maladaptation	70.8	62.5	67.9	60.7

Notes: MTC = minimal-therapist-contact. Variable cutoffs are as follows: anxiety, 10 to 11; depression, 17 to 18; burden, 46 to 47; and maladaptation, 12 to 13.

\**p* < .05; \*\**p* < .01; \*\*\**p* < .001.

dependent variable (see Table 4), classifying it according to the values proposed in 1992 by Faul and Erdfelder (i.e., small < 0.5; medium > 0.5 and < 0.8; and large > 0.8). We found large effect sizes in the traditional treatment program for anxiety and depression. The effect sizes were medium for the levels of maladaptation and burden. In contrast, the MTC intervention had small effect sizes.

## Discussion

Caregivers of frail older relatives comprise a large and growing segment of society that regularly endures significant stress and that could benefit from interventions that reduce the emotional distress that many caregivers experience when carrying out their role. In this study we attempt to contribute to the analysis of the efficacy of a psychotherapeutic stress management program for caregivers. To our knowledge, this study is the first attempt to apply a psychotherapeutic program targeting caregivers, which includes an MTC format that, in addition to phone contacts and homework material, also involved regular meetings with the therapist. This kind of format may be especially appropriate for caregivers, who are hard put to find time to attend a therapy, which frequently leads to high dropout rates (Sørensen et al., 2002).

From the methodological point of view, this work used restrictive inclusion criteria in a broad sample of caregivers. The study meets most of the requirements of research on treatment efficacy (Nathan, Stuart, & Dolan, 2000; Seligman, 1995): (a) random assignment of patients to the different experimental groups; (b) in-depth assessment; (c) exclusion of patients with multiple disorders; (d) clearly described treatments with set protocols; and (e) the use of a fixed number of sessions. The study also included the clinical significance of the results, incorporating variables related with caregivers' daily functioning, such as the level of maladaptation.

**Table 4. Posttreatment Effect Size**

Variables	TT ( <i>n</i> = 24)	MTC ( <i>n</i> = 28)
Anxiety	1.37	0.32
Depression	1.51	0.15
Burden	0.53	0.25
Maladaptation	0.70	0.23

Note: TT = Traditional Treatment; MTC = minimal-therapist-contact (treatment).

Although the study used a convenience sample, participants have demographic characteristics similar to representative samples of caregivers in Spain. The typical caregivers are middle-aged, married women who do not work outside the home, and who are either the daughters or the wives of the care recipient (IMSERSO, 2005). The present sample can be considered to be reasonably representative of its reference population. Perhaps the main divergence with regard to this is the high percentage of caregivers in the sample who belonged to associations, which is common to most studies in this field, and the high percentage of caregivers of individuals with dementia, which is also typical in studies of caregivers (Brodsky et al., 2003; Knight et al., 1993; Sørensen et al., 2002). This may be related to the strategy used to contact the individuals in the sample, but it may also indicate a higher predisposition in this type of caregiver to participate in programs and studies such as the one presented herein. In fact, most of the studies carried out to date have involved caregivers of individuals with dementia and referentially linked with Alzheimer's associations (Brodsky et al.; Knight et al.; Sørensen et al.).

The results obtained reveal that the popular saying "time cures everything" does not seem to be true in the case of informal caregivers of older dependent adults. Longitudinal studies show that the levels of anxiety and depression are high and stable in most of the participants over time (Alspaugh, Stephens, Townsend, Zarit, & Greene, 1999; Bodnar & Kiecolt-Glaser, 1994; Pot et al., 1997). In this study, caregivers' emotional problems (i.e., anxiety, depression, and burden) are maintained and in some instances worsen in the waiting-list condition.

Along the lines of previous investigations (Brodsky et al., 2003; Sørensen et al., 2002), in our investigation the people receiving a multimodal stress management program had a greater reduction in anxiety and depressive symptoms than did the people in the untreated control group. Treatment was also associated with reductions in everyday functional impairment (i.e., maladaptation) experienced by caregivers. Although it is important to modify caregivers' appraisal of burden, it is not surprising that the changes in burden achieved by the interventions were not remarkable: A medium effect size of the reductions was achieved in the traditional group and

a small one in the MTC group. This measure is not very sensitive to change, as has been noted in several meta-analyses of interventions with caregivers (Acton & Kang, 2001; Brodaty et al.; Knight et al., 1993; Sörensen et al.).

It is noteworthy that the magnitude of most of the effects of the changes achieved is large, especially in anxiety and depression, which contrasts with the modest effects reached by most of the interventions with caregivers (Sörensen et al., 2002). As caring for older dependent adults is a chronic stressor that is maintained during and after the intervention, it is not surprising that caregivers' distress is difficult to modify. In these circumstances, it is sometimes considered a good treatment result when caregivers maintain their prior levels of distress (i.e., just preventing them from increasing), which makes the substantial improvements obtained here especially relevant.

When comparing the two intervention formats, one can observe that the traditional format reduces the levels of depression more than the MTC format does. The anxiety, burden, and maladaptation levels were better at posttreatment in the traditional format than in the MTC format, although the differences were not significant in any case. The differences in depression levels can be explained by various factors. First, in the traditional format, caregivers have more contact with the therapist, which may affect them positively, as the therapist is an important source of support for them (Chang, Nitta, Carter, & Markham, 2004). The social contact in more frequent sessions probably plays an important role in reducing the levels of depression. Second, continued contact with the caregivers in this format may lead to their becoming more involved in the treatment. One can see this in the differences observed between the two intervention formats in carrying out homework assignments. In fact, the rate of carrying out homework in the MTC group can be considered low. One could say that, in this group, there was some "treatment dropout without leaving treatment." That is, the group members simply attended the sessions in order to ventilate their feelings, to consult their problems . . . or because they had promised to participate and thought it was their duty to go.

Because the tasks for the two groups were essentially the same, it is possible that the support gained from discussing the caregiving situation with the therapist led to positive results rather than the intervention program. In other words, it could be that the emotional support derived from the traditional format, rather than the stress management skills training, helped the caregivers. Nevertheless, recent meta-analyses of caregiver interventions (Acton & Kang, 2001; Sörensen et al., 2002) determine that supportive interventions (focused on building rapport among participants and creating a space in which to discuss problems, successes, and feelings

regarding caregiving) have no effect on emotional outcome variables. Those reviews indicate that supportive aspects of intervention are important but not sufficient to explain intervention effectiveness. Intervention characteristics, such as the length of caregiver involvement, appear to be important. Presumably, if levels in carrying out homework assignments were similar in both formats, then the amount of emotional support derived from the therapist would be crucial, but caregivers in the MTC are less involved in stress management skills training than are the caregivers in the traditional group. Caregivers in the traditional format are thus more likely to benefit from the intervention. They had not only more emotional support from the therapist but also more skills practice to manage their problems.

The proposal of an eight-session stress management program, with a format of one to one or individual meetings with the caregiver combined with more or less extensive homework material, is a flexible intervention and is adapted to the particular characteristics of this population group. It is a brief treatment that can be carried out without much difficulty in various sociohealth contexts that are reference points for caregivers. Despite the concern that busy caregivers might prefer a less demanding treatment format, such as the MTC, we found that the traditional format was slightly more beneficial. This flexibility, together with the individual nature of the treatment, may have prevented dropouts, which is surprising, as in much of the research with caregivers, the percentages of dropouts are usually high (Hepburn, Tornatore, & Ostwald, 2001; Ostwald, Hepburn, Caron, Burns, & Mantell, 1999).

Longer lasting interventions, however, may not be so well accepted. In fact, when the interventions were postponed because the caregiver was assigned to the waiting-list control group, many problems came up, subsequently leading some of the caregivers to reject the intervention ( $n = 3$ ) or to object to application of the treatment according to the designed protocol ( $n = 5$ ).

It is worth noting that the MTC format could be a good therapeutic option for those caregivers with the highest demands on their time. Although it appears to be not as beneficial, it did offer some benefit. Moreover MTC could be improved in future applications by increasing the supervision of the implementation (e.g., more frequent phone calls between sessions), providing other ways of contact (e.g., Internet), and simplifying the written material and homework.

Several limitations should be taken into account when one is interpreting the results of this study. A first limitation is the fact that the assessments were not performed by blind interviewers. The use of a blind interviewer would prevent possible biases by the interviewer, who was aware of the participants' experimental assignment and might have mediated the results obtained. However, we partially corrected



this limitation by using self-applied assessment instruments, in which this kind of bias decreases (Silliman, McGarvey, Raymond, & Fretwell, 1990). Despite our attempt to plan a simple treatment, that is, with materials with accessible content, homework that was not very complicated, and self-reports that were easy to fill in, this intervention may be somewhat difficult for caregivers with a low educational level who are not used to reading and writing. Some of the therapeutic components were developed orally in session, but others were developed in writing and at home, which may be a limitation for implementing the intervention and may partially explain the low percentage of homework carried out, especially in the MTC group.

Another limitation is that there was only one posttreatment measurement immediately following the intervention. It would be important to know whether treatment effects continue over time or whether the intervention effect is only short term. A longer follow-up is limited here by the waiting-list design. Nevertheless, future research should consider evaluating the impact of the two formats of the intervention over a longer time period.

The intervention described herein is not a particularly extensive stress management program. An eight-session treatment such as the one tested here would be rated as medium-high intensity, according to the meta-analysis of Knight and colleagues (1993). Perhaps increasing the number of sessions would allow participants to work on each of the proposed stress control techniques in more depth, but this would probably increase the dropout rate, and, especially, treatment rejection.

Lastly, all the efforts made with the stress control program, "How to Maintain Your Well-Being," independently of the results and limitations, had as their ultimate goal to offer caregivers, with patience and comprehension, the chance to take care of themselves, developing strategies that would help them to manage stress. On numerous occasions, caregivers are too overburdened, with no time for anything, not even for thinking about their own life situation. Therefore, to make them feel better may seem a simple goal, but to attain it is doubtless a great achievement, both for this investigation and for future ones, and, of course, for the caregivers themselves.

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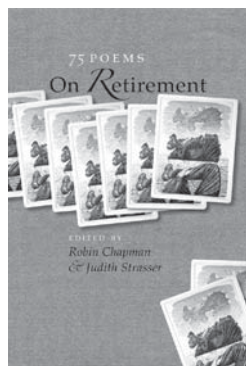
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