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Cognitive-Behavioral Intervention among Women with Slight Menopausal Symptoms: A Pilot Study
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Menopause is associated with a considerable variety of physical, psychological and social symptoms that can be treated using cognitive-behavioral techniques. In the present study, 21 women took part in an eight-week group intervention consisting of weekly two-hour sessions to address their slight symptoms related to the climacteric stage of life. The intervention included: psycho education on menopause, relaxation techniques, nutrition and fitness exercises, Kegel exercises, and problem-solving techniques. A control group was included that did not receive treatment and consisted of 28 women. The results revealed a significant reduction in most symptoms (including depression and anxiety) after intervention as compared to the baseline period. No changes appeared in the control group. The relevance of this work lies in the potential element of prevention this therapeutic package could offer to relieve various symptoms, slight and incipient, during the perimenopausal stage.

Keywords: menopause, psychological intervention, slight symptoms.
Menopause is the permanent cessation of menstruation due to the depletion of ovarian follicular activity, a depletion that is part of the natural aging process in women.

It usually begins between 45 and 55 years of age. In Spain, the mean age of onset is around 51.4 years old (Spanish Society of Gynaecology and Obstetrics 2006); when it appears before 45 years of age, it is considered quite early. In Spain, menopause naturally occurs in close to 270,000 women each year, which implies that around 20% of the Spanish female population find themselves in the menopausal period.

Climacteric and menopause are closely related concepts, though they do not refer to exactly the same thing; it is therefore important that we establish the differences between them. Climacteric is the phase or process of aging in women; it has imprecise limits, and includes three periods. The first is perimenopause and occurs between one and eight years before menopause itself begins. During this period, a series of gradual changes begin to occur in the endocrine system, as well as clinical manifestations that herald the approach of menopause. The second period is menopause, which is confirmed by having experienced a year of amenorrhea. The postmenopausal stage begins when menopause is confirmed, and lasts until old age (Marín, 1996). From a practical point of view, the word menopause refers globally to the process of ovarian senescence, and includes both perimenopause and the postmenopausal stage (Malacara, 2006).

The present study will focus on incipient symptoms present in the perimenopause stage (in the text, this will be termed symptoms of menopause or menopausal symptoms).

The symptoms of menopause can vary widely, but some are reported more frequently than others. These symptoms are displayed in Table 1.

Traditional intervention in menopause is of a medical nature: hormone replacement therapy (HRT). However, it would be impossible to administer this therapy to all women suffering from the aforementioned symptoms because of its contraindications and secondary effects, which have become particularly evident in the last few years. This has sparked a search for new types of intervention. Please also note that HRT is effective at halting anxious and depressive symptoms in menopausal women. The cognitive-behavioral approach to menopause has developed relatively recently, so very few publications have been made, but some may be cited, such as Camuñas et al., (2001), Hunter and Liao (1996); Larroy (2004), Larroy, Gutiérrez, and León (2004), Larroy and Gutiérrez (2009), Gutiérrez and Larroy (2010), and Sueiro, Carbulleira, Perdiz, Rodríguez, and González (1999), whose work covers menopausal symptoms as well as improving patients’ quality of life. This article will focus on the results of an intervention program conducted with a sample of women with slight, or sub-clinical, menopausal symptoms. Studies by Larroy and Gutiérrez (2009) and Gutiérrez and Larroy (2010) yielded beneficial results of this intervention in a sample of women with intense menopausal symptoms, both short and long-term, respectively. Both studies managed to reduce symptoms and improve quality of life. The program was offered in various public institutions, and intervention was administered to each and every woman who requested it and was symptomatic, even if their symptoms were only slight or moderate. The total sample was divided into a clinical group (severe symptoms) and a sub-clinical group (slight or moderate symptoms). We considered it of interest to study the role of intervention in women with symptoms that are not yet intense, because they are incipient. The objective of the present study is: to analyze the results of a cognitive-behavioral intervention applied to reduce slight menopausal symptoms.

Method

Participants

We contacted women’s departments and centers through different city halls within the Community of Madrid. At

<table>
<thead>
<tr>
<th>Vegetative Symptoms</th>
<th>Metabolic Symptoms</th>
<th>Psychological Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot Flashes</td>
<td>Osteoporosis</td>
<td>Irritability</td>
</tr>
<tr>
<td>Sweating</td>
<td>Atheromatosis</td>
<td>Anxiety</td>
</tr>
<tr>
<td>Palpitations</td>
<td>Cutaneous Atrophy</td>
<td>Depression</td>
</tr>
<tr>
<td>Headaches</td>
<td>Urogenital Atrophy</td>
<td>Nervousness</td>
</tr>
<tr>
<td>Vertigo</td>
<td>Arthralgia</td>
<td>Insomnia</td>
</tr>
<tr>
<td>Precordial Oppression</td>
<td>Myalgia</td>
<td>Decreased Libido</td>
</tr>
<tr>
<td>Tinnitus</td>
<td>Obesity</td>
<td>Memory Loss</td>
</tr>
<tr>
<td>Arterial Hypertension</td>
<td></td>
<td>Melancholy</td>
</tr>
</tbody>
</table>
each center, women with menopausal symptoms were invited to participate in the present study. Since the program was offered to all women who frequent the different centers, prior assessment of their symptoms was needed to detect who exhibited intense symptoms (clinical group) and who had slight or moderate symptoms (sub-clinical group). The criteria for inclusion in the sub-clinical group were established as the following: (a) scoring less than or equal to 8 on scales of anxiety and/or depression on the HADS (Hospital Anxiety and Depression Scale, Zigmond & Snaith, 1983) and (b) scoring less than or equal to 20 on the BMI (Blatt’s Menopausal Index, Kupperman & Blatt, 1953). Both cut-off scores for these inventories mark the presence of moderate to severe symptoms. Women who met the criteria listed above were assigned to the experimental, sub-clinical group. Women that surpassed those criteria were assigned to the clinical group.

The control group sample was recruited in the same places or others near those listed above by means of the “snowball” technique: women who attend the centers (but not the program itself) were contacted first, and by word of mouth, the sample grew. In this case, they were informed that they need only respond to a series of questions about their current state in terms of their respective points in the climacteric stage.

The exclusion criteria consisted of being or having been administered hormonal therapy, because this could falsify the study’s results. During the intervention phase, the experimental, sub-clinical group (with slight symptoms) was comprised of 21 women. They ranged in age from 43 to 56 years old ($SD = 3.70$) with an average age of 47.67 years old. A control group was included in this process whose menopausal symptoms were severe, or clinical, but who had similar demographic characteristics to the sub-clinical group. The control group consisted of 25 women. Their average age was 49.88 years old and they ranged in age from 44 to 55 years old ($SD = 2.65$). Table 2 describes each sample’s sociodemographic variables.

**Instruments**

The following instruments were employed to assess the dependent variables (symptoms associated with menopause and quality of life):

Blatt’s Menopausal Index – BMI- (Kupperman & Blatt, 1953). The BMI is comprised of 11 symptoms evaluated on an intensity scale from 0 to 3, where 0 indicates the symptom’s absence, and 3 indicates its maximum intensity. A menopausal index was obtained by multiplying a factor...
provided by the authors by the intensity index indicated by the women themselves. The most characteristic symptoms of menopause (vasomotor) were assigned a higher factor. Scores ranged from 0 to 48 points. An index lower than 15 indicated slight symptoms, between 15 and 20 moderate, between 20 and 35 moderate to severe, and above 35 severe. The BMI is one of the most commonly used instruments to assess the symptoms of menopause to the extent that it is a required reference for the majority of menopause researchers (Gándara- Martín, 1997). The cut-off points described are the same as those being currently utilized in Spain, and certainly in the Community of Madrid (Magnan et al., 1999).

Hospital Anxiety and Depression Scale – HADS- (Zigmond & Snaith, 1983). Since the Blatt Menopausal Index has been criticized by some authors (Salvatierrez, 1992) for its insufficient evaluation of psychological symptoms, it seemed opportune to evaluate those using another instrument: the HADS. It can be administered as a group, is easy to fill out, and draws a clear distinction between the concepts of anxiety and depression (Cuevas, García-Estrada, & González, 1995). This instrument has been translated into the majority of languages, among them Spanish, and these translations have been deemed reliable and valid by numerous studies (Moorey, Greer, Watson, & Gorman, 1991). The scale possesses a high level of specificity and sensitivity in detecting anxiety and depression in physically ill patients (Barczak, Kane, & Andrews, 1988; Zigmond & Snaith, 1983). It consists of a series of seven items corresponding to subscales of anxiety of depression. Each item is worth 0 to 3 points, according to intensity. Scores higher than 10 on each subscale are considered to indicate severe morbidity. A score between 8 and 10 is interpreted as moderate and scores below 8 signify the absence of morbidity.

Quality of Life Evaluation Questionnaire for women between 45 and 64 years old (Sánchez-Cánovas, 1999). This instrument includes 22 items evaluated on a Likert-type scale and responses range from 1 to 5 according to level of agreement with each item. The scale gathers information about topics related to climacteric, anxiety, depression, sexuality, and social and family support. The questionnaire provides information about these aspects of quality of life, yielding a global quality of life score by adding scores on all content related to climacteric. The higher the score, the lower one’s quality of life. This instrument was chosen because it is a quality of life questionnaire specifically geared toward evaluating women in climacteric.

All instruments were administered by the therapists who directed the program.

Procedure

A quasi-experimental design was selected with repeated measures and a control group. As the program was initially designed for a clinical sample, a control group with clinical characteristics was found as well. We later considered the possibility of analyzing the evolution of the subclinical sample, and comparing their results with those of the control group (with clinical symptoms and similar demographic characteristics), evaluating how each group evolved over the course of the intervention. A follow-up was done after six months. However, in that time, the subclinical sample shrunk drastically (only two subjects filled out the questionnaires for various reasons: they moved, their work schedule changed, they had to care for family members, etc.) and, although analyses showed that the groups were homogeneous with the original groups, we decided that the results could not be of particular relevance or generalizability, so they are not presented here.

The independent variable was intervention and the dependent variables were symptoms associated with menopause, and quality of life.

The intervention program was carried out by psychologists who had completed a Masters of Clinical and Health Psychology at Madrid’s Complutense University. For reasons not concerning the present research, pairs of therapists were created at each center. We measured the possible interference of this variable because we could not apply constancy or counterbalancing as methods of control, and found that it was null.

A program was designed that consisted of eight sessions of two hours’ duration each, held weekly in a group setting where participation was involved, based on the procedure of Larroy, Gutiérrez, and León (2004). The intervention program, whose objectives will be explained below, included the following components: psychoeducation about menopause, relaxation techniques, education and training in exercise and nutrition, Kegel exercises and sexual reeducation, identification and control of excessive worries and irrational beliefs, and training in problem-solving and time management. Table 3 depicts how the program developed.

1. Education about the Process of Menopause:
- This was included because information is a primordial factor in any intervention program (Magnani et al., 1999; Marín, Sánchez-Cánovas, & Dupuy, 1995; Sueiro et al., 1999) and particularly in the case of menopause, because the subject is relatively taboo, unknown and the focus of myths and false beliefs in a number of societies and cultures (Marín, 1996; Spanish Society of Gynaecology and Obstetrics, 2006).

2. Progressive Muscular Relaxation and Diaphragmatic Breathing:
- Various studies (Camuñas et al., 2001; Freedman & Woodward, 1992; Germaine & Freedman, 1984; Hunter, 2003; Hunter & Liao, 1996; Keefer, 2003; Stevenson & Delprato, 1983; Sueiro et al., 1999) have utilized relaxation and breathing techniques...
to alleviate menopausal symptoms, especially hot flashes. Relaxation and breathing cause the autonomic nervous system to relax, thereby reducing anxiety and stress. Several research studies have found a relationship between stress and the occurrence of hot flashes. These techniques have been used especially to reduce vasomotor symptoms (hot flashes and night sweats), insomnia, and anxiety, but they also help to relieve symptoms in general by contributing to an improvement in one’s subjective evaluation of their experience of menopause.

3. Promoting Health: Education and Training in Exercise and Nutrition:
- The objective of this strategy is to highlight the importance of certain healthy habits that prevent the onset of disorders such as osteoporosis and cardiovascular disorders (World Health Organization, 1996; Rosario, Villani, Harris, & Klein, 2003). Participants were taught to design healthy menus with simple recipes. Additionally, an exercise plan was designed for each and every participant based on their physical capabilities and schedules.

4. Training in Kegel Exercises and Options to Combat Vaginal Dryness:
- This addresses disorders of the musculature of the pelvic floor during perimenopause, and promotes intervention techniques that prevent and treat this type of disorder, as well as its associated sexual problems. Specifically, the training is in “Kegel exercises,” which have been used in a number of different programs to strengthen the pelvic floor (Fernández, Magnani, Fernández, & Fernández-Arcilla, 2000; Magnani et al., 1999).

5. Identification and Control of Excessive Worries and Irrational Beliefs:
- During menopause, women sometimes experience a series of irrational beliefs or excessive worries (Sueiro et al. 1999) and these play a very important role in the development of emotional (anxiety, depression) and behavioral alterations.

6. Training in Problem-solving and Time Management:
- Training in problem-solving techniques may reduce the conflicts generated by the family and social relationships of women in this stage of life, especially in women for whom menopause is particularly difficult, and who lack the necessary resources to enact the appropriate solution (Sueiro et al., 1999). With that in mind, it is important to learn to reach agreements, and to choose the most appropriate response alternative in every situation to best resolve the conflict at hand. This decreases any anxiety and/or depression produced by this type of conflict and increases women’s quality of life and self-esteem. Time management helps women prioritize their tasks and manage the stress those tasks entail, as well as save time for pleasure or leisure activities.

These components were selected based on the positive results of other intervention programs and they were included toward the objective of designing a therapeutic program that integrates different aspects of menopause and offers alternative tools that can be used to complement pharmacological treatment, or on their own.

Results

Before analyzing the treatment’s effectiveness, different analyses of homogeneity were applied. That way, we were able to confirm that the Therapist variable did not interfere in the study’s results.

The data from pre and post-treatment evaluations indicated that:

On the BMI, the sub-clinical group’s average pre-treatment score was $M = 14.14\ (SD = 7.03)$, which indicates slight to moderate symptoms. The symptoms most often evaluated as intense among this group were nervousness (47.6%), myalgia (33.3%) and head aches (33.3%). Their average post-treatment score was $M = 11.24\ (SD = 6.47)$. The control group’s average pre-treatment score, on the other hand, was $M = 28.88\ (SD = 6.63)$. Hot flashes (92%), melancholy (68%), nervousness (68%) and myalgia (56%) were the most frequent and intense symptoms in this group. Their average post-treatment score was $M = 28.48\ (SD = 5.97)$.

On the anxiety scale of the HADS, the sub-clinical group’s mean pre-treatment score was $M = 6.43\ (SD = 4.3)$; 28.8% of women in this group yielded moderate or high scores; their post-treatment average was $M = 5.24\ (SD = 3.40)$. On the depression scale, the sub-clinical group’s pre-treatment mean was $M = 4.05\ (SD = 3.19)$; 9.6% of women in this group exhibited elevated depressive symptoms; their post-treatment mean was $M = 2.76\ (SD = 2.98)$. Regarding the control group, their pre-treatment average on the anxiety scale was $M = 10.60\ (SD = 1.98)$. 100% of this sample scored above the criterion; their post-treatment results were $M = 10.28\ (SD = 1.43)$. On the depression scale, the control group’s average pre-treatment score was $M = 4.72\ (SD = 3.69)$ and 24% presented with moderate to high depressive symptoms; at post-treatment, their results were $M = 4.88\ (SD = 3.39)$.

As for quality of life, the sub-clinical group’s average pre-treatment score was $M = 48.43\ (SD = 9.22)$, 95.3% of women had a medium or low amount of knowledge about climacteric and 61.9% evaluated it negatively; the majority of women in this group perceived little social and family support (57% and 66.6%, respectively). The sub-clinical group’s post-treatment scores were $M = 42.71\ (SD = 7.29)$. Conversely, the control group’s pre-treatment mean was $M = 54.48\ (SD = 12.74)$, 60% of women in this group had a medium amount of knowledge about the process of
### Table 3

**Summary of the Program’s Content**

<table>
<thead>
<tr>
<th>Session</th>
<th>Objectives and Contents of Each Session</th>
<th>Techniques</th>
</tr>
</thead>
</table>
| 1       | • Begin the psychological intervention program during menopause.  
          • Meet, motivate and integrate participants into this process.  
          • Present the topics that will be addressed throughout the program.  
          • Explore the thoughts and feelings the term *menopause* provokes. | Psychoeducation |
| 2       | • Explain the female reproductive system and the function of the hormonal cycle.  
          • Determine the changes produced during menopause short, medium and long-term, and their different levels: physiological, physical and psychological. | Psychoeducation |
| 3       | • Explain different techniques to treat alterations short-term, indicating the reasons why they are convenient.  
          • Explain the tension-anxiety-unease relationship. | Breathing  
          Relaxation |
| 4       | • Explain exercises, posture and nutrition used to treat alterations medium and long-term.  
          • Explain disorders of the musculature of the pelvic floor in post-menopause and promote Kegel exercises to prevent and treat said disorders. | Training in Exercise and Creating Diets |
| 5       | • Relay information about the options available to combat vaginal dryness (burning, itching and pain during sexual relations).  
          • Explain alternatives to intercourse.  
          • Explain what Irrational Beliefs are, what types of beliefs are most common, and convey at what times these ideas can arise.  
          • Communicate how to learn to identify different types of irrational ideas.  
          • Controlling negative thoughts.  
          • Learn to dismantle and modify irrational ideas into rational ones.  
          • Stopping recurrent negative thoughts.  
          • Learn to identify problematic situations that have various alternative solutions, facilitating possible responses to said situation and establishing a procedure to select the appropriate response to the problem.  
          • Explain one of the ways of managing time, identifying priority activities, establishing objectives and dividing them into steps to achieve them.  
          • Evaluate the effectiveness of and participants’ satisfaction with the psychological intervention program. | Kegel Exercises  
          Sexual Reeducation  
          Cognitive Restructuring  
          Stopping a Thought  
          Problem-solving  
          Time Management |
| 6       | • End the program. | Resolving Questions, Doubts |
climacteric, and 84% evaluated it negatively. The majority exhibited anxious and/or depressive symptoms and reported having little family support, sexual problems, and problems with their significant others. At post-treatment, their mean was $M = 55.04$ ($SD = 11.65$).

The analysis of pre and post-treatment data indicated a decline in women in the sub-clinical group’s global scores on the BMI, of quality of life (a decrease in score on the quality of life inventory means it improved) and both scales of the HADS. With respect to the control group, no statistically significant differences registered in the post-treatment phase in any DV. Table 4 and Figures 1 and 2, respectively, display a summary of the results of the statistical analyses, and the changes observed in the two groups.

As Table 4 conveys, the sub-clinical group exhibited statistically significant differences in all variables in the post-treatment phase, denoting that their symptoms improved (both physical and psychological), as well as quality of life. Generally speaking, the sub-clinical group’s quality of life improved significantly through intervention. On that inventory, a significant improvement was observed in the women’s knowledge about climacteric, on the scale of anxiety and/or depression, and on the scale pertaining to sexuality and significant others. Conversely, the control group obtained very similar scores on all variables before and after intervention (see Figures 1 and 2); they exhibited no significant differences in any variable after the intervention period (see Table 4).

### Table 4

**Student’s t-test, Repeated Measures ANOVA: Dependent Variables in the Sub-clinical and Control Groups**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sub-clinical Group</th>
<th>Control Group</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Pre-trt./Post-trt. (N=21)</td>
<td>Pre-trt./Post-trt. (N=25)</td>
</tr>
<tr>
<td></td>
<td>$t$ ($df$)</td>
<td>$F$ ($df$)</td>
</tr>
<tr>
<td>Hads</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>2.97 $(20)$</td>
<td>$p &lt; .010$</td>
</tr>
<tr>
<td>Depression</td>
<td>2.51 $(20)$</td>
<td>$p &lt; .025$</td>
</tr>
<tr>
<td>Kupperman and Blatt Menopausal Index</td>
<td>2.37 $(20)$</td>
<td>$p &lt; .030$</td>
</tr>
<tr>
<td>Hot Flashes *</td>
<td>1.00 $(1)$</td>
<td>Not significant</td>
</tr>
<tr>
<td>Paresthesia *</td>
<td>.21 $(1)$</td>
<td>Not significant</td>
</tr>
<tr>
<td>Insomnia *</td>
<td>.56 $(1)$</td>
<td>Not significant</td>
</tr>
<tr>
<td>Nervousness *</td>
<td>8.44 $(1)$</td>
<td>Not significant**</td>
</tr>
<tr>
<td>Melancholy *</td>
<td>2.02 $(1)$</td>
<td>Not significant</td>
</tr>
<tr>
<td>Vertigo *</td>
<td>1.34 $(1)$</td>
<td>Not significant</td>
</tr>
<tr>
<td>Fatigue *</td>
<td>1.36 $(1)$</td>
<td>Not significant</td>
</tr>
<tr>
<td>Myalgia *</td>
<td>9.03 $(1)$</td>
<td>Not significant**</td>
</tr>
<tr>
<td>Headaches *</td>
<td>.19 $(1)$</td>
<td>Not significant</td>
</tr>
<tr>
<td>Palpitations *</td>
<td>3.05 $(1)$</td>
<td>Not significant</td>
</tr>
<tr>
<td>Dysmaesthesia *</td>
<td>1.00 $(1)$</td>
<td>Not significant</td>
</tr>
<tr>
<td>Quality of Life Assessment Questionnaire</td>
<td>3.34 $(20)$</td>
<td>$p &lt; .005$</td>
</tr>
<tr>
<td>Knowledge about Menopause *</td>
<td>37.65 $(1)$</td>
<td>$p &lt; .001$</td>
</tr>
<tr>
<td>Emotional Evaluation *</td>
<td>1.72 $(1)$</td>
<td>Not significant</td>
</tr>
<tr>
<td>Anxiety/Depression *</td>
<td>11.30 $(1)$</td>
<td>$p &lt; .005$</td>
</tr>
<tr>
<td>Social Support *</td>
<td>2.41 $(1)$</td>
<td>Not significant</td>
</tr>
<tr>
<td>Family Support *</td>
<td>.71 $(1)$</td>
<td>Not significant</td>
</tr>
<tr>
<td>Sexuality/ Significant Other *</td>
<td>6.10 $(1)$</td>
<td>Not significant**</td>
</tr>
</tbody>
</table>
The effect size yielded by the intervention program at reducing symptoms was calculated using the G*Power program (Buchner, Erdfelder, & Faul, 1997). Table 5 displays the statistical power and effect size of the treatment in terms of each dependent variable for the sub-clinical group. Post-treatment, the effect sizes yielded for all variables were moderate, and an elevated statistical power was obtained for anxiety and quality of life. Upon completing the intervention program, all women in the experimental group filled out a self-register to determine to what extent the intervention program had fulfilled their needs and whether thanks to the program, they had improved their situation in terms of menopause. An average score of 7 points was obtained on a scale of 0 to 10, 0 indicating the program had not covered the women’s needs and that their situation had not improved at all with regards to menopause, and 10 meaning...
that the program had totally fulfilled their needs and that their situation had completely changed, in terms of menopause.

Discussion

The results of the present study allow us to assert that at post-treatment, the sub-clinical group exhibited a remission of their symptoms associated with menopause (physical as well as psychological) and an improvement in quality of life, relative to pre-treatment. On the other hand, women in the control group did not report significant changes post-treatment. Thus, it can be concluded that in the sub-clinical group, the intervention program sparked change in different aspects of the process of climacteric.

Analyzing each variable in depth revealed that for women in the sub-clinical group, before intervention the symptoms they referred to as most intense were headaches, myalgia and nervousness. The great majority of women in the sub-clinical group, as well as 56% of women in the control group reported suffering from myalgia (80.9%). Myalgia and arthromyalgia are frequent symptoms arising during climacteric because the process of menopause provokes muscular hypersensitivity and a loss of muscular force, generating myalgia. On the other hand, these symptoms are intimately connected to osteoporosis (OMS, 1996). Anxiety and stress have a negative impact on patients suffering from myalgia and other types of pain; meanwhile, sudden waves of pain can, in turn, increase a patient’s stress level (Millea & Brodie, 2002), compounding the effect. Several studies have confirmed that relaxation is a good therapeutic alternative to minimize stress responses in patients suffering from chronic stress (Pastor, Díaz, & Martínez, 1999).

The sub-clinical and control groups’ high pre-treatment scores on items of the Kupperman and Blatt Index assessing nervousness and melancholy are consistent with the data obtained by the two scales of the HADS. These data indicate that psychological symptoms are at least as important as physical ones if not more so during the process of climacteric. That being said, interventions in this period of life should take into consideration strategies to mitigate both types of symptoms.

The fact that women reported not having suffered from any psychological disorder prior to climacteric, and that they reported their levels of anxiety and depression had increased at the start of it, improving significantly through treatment, suggests that the intervention was adequate at reducing their depression and anxiety symptoms, which can be frequent during menopause.

One curious, yet significant finding was the widespread lack of knowledge about climacteric reported by women in the sample at the beginning of intervention. Most of them had a medium or low amount of knowledge about menopause, yet the majority of them evaluated this process as something negative. This finding is paradoxical, really, that even without knowledge of the possible consequences of this new event in their lives, they judge in advance that it will be seriously detrimental to them. It is highly probable that the lack of information, or the confusing information that circulates in our society, including stereotypes and prejudices surrounding menopause, were responsible for this assessment.

This lack of information could also trigger high levels of anxiety, especially if the little information they do have available is erroneous and, in many cases, negatively biased. Therefore, the component of psychoeducation is very important in this type of situation.

Interventions directed toward menopause, in addition to alleviating symptoms, should encourage quality of life improvement in women. In this study’s sample, most of the women in the sub-clinical group reported having little family and social support. In fact, at the beginning of the intervention, the majority stated that they felt lonelier and that their social relationships had diminished. Perhaps the underlying factor to explain this decline is the reported quantity of daily activities (caring for parents, elderly relatives, grandchildren, housework, etc.). They indicated feeling less valued by their family network and feeling “of less use than before.” They said their family relationships had worsened, though this decline could be induced or mediated by cognitive distortions. It is important to bear in mind that the children of women at this age are growing increasingly independent and in many cases, have been

Table 5

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sub-Clinical Experimental Group</th>
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<tbody>
<tr>
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<td>Pre-trt./Post-trt. (&lt;em&gt;N&lt;/em&gt; = 21)</td>
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<tr>
<td></td>
<td>&lt;em&gt;E.S.&lt;/em&gt;</td>
<td>Power</td>
</tr>
<tr>
<td>Hads</td>
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<td></td>
</tr>
<tr>
<td>Anxiety</td>
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<td>.88</td>
</tr>
<tr>
<td>Depression</td>
<td>.43</td>
<td>.49</td>
</tr>
<tr>
<td>Kupperman Menopause Index</td>
<td>.43</td>
<td>.48</td>
</tr>
<tr>
<td>Quality of Life Assessment Questionnaire</td>
<td>.69</td>
<td>.82</td>
</tr>
</tbody>
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emancipated. Up to this moment, these women's main commitment, and above all for housewives, was to care for their kids, so when they leave home, their mothers are confronted with a feeling of uselessness and loneliness never before felt. Again, the educational factor is essential. It is imperative to determine to what extent the process of climacteric is responsible for these changes, and also to remind the women that it temporarily coincides with other socio-familial changes that have little to do with menopause itself. On another note, we tried to foment an active attitude to improve the women's situation during this phase.

The intervention program integrated different elements that converge during climacteric, emphasizing alternatives to medical treatment and offering a strategy of assistance, prevention and education.

The fact that we discovered statistically significant differences in the sub-clinical group highlights the treatment's preventative (symptoms that had begun to set in were stopped from advancing) and mitigating nature. Furthermore, it emphasizes the need to incorporate into interventions aspects promoting health to prevent certain disorders from developing long term after menopause (cardiovascular disorders, osteoporosis, etc.). It was confirmed that educating women and providing them with adequate alternatives to combat the symptoms that sometimes arise as a consequence of menopause, will enable them to cope with it in a healthy way. It was also confirmed that if the factors that mediate or exacerbate different symptoms are directly stated, a significant remission in symptoms will occur. At least 50% of menopausal women suffer from symptoms that are either irritating or very irritating to them (Spanish Society of Gynaecology and Obstetrics, 2006), which implicates around 135,000 people per year in Spain. Therefore, it is critically important to design preventative programs to address menopausal symptoms that would decrease them while they are still incipient, to nip them in the bud (or even to act quickly in at-risk populations when symptoms have not yet arisen).

In light of the positive results of this research for women in the sub-clinical group, that is, women who had not yet experienced high levels of menopausal symptoms, it is safe to assume that interventions along the lines of the one described here can obtain very encouraging results.

The hope is that intervention, in addition to being effective, will be efficient (Labrador, Echeburúa, & Becoña, 2000). The intervention presented in this article is demonstrably effective, given that in climacteric women, it successfully led to remission in their symptoms associated with menopause and improved their quality of life, even for those with slight symptoms. This was done within the context of habitual practice and using truly helpful tools, both of which contributed to its effectiveness. Finally, it incurred very little cost compared to other therapeutic options such as pharmacology, so it was efficient, too. Also, since it was done as a group, it allowed a greater number of women to be administered treatment in a small amount of time, maximizing the cost-benefit ratio. The group format also provided a normative marker for symptoms, favoured the women's expression and participation, and contributed to their adherence to treatment.

In view of these results, it is fair to say that the proposed intervention program poses a strong alternative to HRT, especially in cases where hormonal treatment is contraindicated, but also as a simple matter of choice, particularly when it comes to incipient symptoms. Cognitive-behavioral intervention, relative to HRT, has the following advantages: it lacks secondary or undesirable effects; it saves pharmaceutical expense; it has no contraindications; it is highly effective at remitting symptoms; it establishes specific techniques to address psychological symptoms; and it includes prophylaxis for disorders that can develop long term. The components of the nutrition and exercise program, for example, contribute to preventing osteoporosis, obesity and cardiovascular disorders; Kegel exercises strengthen the pelvic floor, preventing involuntary urination and improving sexual activity, etc. On the other hand, it has a simple intervention protocol that is easy to apply, it is administered as a group (which improves its efficiency) and is adaptable to use in different institutions for women.

It is crucial we not forget, however, that this is a preliminary study and that clearly, it has several important limitations. Among them, we would like to emphasize the following: (a) small sample size; the strength of the results might be improved by a larger sample; (b) not having been able to obtain follow-up data; that would have allowed us to determine if the decrease in symptoms was maintained or even improved, as other studies of women with severe symptoms have shown (Gutiérrez & Larroy, 2009), and (c) the control group was not identical to the experimental group; this limitation should be rectified in future studies, but since in our case, the comparison was established between each group and itself, before and after intervention, the results allowed us to confirm that the mere passage of time did not influence the results, at least short-term (the same results were found in Larroy & Gutiérrez, 2009 and in Gutiérrez & Larroy, 2009). Of course, it would be desirable to replicate this study with a control group with the same characteristics as the experimental group so the results could be more clearly established, larger samples, and above all, the possibility of short and long-term follow-up measures. We will attempt to achieve this in future research.

In summary, and bearing in mind that the findings of a preliminary study should be applied with caution, we can confirm that the intervention presented here is both effective and efficient at remitting slight symptoms of menopause. The fact that these changes were not exhibited by the control group highlights the intervention's effectiveness. Having obtained significant improvements in incipient symptoms gives us cause to reflect on the importance of secondary prevention of menopausal symptoms during climacteric: probably the sooner the intervention takes place in women with symptoms, the more it will benefit them.
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