Leisure, Gender, and Kinship in Dementia Caregiving: Psychological Vulnerability of Caregiving Daughters With Feelings of Guilt

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Objectives. The moderator role of guilt on the effect of leisure activities on dementia caregivers’ depressive symptoms was analyzed, considering differences by kinship and guilt as a multidimensional construct.

Method. Participants were 351 caregivers (58.97% daughters, 10.54% sons, 19.66% wives, and 10.83% husbands). Measures included frequency of leisure activities, depressive symptoms, and guilt (total scale and 5 factors).

Results. A moderator role of guilt was found only for daughters. Specifically, significant interactions between guilt and frequency of leisure activities were found for the total scale and for the Factors 1 (guilt about doing wrong by the care recipient), 2 (guilt about failing to meet the challenges of caregiving), and 3 (guilt about self-care). For those daughters who reported lower levels of leisure activities, showing higher levels of guilt was associated with higher scores in depressive symptoms, whereas those with lower levels of guilt showed lower depressive symptoms scores.

Discussion. Feelings of guilt may have different consequences on caregivers’ distress depending on caregivers’ gender and kinship. Daughters with higher levels of guilt who do not engage in leisure activities may be especially vulnerable to suffering psychological distress.

Key Words: Behavioral therapy—Depression—Gender—Kinship—Leisure activities—Moderation.

I t is well known that dementia caregiving has been linked to negative consequences for caregivers’ mental health, such as depressive symptoms (Piercy et al., 2012; Pinquart & Sörensen, 2003). Due to the high demands associated with caring for someone with dementia, caregiving has been considered as a chronic stressful situation, and the most common theoretical model used to study caregiving is the stress and coping model adapted to caregiving (Knight & Sayegh, 2010). Following this model, the impact that stressors, such as frequency of behavioral problems, have on caregiver’s distress depends on modulating variables such as coping resources and social support. In addition, demographic characteristics, including sex and relationship to the care recipient, may be an important moderator of the impact of caregiving on mental health (Pinquart & Sörensen, 2003), care transitions (Allen, Lima, Goldscheider, & Roy, 2012), and caregivers’ responses to interventions (Bookwala, 2009; Kim, Zarit, Femia, & Savla, 2012). Hence, the associations between stress and coping variables and caregiver distress may differ among daughters, sons, wives, and husbands (Pinquart & Sörensen, 2003). The need for more comparative studies analyzing the relationship between coping processes and caregivers’ psychological distress depending on kinship has recently been pointed out (Pinquart & Sörensen, 2011). Moreover, in order to analyze between-group differences, it has also been suggested that there is a benefit to be gained from using domain-specific measures or different dimensions of a construct instead of global ones and considering a greater variety of variables that moderate the size of differences between groups (Pinquart & Sörensen, 2011). Following these recommendations, the objective of this study was to analyze the moderator role of feelings of guilt on the relationship between frequency of leisure activities and depressive symptoms in dementia family caregivers. Specifically, considering the multidimensional nature of the guilt construct and the importance of kinship, we carried out moderation analyses of guilt—considering the guilt global scale and its different dimensions—on the relationship between frequency of leisure activities and depressive symptoms in daughters, sons, wives, and husbands separately.

One of the coping variables analyzed in caregiving research is the frequency of leisure activities. Although the construct of leisure has not been uniformly operationalized or measured across studies, most studies define leisure as the frequency or duration of participation in a wide variety of discretionary activities that occur during time that is free from obligations, such as jobs, chores, and daily routines.
Leisure activities are related to participation in a wide variety of activities, which may involve pleasant events or not.

Research findings to date appear to be consistent as regards the beneficial effects of engaging in leisure activities on the onset and maintenance of depressive symptoms (Mausbach, Patterson, & Grant, 2008). In addition, psychological interventions aimed at increasing leisure activities show effectiveness for reducing depressive symptoms in dementia caregivers (Coon, Thompson, Steffen, Sorocco, & Gallagher-Thompson, 2003; Losada, Márquez-González, & Romero-Moreno, 2011). Identifying which variables moderate the impact of behavior therapy on depressive symptoms seems to be a useful strategy for increasing our knowledge about which caregivers benefit most from engagement in leisure activities and respond best to interventions (Dimidjian, Barrera, Martell, Muñoz, & Lewinsohn, 2011; Mausbach, Harmell, Moore, & Chattillion, 2011). In this line, Mausbach and colleagues (2011) found that dementia caregivers with higher levels of burden showed a greater increase in positive affect associated with increased leisure satisfaction than did caregivers with lower burden, who did not show an increase in positive affect associated with increased leisure, suggesting a moderator role of caregiver’s burden on the relationship between leisure satisfaction and depressive symptoms.

It is also theoretically plausible that one moderator variable that might reduce the beneficial effect of the positive influence of leisure on caregiver’s depressive symptoms is caregivers’ feelings of guilt. In the psychology literature, guilt has been operationalized in different ways (Kugler & Jones, 1992): as a transitory affective state reflecting the immediate psychological consequences of violating moral standards (state guilt); as an enduring personality trait, perhaps reflecting past transgressions or other psychological factors (trait guilt); and as a readiness to experience guilt based on the strength of one’s moral values (i.e., moral standards). In dementia caregiving research, guilt has been described as the individual’s appraisal that he or she has violated (or is capable of violating) a moral or social standard either in terms of a behavior or thought, as regards the care of a relative (Gonyea, Paris, & de Saxe Zerden, 2008).

Feelings of guilt have been associated with caregivers’ distress, specifically depressive symptoms, anxiety, and burden, and with low levels of caregivers’ frequency of leisure activities (Losada, Márquez-González, Peñacoba, & Romero-Moreno, 2010). The intensity of the relationship between frequency of leisure activities and depressive symptoms may differ across caregivers depending on their levels of guilt.

Thus, guilt may lead some caregivers to avoid engaging in activities that can strengthen their feelings of guilt, such negative reinforcement contributing to maintaining their passivity and inactivity. This combination of guilt and low frequency of leisure activities probably represents the profile of caregivers most prone to presenting and maintaining depressive symptoms. However, it is also plausible that caregivers with high levels of leisure activities and high levels of guilt present high scores on depressive symptoms as a result of a moral conflict about the importance of maintaining leisure activities for themselves but simultaneously devoting time to caring for their relatives.

Hence, feelings of guilt may influence the relationship between leisure activities and depressive symptoms. To our knowledge, there are no studies analyzing the moderator role of guilt in the relationship between frequency of leisure activities and caregivers’ depressive symptoms.

Taking into account the earlier remarks, and following the stress and coping model (Knight & Sayegh, 2010), the aim of this study is twofold: (a) to analyze the moderator role of caregiver guilt in the relationship between frequency of leisure activities and caregivers’ depressive symptoms, even after controlling for caregiver stressors (hours caring, frequency of behavioral problems, and functional capacity) and (b) to analyze whether the role of guilt is influenced by kinship, considering its potential moderator role separately in the groups made up of caregivers’ daughters, sons, wives, and husbands.

Taking into account previous research, our hypotheses are (a) the negative relationship between frequency of leisure activities and depressive symptoms will be stronger for caregivers with high levels of guilt compared with those with low levels of guilt; in other words, caregivers’ feelings of guilt will moderate the relationship between frequency of leisure activities and caregivers’ depressive symptoms and (b) given that caring for a loved one is culturally expected to be taken on by women caregivers, and especially by daughters who may also have to take on other burdens or responsibilities, such as childcare, work, or housework, we expect a moderator effect of guilt on the relationship between frequency of leisure activities and depressive symptoms only for women (spouses and daughters), not for men (sons and husbands).

METHODS
Participants
A total of 351 family caregivers of persons with dementia living in the community participated in this study. Inclusion criteria were being at least 18 years old, identifying oneself as the main source of help for one’s relative, and caring at least 1 hr/day for a period of at least 3 consecutive months.

Variables and Instruments
The following sociodemographic characteristics were assessed: gender, kinship, care recipient’s illness, ages of caregiver and care recipient, daily hours caring, and time since care began (months).
In addition, the following variables, such as guilt, frequency of behavioral problems, functional status, frequency of leisure activities, and depressive symptoms, were also measured.

**Guilt.**—Caregivers’ feelings of guilt were assessed using the Caregiver Guilt Questionnaire (Losada et al., 2010), which is a 22-item questionnaire, with answers ranging from 0 (never) to 4 (always or almost always), made up of five subscales. The “guilt about doing wrong by the care recipient” subscale (Factor 1) consisted of seven items assessing caregivers’ feelings of guilt relative to negative feelings, emotions, or acts toward their relative (e.g., “I’ve got angry with myself for having negative feelings toward the person I’m caring for”). Specifically, this factor is related to caregivers’ feelings of guilt as a result of their behavior toward their relatives, such as telling them off or not having more patience with them and having negative emotions toward them. The “guilt about failing to meet the challenges of caregiving” subscale (Factor 2) consisted of six items that measure caregivers’ feeling that a better job could be done as a caregiver (e.g., “I’ve found myself thinking that I’m not up to the job”). The “guilt about self-care” subscale (Factor 3) consisted of four items measuring caregivers’ negative feelings about looking after themselves and taking part in activities other than caring for their relative (e.g., “I have felt bad for leaving my relative in the care of someone else while I had fun”). The “guilt about neglecting other relatives” subscale (Factor 4) consisted of two items assessing caregivers’ negative feelings associated with the fact of not being able to devote as much time as they would wish to other relatives (e.g., “When I’ve gone out to do some pleasant activity [e.g., eating out in a restaurant], I’ve felt guilty and unable to stop thinking that I should be caring for my relative”). The “guilt about having negative feelings toward other people” subscale (Factor 5) consisted of three items about caregivers’ negative feelings related to having negative emotions or feelings toward other people (e.g., “I have felt guilty about having wished that others could have this burden or suffer as I do”). In the previous study by Losada and colleagues (2010), internal consistency (Cronbach’s alpha) for the total scale was 0.88, and for the different dimensions, the values were as follows: 0.89 for Factor 1, 0.76 for Factor 2, 0.69 for Factor 3, 0.86 for Factor 4, and 0.61 for Factor 5. In this study, Cronbach’s alpha for the total scale was 0.87, and the same values were found as in the previous study for the subscales (Losada et al., 2010).

**Frequency of behavioral problems.**—The Revised Memory and Behaviors Problems Checklist (Teri et al., 1992) is a 24-item scale that measures the frequency of behavioral problems in dementia patients (e.g., “During the past week, how often did your relative ask the same question over and over?”). Item scores range from 0 (not at all) to 4 (extremely). Internal consistency in the original study for this scale was 0.84. It constitutes one of the most widely used instruments in dementia caregiving research and has been recommended as a reliable and valid instrument for assessing observable behavior problems in dementia patients (Teri et al., 1992). The internal consistency (Cronbach’s alpha) for this scale in this study was 0.81.

**Functional status.**—Dementia patients’ functional status was assessed using the Barthel Index (Mahoney & Barthel, 1965). This scale consists of a 10-item scale rating the level of independence for activities of daily living (e.g., “To what extent is your relative able to wash or bath himself/herself?”), with scores ranging from 0 (dependent) to 100 (independent). Higher scores indicate a higher level of independence of the care recipient. The internal consistency (Cronbach’s alpha) in previous research was 0.91 (Losada et al., 2010). Internal consistency in this study was 0.92.

**Frequency of leisure activities.**—Caregivers’ frequency of leisure activities was measured using an adaptation of the leisure time satisfaction (LTS) assessment (Stevens et al., 2004). This scale assesses caregivers’ perceived LTS regarding six leisure activities over the past month (e.g., “How satisfied are you with the amount of time you have been able to spend in quiet time by yourself?”). The adaptation of this scale to measure frequency of leisure activities involved assessing the frequency of engagement in the same six leisure activities over the past month (e.g., “How often have you been able to spend quiet time by yourself?”), with item scores ranging from 0 (not at all) to 4 (a lot). Internal consistency (Cronbach’s alpha) of the scale in this study was 0.73, whereas an acceptable internal consistency index (Cronbach’s alpha) of 0.70 had been found for it in a previous study (Romero-Moreno, Márquez-González, Mausbach, & Losada, 2012).

**Depressive symptoms.**—The Center for Epidemiological Studies-Depression (CES-D) scale (Radloff, 1977) consists of 20 items assessing caregivers’ frequency of depressive symptomatology over the last week (e.g., “I felt sad”). Scores range from 0 (rarely or none of the time) to 3 (most or all of the time). Although this scale was designed to assess depressive symptoms in general population, it is one of the most widely used scales in dementia caregiving research (Moniz-Cook et al., 2008). The cutoff for clinical depression was 16 or higher (Beekman et al., 1997). High reliability indexes (0.90) have been found for this scale in general population (Radloff, 1977) and in dementia caregiving research (0.90; Losada et al., 2010). Internal consistency (Cronbach’s alpha) of the scale in this study was 0.89.

**Procedure**

Caregivers were recruited through different Social and Health Care centers in Madrid (Spain) or via advertisements in the print media, on Internet, or on television. First,
in order to test whether caregivers met the inclusion criteria, telephone interviews were carried out. Prior to enrolling in the study, caregivers gave their informed consent, and face-to-face interviews were conducted at the Social and Health Care centers. This study was approved by the Spanish Ministry of Science and the Ethics Committee at the Universidad Rey Juan Carlos (Madrid).

Data Analyses

The normal distribution of the variables and the presence of univariate and multivariate outliers were analyzed following the Tabachnick and Fidell’s criteria (Tabachnick & Fidell, 2007). Analyses of variance (ANOVAs) were carried out in order to calculate differences by kinship and gender in the assessed variables.

Following Baron and Kenny’s (1986) criteria, the moderator role of the total score for guilt and the different dimensions of guilt in the relationship between frequency of leisure activities and depressive symptoms was analyzed. Different hierarchical regression analyses were carried out considering each of the following dimensions of guilt as moderator variables: (a) guilt (total score), (b) guilt about doing wrong by the care recipient (Factor 1), (c) guilt about failing to meet the challenges of caregiving (Factor 2), (d) guilt about self-care (Factor 3), (e) guilt about neglecting other relatives (Factor 4), and (f) guilt about having negative feelings toward other people (Factor 5). In the first step, stressors (hours caring, frequency of behavioral problems, and functional capacity) were entered. Frequency of leisure activities was entered in the second step. In the third step, the corresponding guilt dimension analyzed and its interaction with frequency of leisure activities were entered. We analyzed these moderator effects of guilt considering gender and kinship, separately, for husbands, wives, sons, and daughters. In order to control for plausible multicollinearity problems, all independent and interaction variables were centered at their means.

The nature of the relationship between frequency of leisure activities and depressive symptoms was analyzed using the method described by Holmbeck (2002), through post hoc analyses for caregivers with high guilt (+1 SD) versus low guilt (−1 SD; for the different dimensions of guilt). Finally, following the procedure described by Preacher, Curran, and Bauer (2006), the regions of the specific values of guilt in which the regression of frequency of leisure activities on depressive symptoms moves from nonsignificant to significant were calculated. For all these analyses, the SPSS version 19 (IBM, 2010; SPSS, Chicago, IL) software was used.

Results

Outliers, Normality, and Multicollinearity

For all variables, neither univariate (z score higher than 3.29; p < .001) nor multivariate outliers (Mahalanobis distance at p < .001) were found. Skewness and kurtosis were within the expected values. Multicollinearity was tested, and the highest value of the variance inflation factors and the condition index were 1.06 for frequency of leisure activities and 11.58 for time spent caring, respectively.

Sample Characteristics

The sample consisted of 78.63% of female caregivers and 21.37% of male caregivers. Of these, 58.4% were caring for a relative with Alzheimer’s disease and 41.6% for a relative with other dementia. Mean age of caregivers and care recipients was 60.19 (SD = 12.90) and 78.76 (SD = 8.93), respectively. Care was provided for a mean of 11.77 hr daily (SD = 8.20), and mean number of months since caregiving began was 51.19 (SD = 43.39). Descriptive information (means and standard deviations) of the assessed variables for caregiving daughters, sons, wives, and husbands, as well as their mean differences in the different variables, is shown in Table 1. Most of the caregivers were daughters (58.97%), followed by wives (19.66%), husbands (10.54%), and sons (10.83%). The results of the ANOVAs showed main group effects for caregiver’s age, hours caring, time caring, frequency of behavioral problems, frequency of leisure activities, guilt (total scale) and its five different dimensions, and depressive symptoms scores. Specifically, caregiving daughters and sons cared for fewer hours and were younger than spouses. Husbands were older than wives. Daughters obtained higher scores than wives on frequency of behavioral problems. In addition, husbands reported higher levels of frequency of leisure activities than wives, sons, and daughters. Caregiving daughters and sons presented higher levels of guilt in the total score than caregivers’ wives and husbands. In addition, daughters and sons presented higher levels of guilt about failing to meet the challenges of caregiving (Factor 2) than husbands. Regarding the “guilt about doing wrong by the care recipient” dimension (Factor 1), daughters reported higher scores in this variable than wives and husbands and sons scored higher than husbands. With respect to Factor 3, guilt about self-care, the results show that daughters and sons score higher than husbands and sons higher than wives. In addition, daughters and wives scored higher than sons and husbands in Factor 4, guilt about neglecting other relatives. In Factor 5, guilt about having negative feelings toward other people, daughters reported higher levels of guilt than wives and husbands. Finally, wives scored higher on depressive symptoms than the rest of the groups and daughters scored higher than sons and husbands.

The moderator role of guilt and its different dimensions in the relationship between frequency of leisure activities and depressive symptoms were analyzed separately by kinship, for caregivers’ husbands, wives, sons, and daughters. Given that similar results were found for the groups formed by husbands, wives, and sons, these results are presented in the same section.
Table 1. Differences Between Daughters, Sons, Wives, and Husbands in the Assessed Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Daughters, N = 207 (mean ± SD)</th>
<th>Sons, N = 37 (mean ± SD)</th>
<th>Wives, N = 69 (mean ± SD)</th>
<th>Husbands, N = 38 (mean ± SD)</th>
<th>F</th>
<th>Post hoc differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily hours caring</td>
<td>9.93 ± 7.83</td>
<td>10.10 ± 8.15</td>
<td>16.08 ± 7.68</td>
<td>15.20 ± 7.31</td>
<td>13.43</td>
<td>Daughters and sons spent lesser hours than wives and husbands</td>
</tr>
<tr>
<td>Time spent caring</td>
<td>52.11 ± 40.63</td>
<td>39.05 ± 43.62</td>
<td>56.71 ± 54.40</td>
<td>48.16 ± 4.38</td>
<td>1.42</td>
<td>Non-significant differences</td>
</tr>
<tr>
<td>Caregivers’ age</td>
<td>55.42 ± 9.55</td>
<td>55.79 ± 18.24</td>
<td>69.38 ± 8.49</td>
<td>75.42 ± 6.67</td>
<td>48.17</td>
<td>Daughters and sons younger than wives and husbands. Wives younger than husbands</td>
</tr>
<tr>
<td>Frequency of behavioral problems</td>
<td>36.04 ± 15.40</td>
<td>33.19 ± 14.50</td>
<td>30.11 ± 12.83</td>
<td>31.15 ± 15.98</td>
<td>3.36*</td>
<td>Daughters scored higher than wives</td>
</tr>
<tr>
<td>Care recipient functional capacity</td>
<td>61.66 ± 20.42</td>
<td>72.08 ± 28.79</td>
<td>68.88 ± 30.31</td>
<td>67.97 ± 35.01</td>
<td>2.00</td>
<td>Non-significant differences</td>
</tr>
<tr>
<td>Frequency of leisure activities</td>
<td>7.59 ± 4.17</td>
<td>7.43 ± 3.88</td>
<td>7.07 ± 3.66</td>
<td>10.16 ± 4.96</td>
<td>5.05**</td>
<td>Husbands scored higher than wives, daughters, and sons</td>
</tr>
<tr>
<td>Guilt total score</td>
<td>23.56 ± 13.02</td>
<td>24.51 ± 12.95</td>
<td>18.58 ± 10.62</td>
<td>15.41 ± 10.28</td>
<td>6.98**</td>
<td>Daughters and sons scored higher than wives and husbands</td>
</tr>
<tr>
<td>Guilt (Factor 1)</td>
<td>9.84 ± 6.47</td>
<td>9.84 ± 6.30</td>
<td>7.89 ± 6.40</td>
<td>6.92 ± 5.65</td>
<td>3.43*</td>
<td>Daughters scored higher wives and husbands. Sons scored higher than husbands</td>
</tr>
<tr>
<td>Guilt (Factor 2)</td>
<td>7.87 ± 3.73</td>
<td>8.68 ± 4.42</td>
<td>7.22 ± 3.83</td>
<td>6.13 ± 3.25</td>
<td>3.48*</td>
<td>Daughters and sons scored higher than husbands</td>
</tr>
<tr>
<td>Guilt (Factor 3)</td>
<td>2.54 ± 3.13</td>
<td>3.14 ± 4.23</td>
<td>1.74 ± 2.59</td>
<td>1.06 ± 2.44</td>
<td>4.09**</td>
<td>Daughters and sons scored higher than husbands. Sons scored higher than wives</td>
</tr>
<tr>
<td>Guilt (Factor 4)</td>
<td>2.23 ± 1.83</td>
<td>1.30 ± 1.41</td>
<td>2.64 ± 1.99</td>
<td>0.89 ± 1.20</td>
<td>10.86**</td>
<td>Daughters and wives scored higher than husbands and sons</td>
</tr>
<tr>
<td>Guilt (Factor 5)</td>
<td>1.30 ± 2.07</td>
<td>1.16 ± 1.95</td>
<td>0.72 ± 1.38</td>
<td>0.37 ± 0.94</td>
<td>3.75*</td>
<td>Daughters scored higher wives and husbands</td>
</tr>
<tr>
<td>Depressive symptoms</td>
<td>19.24 ± 12.00</td>
<td>14.19 ± 10.14</td>
<td>23.26 ± 12.29</td>
<td>12.81 ± 9.58</td>
<td>8.77**</td>
<td>Wives scored higher than daughters, sons, and husbands. Daughters scored higher than sons and husbands</td>
</tr>
</tbody>
</table>

*Note: *p < 0.05. **p < .01.
**Moderator role of guilt (total score) and its dimensions in the relationship between frequency of leisure activities and depressive symptoms for husbands, wives, and sons.**—No significant results were obtained according to the different regression analyses testing the moderator role of guilt (total scale) and its different dimensions in the relationship between frequency of leisure activities and depressive symptoms for the total sample of caregivers, or for husbands (Supplementary Table 1), wives (Supplementary Table 2), and sons (Supplementary Table 3).

**Moderator role of guilt (total score) in the relationship between frequency of leisure activities and depressive symptoms for daughters.**—The results of this analysis are shown in Table 2. Significant main effects on depressive symptoms were found in the final model for hours caring, frequency of behavioral problems, frequency of leisure activities, and guilt (total score). In addition, there was a significant effect on depressive symptoms of the interaction between frequency of leisure activities and guilt (total score).

The results of post hoc analyses (Figure 1) showed that, when guilt (total score) was high, the relationship between frequency of leisure activities and depressive symptoms was stronger ($\beta = -1.51, t = 5.05, p < .01$) than when guilt (total scale) was low ($\beta = -0.54, t = 2.07, p < .05$). On calculating the region of significance, we estimated that the frequency of leisure activities significantly predicted depressive symptoms when caregivers scored 7.22 or higher on guilt about doing wrong by the care recipient.

**Moderator role of guilt about doing wrong by the care recipient in the relationship between frequency of leisure activities and depressive symptoms for daughters.**—The results of this analysis are shown in Table 2. Significant main effects on depressive symptoms were found in the final model for hours caring, frequency of behavioral problems, frequency of leisure activities, and guilt about doing wrong by the care recipient (Factor 1). In addition, there was a significant interaction effect of frequency of leisure activities by guilt about doing wrong by the care recipient. The results of the post hoc analyses (Figure 2) showed that, when guilt about doing wrong by the care recipient was high, the relationship between frequency of leisure activities and depressive symptoms was stronger ($\beta = -1.39, t = 4.88, p < .01$) than when guilt about doing wrong by the care recipient was low ($\beta = -0.54, t = 2.07, p < .05$). On calculating the region of significance, we estimated that frequency of leisure activities significantly predicted depressive symptoms when caregivers scored 0.27 or higher on the guilt about doing wrong by the care recipient.

**Moderator role of guilt about failing to meet the challenges of caregiving in the relationship between frequency of leisure activities and depressive symptoms for daughters.**—The results of this analysis are shown in Table 2. Significant main effects on depressive symptoms in the final model were found for hours caring, frequency of behavioral problems, frequency of leisure activities, and guilt about failing to meet the challenges of caregiving (Factor 2). In addition, there was a significant interaction effect of frequency of leisure activities by guilt about failing to meet the challenges of caregiving (Factor 2) and the interaction is shown in Figure 3.

Post hoc results show that when guilt about failing to meet the challenges of caregiving was high, the relationship between frequency of leisure activities and depressive symptoms was significant ($\beta = -1.59, t = 5.61, p < .01$). In contrast, when guilt about failing to meet the challenges of caregiving was low, the relationship between frequency of leisure activities and depressive symptoms was not significant ($\beta = -0.43, t = 1.54, p = .13$). On calculating the region of significance, we estimated that frequency of leisure activities significantly predicted depressive symptoms when caregivers scored 3.47 or higher on the guilt about doing wrong by the care recipient.

**Moderator role of guilt about self-care in the relationship between frequency of leisure activities and depressive symptoms for daughters.**—The results of this analysis are shown in Table 2. Significant main effects on depressive symptoms in the final model were found for hours caring, frequency of behavioral problems, frequency of leisure activities, and guilt about self-care (Factor 3). There was a significant interaction effect of frequency of leisure activities by guilt about self-care (Factor 3).

Post hoc analyses (Figure 4) indicated that when guilt about self-care was high, the relationship between frequency of leisure activities and depressive symptoms was stronger ($\beta = -1.59, t = 4.56, p < .01$) than when guilt about self-care was low ($\beta = -0.63, t = 2.31, p < .05$). On calculating the region of significance, we estimated that frequency of leisure activities significantly predicted depressive symptoms when caregivers scored 1.32 or higher on the guilt about doing wrong by the care recipient.

**Moderator role of guilt about neglecting other relatives and guilt about having negative feelings toward other people in the relationship between frequency of leisure activities and depressive symptoms for daughters.**—Similarly to the results found for sons, wives, and husbands, analysis of the moderator role of guilt about neglecting other relatives (Factor 4) and guilt about having negative feelings toward other people (Factor 5) in the relationship between frequency of leisure activities and depressive symptoms revealed no significant moderator effects for daughters (Supplementary Table 4).

**Discussion**

The aim of this study was to analyze the moderator role of guilt in the relationship between caregivers’ frequency
Table 2. Moderation Analyses of Guilt (Total Score) and the Different Dimensions of Guilt (Factor 1, Factor 2, and Factor 3) on the Relationship Between Frequency of Leisure Activities and Depressive Symptoms in Daughter Caregivers

<table>
<thead>
<tr>
<th></th>
<th>Guilt (total score)</th>
<th>Factor 1: Guilt about doing wrong by the care recipient</th>
<th>Factor 2: Guilt about failing to meet the challenges of caregiving</th>
<th>Factor 3: Guilt about self-care</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standard β’s and t scores</td>
<td>Standard β’s and t scores</td>
<td>Standard β’s and t scores</td>
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<td></td>
<td>Step 1 Step 2 Step 3</td>
<td>Step 1 Step 2 Step 3</td>
<td>Step 1 Step 2 Step 3</td>
<td>Step 1 Step 2 Step 3</td>
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<tr>
<td></td>
<td>β       t</td>
<td>β       t</td>
<td>β       t</td>
<td>β       t</td>
</tr>
<tr>
<td>Hours caring</td>
<td>0.25** 3.46</td>
<td>0.18** 2.71</td>
<td>0.17** 2.6</td>
<td>0.25** 3.46</td>
</tr>
<tr>
<td>Frequency of behavioral problems</td>
<td>0.34** 4.90</td>
<td>0.33** 5.17</td>
<td>0.23** 3.63</td>
<td>0.34** 4.90</td>
</tr>
<tr>
<td>Functional capacity</td>
<td>0.08 1.18</td>
<td>0.11 1.60</td>
<td>0.06 0.90</td>
<td>0.08 1.18</td>
</tr>
<tr>
<td>Frequency of leisure activities</td>
<td>0.08 1.18</td>
<td>0.11 1.60</td>
<td>0.06 0.90</td>
<td>0.08 1.18</td>
</tr>
<tr>
<td>Guilt</td>
<td>−0.37** −5.59</td>
<td>−0.35** −5.59</td>
<td>−0.36** −5.65</td>
<td>−0.37** −5.82</td>
</tr>
<tr>
<td>Frequency of leisure activities × guilt</td>
<td>0.27** 4.18</td>
<td>0.22** 3.46</td>
<td>0.17* 2.54</td>
<td>0.077 3.10</td>
</tr>
<tr>
<td>R²</td>
<td>0.128 0.260 0.355</td>
<td>0.128 0.260 0.320</td>
<td>0.128 0.260 0.298</td>
<td>0.128 0.260 0.342</td>
</tr>
<tr>
<td>ΔR²</td>
<td>0.142 0.133 0.099</td>
<td>0.142 0.134 0.067</td>
<td>0.142 0.133 0.045</td>
<td>0.142 0.133 0.087</td>
</tr>
</tbody>
</table>

Note: *p < .05. **p < .01.
of leisure activities and depressive symptoms. Specifically, the different dimensions of the guilt construct have been analyzed and the moderator effects have been conducted separately for daughters, sons, wives, and husbands. In general, for wives, husbands, and sons, caregivers who report higher levels of guilt score were associated with higher scores in depressive symptoms than those who report lower levels of guilt, both for low and high levels of frequency of leisure activities (though with higher levels of depressive symptoms for those reporting lower levels of leisure activities). However, for daughter caregivers, the results suggest a moderator role of guilt in the relationship between frequency of leisure activities and depressive symptoms with regard to guilt total score and three of its dimensions: guilt about doing wrong by the care recipient (Factor 1), guilt about failing to meet the challenges of caregiving (Factor 2), and guilt about self-care (Factor 3).

Among those daughter caregivers who report high levels of guilt, engagement in leisure activities seems to be significantly associated with large reductions in the levels of depressive symptoms. These caregivers show high levels of depressive symptomatology when their engagement in leisure activities is low—in a similar way to the other kinship groups—and show a significant reduction in depressive symptoms as their frequency of leisure activities increases. However, even though a significant reduction in
When depressive symptoms is found, the mean obtained for this group is higher than the usual cutoff point of the CES-D scale considered for classifying the symptomatology as clinically relevant (Beekman et al., 1997). The reduction in depressive symptoms as the frequency of leisure activities increases observed in daughter caregivers with high levels of guilt is not found among daughter caregivers with low levels of guilt. Hence, the results confirm our hypothesis regarding the stronger relationship between the frequency of engaging in leisure activities and caregivers' depressive symptoms in caregivers with high levels of guilt compared with those with low levels of guilt but only in daughter caregivers.

These results may be partially explained by the fact that, influenced by cultural obligation expectations and norms about nurturing responsibilities (Pinquart & Sörensen, 2011), caregiver daughters may have to cope with more and/or different stressors compared with other kinship groups. These may include adequately addressing perceived “socially expected” caregiving responsibilities, such as simultaneously caregiving for parents and children, and it is likely that caregivers’ daughters experience more conflict among their roles (Stephens, Townsend, Martire, & Druley, 2001). This result may suggest gender differences in how guilt is experienced, and if this is the case it may have implications when health care professionals seek to...
measure the emotional impact of providing care for people with dementia. Moreover, as shown in Table 1, daughters report more care recipient behavioral problems, more levels of guilt (global scale), more guilt about doing wrong by the care recipient (Factor 1), and more guilt about having negative feelings toward other people (Factor 5) than wives. A plausible explanation for these findings is that daughters present other burdens or responsibilities, such as housework, childcare, or work, which may influence their levels of guilt. However, these variables have not been measured in this study, and this is an aspect that constitutes a limitation of the work. It would be very helpful to control these variables in future studies with a view to analyzing factors that might explain why daughters with low levels of leisure activities and high levels of guilt present a vulnerable profile. Conde-Sala, Garre-Olmo, Turró-Garriga, Vilalta-Franch, and López-Pousa (2010) suggested that daughter caregivers are at greatest emotional risk given that, whereas spouses perceived caregiving tasks more naturally as a part of their marital role, caring tasks have a disruptive effect on daughters’ lifestyle and make difficult the combination with other family responsibilities. As a consequence of this, daughter caregivers may have a greater objective need for the rest and disconnection that can be obtained from leisure. Therefore, engaging in leisure activities may have special positive effects for daughter caregivers, as they benefit more from these activities than husbands, sons, and wives. On the other hand, the results show that wives report higher depressive symptoms than daughters. This may be explained by the fact that wives care for more daily hours than daughters and/or because wives more often present maladaptive coping strategies, such as less self-efficacy than daughters (Depp et al., 2005).

The results of this study could make a useful contribution to the analysis of a gap in current research on behavioral treatments for depressive symptoms (Dimidjian et al., 2011). Specifically, regarding the question of who behavioral activation works for (Dimidjian et al., 2011). The present results suggest that, in caregiver populations, it might be daughter caregivers with high levels of guilt who respond best to behavioral treatment. Moreover, it would be very interesting in future research to analyze whether guilt is a potential mechanism through which behavioral treatment works to achieve clinical benefits, via studies using mediation analysis or path analysis, or in longitudinal studies. Also, and in relation to optimizing caregiver treatment effects, the results of this study contribute to highlighting the importance of identifying and analyzing modulating variables that interfere in the enhancement of leisure activities. It would be very useful for clinicians to evaluate caregivers’ levels of guilt and to design psychological interventions focused primarily on reducing them, especially in the case of daughters who present low levels of frequency of leisure activities, prior to the application of behavioral therapy. In this regard, techniques such as cognitive restructuring, which have been used successfully with dementia caregivers (Burgio, Stevens, Guy, Roth, & Haley, 2003; Losada et al., 2011) and which try to change dysfunctional thoughts that may influence caregivers’ guilt (“it is selfish for a caregiver to dedicate time to himself/herself when a relative is frail/sick and needs care”), may contribute to reducing guilt; techniques such as self-forgiveness and self-acceptance may also be useful for helping caregivers to manage their feelings of guilt (Gonyea et al., 2008). In addition, a related psychological approach, especially useful for caregivers who use a ruminative thinking style (“I shouldn’t be doing pleasant activities having a relative ill and other relatives to care for”), might be acceptance and commitment therapy (Hayes, Strosahl, & Wilson, 1999; Márquez-González, Romero-Moreno, & Losada, 2010). The specific cutoff points for guilt scores that show when frequency of leisure activities was significantly associated with depressive symptoms—for example, more than 7 on the guilt total score or more than 3 on guilt about failing to meet the challenges of caregiving—may contribute to identifying caregivers who could especially benefit from these types of intervention.

This study presents some limitations. First, its cross-sectional nature precludes our making any causal inferences. Hence, the results should be interpreted with caution, given that other explanations about the hypothesized directions of the relationships between the variables of this study are also plausible. For example, it may also be likely that caregivers with low levels of guilt engage in more leisure activities, whereas those with high levels of guilt engage in fewer leisure activities. Similarly, those caregivers with high levels of depressive symptoms may present high levels of guilt and low levels of frequency of leisure activities. More longitudinal and experimental studies are necessary to address the influence of directionality in the interpretation of these findings.

In addition, the sample, which consisted of voluntary caregivers recruited from social and health services from Spain, and the resulting sample sizes for kinship groups, especially for sons, may limit the generalization of the findings. Specifically, the results of this study may not be fully generalizable to caregivers from other countries due to the influence of contextual or cultural issues, such as beliefs or norms, in the caregiving process (Casado & Sacco, 2011; Knight & Sayegh, 2010; Losada et al., 2006). Cross-cultural studies, considering other caregiver samples, are also necessary. Further limitations of the study are related to differences in the types of caregiving tasks or activities carried out by daughters, sons, wives, and husbands and to differences as a function of kinship in the levels of formal and informal support received by caregivers. It may be that women caregivers more often carry out personal care (i.e., hygiene) or/and cooking care tasks than men (Kramer & Kipnis, 1995), who, in contrast, seem to be more involved in financial management and/or supervision of someone.
who helps them with the demands of caregiving. Future studies are needed in which these variables are controlled.

The results of this study have important clinical implications. Caregivers’ husbands, wives, and sons who report high levels of guilt appear to be psychologically vulnerable, as they are more likely to present higher levels of depressive symptoms, regardless of whether they report low or high scores on frequency of leisure activities. Similar findings have been obtained for daughter caregivers. However, daughter caregivers with high scores in guilt seem to benefit more from leisure activities, in terms of reporting lower depressive symptomatology than daughter caregivers with high scores in guilt and low scores in leisure activities. Therefore, guilt, an understudied variable in caregiving research (Losada et al., 2010), seems to be a clinically relevant dimension, and frequency of leisure activities appears to be especially positive for daughter caregivers with high levels of guilt.

In summary, the results of this study suggest the importance of considering caregivers not as a single group but as separate kinship relation subgroups (Allen et al., 2012; Cho, Zarit, & Chiriboga, 2009; Depp et al., 2005; Kim et al., 2012; Pinquart & Sörensen, 2011). This study also provides support for the multidimensionality of the caregiver guilt construct, given that the moderator effects have been found for the guilt dimensions of guilt about doing wrong by the care recipient, guilt about failing to meet the challenges of caregiving, and guilt about self-care. These guilt dimensions appear to be more related to the moral norm or the obligation belief reported by daughters about how to “give back my parent what they have done for me” (Losada et al., 2010). Finally, clinicians should pay special attention to a potential risk profile that may benefit most from behavioral interventions: daughters with high levels of guilt and low levels of frequency of leisure activities. In this sense, this study seems to provide further support for the importance of interventions targeting specific caregiving profiles, and specifically daughters with high levels of guilt, as opposed to initiatives with a more general approach (Gallagher-Thompson & Coon, 2007; Zarit & Femia, 2008).

**Supplementary Material**

Supplementary material can be found at: http://psychsocgerontology.oxfordjournals.org/

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**Conflicts of Interest**

None to report.

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References


