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Change in Indices of Distress Among Latino and Anglo Female Caregivers of Elderly Relatives With Dementia: Site-Specific Results From the REACH National Collaborative Study

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Purpose: Few empirical studies have compared the efficacy between psychoeducational (skill-building) approaches for reducing caregivers’ psychological distress and interventions modeled after typical community-based support groups. We compare the impact of two distinct interventions on Anglo and Latino caregivers of elderly relatives with dementia.

Design and Methods: The change from preassessment to postassessment (baseline to 3 months) for 213 female caregivers (122 Anglo and 91 Latino) is presented. They were seen weekly for 10 weeks in either the Coping With Caregiving psychoeducational program (instruction and practice in small groups to learn specific cognitive and behavioral skills) or in the Enhanced Support Group condition (guided discussion and empathic listening to develop reciprocal support within the group). Both programs were tailored to be sensitive to the cultural concerns of Anglo and Latino caregivers, and they were delivered in either English or Spanish by trained interventionists.

Results: Overall, participants in the Coping With Caregiving condition reported a significant reduction in depressive symptoms, increased use of adaptive coping strategies, and a trend toward decreased use of negative coping strategies when compared with those in the Enhanced Support Group condition. Results were similar for both ethnic groups: there were no main effects for ethnicity, and no significant ethnicity by treatment interaction effects.

Implications: This study provides empirical support that female caregivers benefit more from a skill-building approach to managing their distress than from support group membership alone. We find it very encouraging that the Latino caregivers responded well on key outcome variables, suggesting that Latinos will participate in clinical research and will benefit from their involvement when services are provided to meet their specific needs.

Key Words: Alzheimer’s caregiving, Interventions, Latino issues, Coping

According to the year 2000 census data, individuals from diverse racial and ethnic backgrounds are increasing, both in their absolute numbers and in their proportion to the general population. Although the older population will increase among all racial and ethnic groups, the Latino older population is projected to grow the fastest (Administration on Aging, 2000). In sheer numbers, it is expected that there will be over 13 million Latino elders by the year 2050. From this group, it is estimated that at least 4.5 million Latino elders will require long-term care (Markides, Rudkin, Angel, & Espino, 1997).
Over the past two decades, numerous studies have reported that caregiving among Anglos is associated with depression, anxiety, anger, and poor self-reported health (Bookwala, Yee, & Schulz, 2000). Moreover, this negative impact is likely to be greater for caregivers of dementia patients than caregivers of frail elder relatives without dementia (Ory, Hoffman, Lee, & Schulz, 1999). The impact of caregiving among Latinos remains unclear (Aranda & Knight, 1997; Valle, 1998); however, a few studies have reported significant depressive symptoms among female Latino caregivers (Adams, Aranda, Kemp, & Takagi, 2002; Polich & Gallagher-Thompson, 1997).

The range of intervention programs and services that have been developed to assist caregivers in coping with the stresses of caregiving includes support groups, individual or family counseling, psychotherapy, respite care, and psychoeducational programs. Taken as a whole, these interventions have shown promising results among Anglo caregivers (Bourgeois, Schulz, & Burgio, 1996). For example, both brief individual cognitive–behavioral and psychodynamic therapies are reported to reduce clinical depression in dementia family caregivers (Gallagher-Thompson & Steffen, 1994). Psychoeducational interventions oriented toward developing specific coping skills in caregivers also are effective for reducing both depression and burden (Gallagher-Thompson, Lovett, et al., 2000; Zarit, Anthony, & Boutselis, 1987) and caregiver frustration and anger (Gallagher-Thompson & DeVries, 1994), while increasing levels of participation in everyday pleasurable events (Gallagher-Thompson, Lovett, et al., 2000) and decreasing the frequency of distress associated with care recipients’ behavioral problems (Pinkston, Linsk, & Young, 1988). Support groups appear to be helpful for information sharing and peer support but less useful in teaching participants how to take care of their own needs (Gonyea, 1989). Multimodal programs involving comprehensive support and counseling have delayed institutionalization of demented patients in the early and middle stages of the disease (Mitrleman, Ferris, Shulman, Steinberg, & Levin, 1996). It is important to note that these interventions have not included Latino caregivers. Whether these interventions could be successfully applied to caregivers of diverse ethnic, racial, and cultural backgrounds remains unknown. Given the changing demographics among family caregivers, it would be useful to conduct rigorous scientific studies to obtain empirical data addressing these questions.

To our knowledge, there is only one empirically based published study to date that has focused on Latino caregivers. Gallagher-Thompson, Areán, Rivera, and Thompson (2001) compared Latino caregivers in a psychoeducational intervention to a wait-list control condition. The intervention program consisted of an 8-week Coping With Frustration class that was designed to teach participants various cognitive-behavioral strategies for managing feelings of anger and frustration that are common among caregivers. Although the original class was developed for use with Anglo caregivers (Gallagher-Thompson & DeVries, 1994), it was substantially revised and adapted to make it culturally acceptable and appropriate for Latino caregivers. This adaptation process is described in detail by Gallagher-Thompson and colleagues (2001). Following the intervention, caregivers in the class reported fewer depressive symptoms and showed a trend for increased control of feelings of anger and frustration, compared with the wait-list control participants. Although these results are encouraging, a limitation is that random assignment to the two conditions was not possible. Nevertheless, the fact that this psychoeducational approach was accepted by and helpful to female Latino caregivers has encouraged further investigation.

This paper presents data from the National Institutes of Health’s Resources for Enhancing Alzheimer’s Caregiver Health (REACH) multisite study. REACH is a unique 5-year initiative investigating the effectiveness of innovative interventions to support family caregivers (Coon, Schulz, & Ory, 1999). The data reported in this study consist of a site-specific analysis of the outcome data from the Palo Alto site. Therefore, the current study examines our site-specific primary research questions and hypotheses that focus on the direct comparison between our two group-based interventions: Coping With Caregiving (CWC) and the Enhanced Support Group (ESG).

Hypotheses

Primary Hypotheses

The current study focuses on outcomes after completion of the intensive phase of treatment (3 months after baseline assessment). The primary hypotheses to be tested were as follows. Hypothesis 1: Participants in the CWC intervention will show (a) greater improvement in depressive symptoms, (b) greater use of positive coping strategies for dealing with chronic stressors associated with caregiving, (c) less use of negative coping strategies, and (d) less bother by memory and behavior problems than participants in the ESG intervention. Hypothesis 2: participants in the ESG intervention will show (a) greater satisfaction with social support and (b) less frequency of negative interactions in the support network than participants in the CWC intervention.

Secondary Hypotheses

Two additional exploratory hypotheses were addressed. First, we explored whether the two ethnic groups were differentially responsive to the two interventions. Second, given the diversity among
Latinos, we examined whether similar patterns of change in the outcome measures might be observed if the female Latino group were limited to Mexican-Americans specifically, because this group comprised roughly two thirds of the Latina caregivers.

**Methods**

**Participants**

Female family caregivers of older adults with significant memory problems were recruited from the community. Women were targeted for inclusion because prior research indicates significant gender differences (reviewed in Lauderdale & Gallagher-Thompson, 2002). Special attention was paid to identifying organizations within the Latino community. Key recruitment sites included local diagnostic centers, local Alzheimer’s Association chapters, adult day care programs, Alzheimer’s day care programs, caregiver resource centers, and local senior centers serving the Latino communities. Strategies included the establishment of a community advisory board, staff presentations on a variety of aging and caregiving topics at community agencies, and media advertisement in both Spanish and English. (For additional information on REACH recruitment and retention strategies, see Gallagher-Thompson, Arcan, et al., 2000; Gallagher-Thompson, Solano, Coon, & Arcan, 2003; Wisniewski et al., in press.)

The national REACH project developed a standardized telephone-screening tool based on a common set of inclusion–exclusion criteria designed to identify an appropriately diverse yet well-defined target population. Study participants had to be adult caregivers at least 21 years old who lived with and provided 4 or more hours of care to family members suffering from at least two instrumental activities of daily living (IADL) or one activity of daily living (ADL) impairment (Katz, Ford, Moskowitz, Jackson, & Jaffe, 1963; Lawton & Brody, 1969). Participants must have been in the caregiving role at least 6 months, available by telephone, and planning to stay in the area for the study’s duration. These caregivers needed to assist family members with either a physician’s diagnosis of dementia or a recent Mini-Mental State Examination (MMSE) score less than or equal to 23 out of 30 (Folstein, Folstein, & McHugh, 1975). The majority of REACH sites added entry criteria relevant to site-specific hypotheses. In California, REACH caregivers also had to (a) be female and (b) self-identify as Anglo or Latino, and (c) when a clinical diagnosis of dementia was not available, the results of baseline MMSE, ADL, IADL, and Revised Memory Behavior Problem Checklist (Teri et al., 1992) scores had to be consistent with a diagnosis of dementia as determined by the project geropsychiatrist. Further details are available in the literature (e.g., Coon et al., 1999; Wisniewski et al., in press).

**Procedures**

Trained interviewers met with eligible caregivers in their homes, obtained informed consent, and administered the baseline interview. After baseline assessment, study participants within each ethnic group were randomly assigned to one of three intervention conditions: a psychoeducational CWC class, an ESG condition, or a telephone-based Minimal Support condition (MSC). Because the MSC was included only to permit certain cross-site analyses (see Gitlin et al., in press, for a review of all conditions at REACH sites), randomization was done using a 2:2:1 ratio. This resulted in a total of 147 Anglos and 110 Latinos enrolled in the study. Of these participants, 122 Anglos and 91 Latinos were randomized into the two active treatments that were of interest at this site for comparison purposes.

**Interventions–Conditions**

As described elsewhere (e.g., Coon et al., 1999; Wisniewski et al., in press), the California site added the MSC not as part of our original hypotheses or analytic plan but solely to allow comparability with other sites, as part of the national cooperative agreement to permit cross-site analyses. Thus, data from the MSC participants are included only in appropriate cross-site analyses and not in this site-specific outcome paper.

Each intervention followed a detailed protocol. Both conditions provided subjects with identical educational materials relevant to caregivers of persons with dementia. Interventionists distributed these materials at preestablished time periods (i.e., immediately after randomization as part of a project “Welcome Packet” and at the 4th intervention contact). All educational and intervention materials were available in both Spanish and English. The two conditions are as follows.

**Coping With caregiving Class.**—The CWC is a psychoeducational group intervention that is derived primarily from the works of Beck (Beck, Rush, Shaw, & Emery, 1979) and Lewinsohn (Lewinsohn, 1974; Lewinsohn, Muñoz, Youngren & Zeiss, 1986), whose theories articulate the role of cognition and behavior in the development and maintenance of negative affective states. The writings of Beck and Lewinsohn provide many highly operationalized techniques for achieving treatment goals—essentially through a reduction of negative thoughts and attitudes and through an increase in positive reinforcement by use of more adaptive social behaviors (Lewinsohn, 1974; Lewinsohn et al., 1986). The CWC taught a limited number of cognitive–behavioral mood management skills through two key approaches: first, an emphasis on reducing negative affect by learning how to relax in the stressful situation, appraise the care-receiver’s be-
behavior more realistically, and communicate more assertively; and second, an emphasis on increasing positive mood through the acquisition of such skills as seeing the contingency between mood and activities, developing strategies to do more small, everyday pleasant activities, and learning to set self-change goals and reward oneself for accomplishments along the way.

Enhanced Support Group.—Numerous studies of family caregivers suggest that both informal and formal social support may help people cope with the stresses of caregiving (e.g., Aneshensel, Pearlin, Mullan, Zarit, & Whitlatch, 1995; Clipp & George, 1990; Miller & Guo, 2000). Whereas a great deal of the clinically based literature reports the helpfulness of support groups for family caregivers, very few well-controlled empirical studies have been conducted to date. The lack of controlled studies including caregiver support groups may be partially due to the fact that support groups vary considerably in such features as frequency of meetings, type of disclosure encouraged, and the length and regularity of caregiver attendance. The ESG was patterned after typical caregiver support groups in the community and was developed by using the principles outlined in a manual on support groups published by the Alzheimer’s Association. It primarily focused on developing peer support rather than on teaching participants how to care for their own needs. The ESG was “enhanced” because initially it met weekly rather than monthly, as is typical in the community, and was standardized in frequency and duration as well as the overall length of time for participation.

Intervention Logistics

Trained interventionists ranged in their professional backgrounds and included psychologists, social workers or other helping professionals, and predoctoral or postdoctoral psychology and social work graduate students. Approximately 50% of the interventionists employed at this site were bilingual or bicultural Latinos so that interventions with the Latino portion of our sample could be delivered in Spanish. Interventions were co-led in either Spanish or English by two appropriately trained project staff. Both the CWC and ESG interventions were composed of approximately 7–9 participants, lasted 2 hr per week, and were conducted on the same schedule: once a week for the first 10 weeks during the intensive intervention phase (the outcome period reported here), and then once a month during the “booster phase” for the next 8 months. Interventions were held in well-known and accessible community locations.

Finally, critiques of the caregiving intervention literature note that treatment fidelity practices are typically ignored, thereby diminishing the replicability, generalizability, and interpretation of intervention efforts (e.g., Bourgeois et al., 1996; Burgio et al., 2001). As a way to help monitor and assess treatment implementation, detailed manuals and protocols were developed for each intervention, interventionists participated in weekly supervision, and interventions were audiotaped and reviewed by project leaders and were also rated by two different independent raters who used evaluation forms tailored to each intervention. Participant attendance was recorded to assess the amount of intervention exposure. Project leaders also created enactment checklists relevant to each intervention to describe the amount of “practice” or “use” of the intervention strategies.

Assessments and Measures

Trained project staff administered the full REACH assessment battery at baseline and at 3 months. The 3-month assessment occurred at the conclusion of our primary intervention. Although we also assessed participants at 6, 12, and 18 months to evaluate maintenance of gains, the present paper focuses on the change between preintervention and postintervention. All screening, baseline, and follow-up assessments occurred in the home or in a confidential place that was comfortable for the caregiver. Bilingual–bicultural staff conducted assessments with Latinos in either Spanish or English, based on subject preference.

Translation of REACH measures involved several carefully planned steps. First, a number of measures were reviewed for each measurement domain identified by REACH and then pilot tested with local Spanish-speaking caregivers by using conceptual translations. Conceptual translations concentrate on the maximization of similar meaning and intent across languages, using language-specific sentence structure, phrases, and shades of meaning as opposed to literal translations that focus on word-for-word transformations. Pilot results and feedback from participants and the local community advisory board influenced both measurement selection and the translation of selected measures. Next, the California site hired a professional team that was familiar with older adults and dementia to conceptually translate the measures into Spanish and then backtranslate them into English to maximize meaning, intent, and understanding across Spanish speakers representing different age cohorts, education levels, national origins, and levels of acculturation. In addition, the Miami REACH site bilingual–bicultural staff identified and entered relevant Cuban dialectal differences. Finally, the Coordinating Center hired an independent consultant to review and approve the ultimate translation.

Sociodemographic characteristics of the care recipient and the caregiver were gathered at baseline and included care recipient’s age and current levels of physical and cognitive functioning, as well as caregiver’s age, relationship to the care recipient.
(e.g., wife, or daughter or daughter-in-law), years in the United States, years of education, number of years living with the care recipient, and years of caregiving for the care recipient.

Care Recipient Self-Care Impairment.—Both the seven-item ADL scale (Katz et al., 1963) and the eight-item IADL scale (Lawton & Brody, 1969) were reported by the caregiver and used to measure care recipient level of physical impairment. The ADL assesses the level of help that the care recipient required to bathe, dress above and below the waist, eat, use the toilet, groom, and transfer in and out of a bed or chair. The IADL assesses deficits in higher-level self-care abilities, including help needed to use the telephone, prepare meals, do housework, do the laundry, shop, take medications, travel, and manage finances. Response options for both ADL and IADL were dichotomous, with 0 = no and 1 = yes, help needed. The numbers of “yes” responses to the items on the two scales were summed independently to yield two scores. ADL scores range from 0 to 6 and IADL scores range from 0 to 8, with higher scores indicating greater functional impairment for both.

Care Recipient Cognitive Functioning.—The MMSE (Folstein et al., 1975) was used as an assessment of care recipient cognitive functioning. It provides an assessment of orientation to time and place, recall, short-term memory, and arithmetic ability. Scores range from 0 to 30, with higher scores indicating higher levels of functioning.

Caregiver Depression.—Depressive symptomatology was assessed with both the overall Center for Epidemiological Studies Depression scale (CES-D; Radloff, 1977) and its four standard subscales (Hertzog, Van Alstine, Usala, Hultsch, & Dixon, 1990; Radloff, 1977). The CES-D has been used in studies with older adult samples (Hertzog et al., 1990) and older Latinos (Gonzalez, Haan, & Hinton, 2001). A separate confirmatory factor analysis conducted by the REACH Coordinating Center on all Latino participants and then on all non-Latino Anglo participants indicated a better fit with the standard subscales and supported their use, albeit there may have been insufficient power to detect the factor structures that have been found to differ across Latino groups (see, e.g., Guarnaccia, Angel, & Worobey, 1989; Miller, Markides, & Black, 1997). The overall CES-D consists of 20 items asking about the frequency with which respondents have experienced depressive symptoms within the past week. Response options range from 0 to 3 for each item: 0 = rarely or none of the time (less than 1 day), 1 = some or a little of the time (1–2 days), 2 = occasionally or a moderate amount of time (3–4 days), and 3 = most or all of the time (5–7 days). The overall Cronbach alpha for the CES-D in the current sample was .90 at baseline and .90 at 3-month follow-up. The four CES-D subscales and their relevant Cronbach alphas at baseline and 3-month follow-up, respectively, are as follows: Depressive Affect (seven items; \( \alpha = .86 \) and .87), Well-Being (four items; \( \alpha = .70 \) and .71), Somatic (seven items; \( \alpha = .74 \) and .78), and Interpersonal (two items; \( \alpha = .58 \) and .64).

Coping.—Coping was assessed by using the Revised Ways of Coping Checklist (RWCCCL; Vitaliano, Russo, Carr, Maiuro, & Becker, 1983). Participants rated their use of coping strategies to manage their caregiving situation on a 4-point Likert response format (0 = not used to 3 = regularly used). For the present analyses, we summed the scores of the RWCCCL’s Problem-Focused (15 items), Seeks Social Support (6 items), and Count Your Blessings (6 items) subscales to yield a Positive Coping Scale score (27 items), and the scores of the Avoidance (10 items) and Blame Others (6 items) subscales to create a Negative Coping Scale score (16 items). The overall Cronbach alpha for the Positive Coping Scale score was .85 at baseline and .84 at the 3-month assessment point. The overall Cronbach alpha for the Negative Coping Scale score was .82 at baseline and .78 at 3-month follow-up.

Social Support.—Caregiver perceptions of help received from others were assessed by using 11 questions on received support from the Inventory of Socially Supportive Behaviors (ISSP; Krause, 1995; Krause & Markides, 1990; also see Barrera, Sandler, & Ramsey, 1981). Received support included tangible support, such as help with transportation (three items; \( \alpha = .61 \) and .53 at baseline and 3 months, respectively); emotional support, such as having others listen and show interest (four items; \( \alpha = .82 \) and .78); and informational support, such as sharing suggestions (four items; \( \alpha = .64 \) and .73). Responses were made along a 4-point rating from “never” to “very often.” Satisfaction with support was measured with three items concerning the overall satisfaction with tangible, emotional, and informational support received on a 4-point scale ranging from “not at all satisfied” to “very satisfied” (three items; \( \alpha = .67 \) and .66). Negative social interaction was also assessed with four items, such as criticisms by others, on a 4-point rating from “never” to “very often” over the past month (four items; \( \alpha = .82 \) and .77).

Caregiver Burden and Bother.—The Revised Memory and Behavior Problems Checklist (RMBPC; Teri et al., 1992) measures the type and number of care recipient disturbing behaviors, emphasizing 24 memory-related problems. For each behavior exhibited, the caregiver is then asked how much it bothers her on a 5-point scale ranging from “not at all” to “extremely.” An additional item was added
to the original checklist; it asked if the care recipient exhibited any memory or behavior problems not covered on the preceding list and provided space for up to three additional problem behaviors with accompanying bother responses. Bother scores, not disturbing behaviors, were the outcomes of consideration in this domain. Average bother ratings were computed by summing total appraised stressfulness and dividing by the number of problems. Bother items for which the behavior was not exhibited were ignored in calculating the conditional bother scores. This approach has been used previously (Goode, Haley, & Roth 1998; Haley et al., 1996) and allows for computation of average appraisals of stressors independent of the number of stressors. The overall Cronbach alpha for the average bother ratings was .88 and .85 for the baseline and 3-month assessments, respectively.

Results

Tables 1 and 2 provide select sociodemographic data for the caregiver subjects grouped according to intervention condition and ethnicity, respectively. Although randomized to condition, caregivers in the ESG did have a significantly higher mean education level than the caregivers in the CWC (p < .05); however, this difference was less than 1 year (12.83 vs. 12.05). There was also a suggestion that the caregivers in the ESG had lived in the United States longer than the caregivers in the CWC (p = .05), but the difference in mean levels was less than 2 years (49.54 vs. 47.75). There were no differences between the two interventions on other caregiver and care recipient sociodemographic characteristics or care recipient level of functioning.

However, as seen in Table 2, the Latino caregivers were substantially younger than their non-Latino Anglo participants, had fewer years of education, and had lived with the care recipient fewer years even though they had been caregiving slightly longer. Unsurprisingly, Latinos on average had lived in the United States for fewer years, with 56% of Latinos versus 8.2% of non-Latino Anglos being foreign born. Latino caregivers were more likely to be daughters and have female care recipients, whereas non-Latino Anglos were more likely to be wives and to provide care for male care recipients. There were no differences between the ethnic groups’ care recipients on age or level of functioning. There also were no interactions between intervention condition and ethnicity on any of the sociodemographic variables.

Primary Analyses

The primary hypotheses were tested with two (intervention) by two (ethnicity) analyses of covariance (ANCOVAs), with the change score on specific measures of interest as the dependent variable, and age and education as covariates. Age and education were selected as covariates because of the substantial ethnic differences on these two variables. Change scores were created by subtracting the baseline value of a given variable from the value obtained at 3 months.

Table 3 provides the means and standard deviations for the outcome measures at baseline and 3 months and the change from baseline to 3 months for caregivers grouped according to type of intervention and ethnicity. Means of depressive symptoms (CES-D total) at baseline ranged from 15 to above 18. Although the CES-D does not provide a diagnosis of...
depression, a cutoff score of 16 on this measure was used to differentiate between participants at greater versus less risk for clinical depression. The data indicate that 48% of this total sample scored within the higher risk range (CES-D ≥ 16). There was no significant difference in this proportion across type of intervention or ethnicity. At 3 months, the total CES-D scores were lower for all four groups. The ANCOVA for the change in CES-D indicated a significant decrease in depressive symptoms for the CWC, that is, $t(104) = 3.44$ and $p = .00$, whereas $t(107) = 2.27$ and $p = .03$, although this decrease was similar for the two interventions. No evidence of an ethnicity effect or an intervention by ethnicity interaction emerged. Thus, Hypothesis 1(d) was not supported.

Caregiver bother from memory and behavior problems showed a decrease from baseline to 3 months for both interventions across both ethnic groups (see Table 3). An ANCOVA for repeated measures showed this change to be significant, that is, $F(1,166) = 4.77$ and $p = .03$, although this decrease was similar for the two interventions. No evidence of an ethnicity effect or an intervention by ethnicity interaction emerged. Thus, Hypothesis 1(d) was not supported.

Table 3 includes two measures of social support: (a) the overall satisfaction with the support caregivers received, and (b) the extent of negative interactions experienced in the social support network. The change in support satisfaction was across groups. As shown in Table 4, there were no significant effects for intervention, ethnicity, or intervention by ethnicity interaction. In contrast, there was a marginal effect of intervention type on the change in negative interaction (see Table 4).
There were no significant effects for ethnicity or the intervention by ethnicity interaction. Thus, Hypotheses 2(a) and 2(b) are not fully supported. However, post hoc comparisons showed that the negative interactions decreased significantly in the CWC, that is, $t(102) = 3.41$ and $p = .001$, but not in the ESG participants, that is, $t(107) = 1.43$ and $p = .15$.  

The table below provides the means and standard deviations for the Depressive Symptoms, Coping, Social Support, and Conditional Burden Measures:

### Table 3. Means and Standard Deviations for the Depressive Symptoms, Coping, Social Support, and Conditional Burden Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coping With Caregiving</th>
<th>Enhanced Support Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Latino ($n = 42$)</td>
<td>Anglo ($n = 63$)</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>CES-D, total score</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>16.33</td>
<td>12.42</td>
</tr>
<tr>
<td>3 Month</td>
<td>13.28</td>
<td>10.74</td>
</tr>
<tr>
<td>Change</td>
<td>-3.05</td>
<td>10.09</td>
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<tr>
<td>CES-D, Well-Being subscale</td>
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<td></td>
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<tr>
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<td>7.88</td>
<td>3.19</td>
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<tr>
<td>3 Month</td>
<td>8.29</td>
<td>3.22</td>
</tr>
<tr>
<td>Change</td>
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<td>3.18</td>
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<tr>
<td>CES-D, Depressive Affect subscale</td>
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<td>5.48</td>
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<tr>
<td>3 Month</td>
<td>4.14</td>
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</tr>
<tr>
<td>Change</td>
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<tr>
<td>CES-D, Somatic Complaint subscale</td>
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<tr>
<td>Baseline</td>
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<tr>
<td>3 Month</td>
<td>4.81</td>
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<td>Change</td>
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<tr>
<td>CES-D, Interpersonal subscale</td>
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<tr>
<td>3 Month</td>
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<td>Change</td>
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<td>Positive Coping scale</td>
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<tr>
<td>Baseline</td>
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<tr>
<td>3 Month</td>
<td>60.88</td>
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<tr>
<td>Change</td>
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<td>9.47</td>
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<tr>
<td>Negative Coping scale</td>
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<td>Baseline</td>
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<tr>
<td>3 Month</td>
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</tr>
<tr>
<td>Change</td>
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<tr>
<td>Support, Satisfaction</td>
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<tr>
<td>Baseline</td>
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<td>3 Month</td>
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<td>Change</td>
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<tr>
<td>Support, Negative Interaction</td>
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</tr>
<tr>
<td>Baseline</td>
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<tr>
<td>3 Month</td>
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<td>2.78</td>
</tr>
<tr>
<td>Change</td>
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<td>2.97</td>
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<tr>
<td>RMBPC–Conditional Bother score</td>
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<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>1.40</td>
<td>0.92</td>
</tr>
<tr>
<td>3 Month</td>
<td>0.96</td>
<td>0.77</td>
</tr>
<tr>
<td>Change</td>
<td>-0.44</td>
<td>0.82</td>
</tr>
</tbody>
</table>

Notes: RMBPC = Revised Memory and Behavior Problems Checklist; CES-D = Center for Epidemiological Studies Depression scale; “change” is the score at 3 months minus the baseline score.

**CES-D:** For the total score and scores on the Depressive, Somatic, and Interpersonal subscales, a positive change indicates increased symptoms, whereas negative change indicates improvement. For the Well-Being subscale the reverse is true.

**Change:** Change on the Positive Coping scale in the positive direction indicates increased use of positive coping strategies, and change on the Negative Coping scale in the positive direction indicates increased use of negative coping strategies.

**Support, Satisfaction:** For the support Satisfaction scale, positive change indicates improved satisfaction.

**Support, Negative Interaction:** For the Negative Interaction scale, negative change indicates decreased negative interaction.

**On the conditional bother measure, negative change indicates less distress from the occurrence of memory and behavior problems.**
**Discussion**

The present study adds to the growing literature that psychoeducational interventions based on principles of cognitive behavioral therapy (CBT) can be effective for reducing the chronic stress of caregiving. Our findings further extend the current literature by documenting that a CBT intervention is more beneficial to caregivers than a traditional support group. Caregivers in the CWC, when compared with ESG participants, reported decreased depression, increased use of positive coping strategies, the tendency to use fewer negative coping strategies, and the experience of fewer negative interactions in their social network. However, when compared to baseline levels, caregivers in both the CWC and ESG were less bothered by care recipient memory and behavior problems.

The CWC's positive effect on depressive symptoms and coping skills is most likely attributable to CBT tenets incorporated into the intervention. The class taught caregivers the relationship between mood and participation in pleasurable activities and encouraged them to develop strategies to participate in small everyday pleasant activities, thereby increasing the frequency of positive reinforcement. CWC also taught them to challenge negative thoughts through the use of daily thought records and to appraise the care-receiver's behavior more realistically. Greater reductions in negative interactions with social network members among CWC participants may be the result of these CBT techniques combined with additional behavioral skill training on assertive communication.

The overall pattern of change was similar for both Latino and Anglo caregivers, and this trend remained evident when the comparison was limited to the Mexican-American and Anglo caregivers. Moreover, the data replicate the results of a recent pilot study with Latino caregivers showing that a psychoeduca-

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**Table 4. Analysis of Covariance for Treatment and Ethnicity Conditions**

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>ANOVA F&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T</td>
</tr>
<tr>
<td>CES-D Total</td>
<td>4.96&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td>Well-Being</td>
<td>0.68</td>
</tr>
<tr>
<td>Depressive Affect</td>
<td>5.14&lt;sup&gt;**&lt;/sup&gt;</td>
</tr>
<tr>
<td>Somato-motor</td>
<td>1.66</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>6.52&lt;sup&gt;**&lt;/sup&gt;</td>
</tr>
<tr>
<td>Positive Coping</td>
<td>6.77&lt;sup&gt;**&lt;/sup&gt;</td>
</tr>
<tr>
<td>Negative Coping</td>
<td>2.86&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td>Support Satisfaction</td>
<td>0.06</td>
</tr>
<tr>
<td>Negative Interaction</td>
<td>3.60&lt;sup&gt;**&lt;/sup&gt;</td>
</tr>
<tr>
<td>RMBPC conditional</td>
<td>2.20</td>
</tr>
</tbody>
</table>

**Note:** ANOVA = analysis of variance; CES-D = Center for Epidemiological Studies Depression scale; RMBPC = Revised Memory and Behavior Problems Checklist; T = Treatment main effect; E = Ethnicity main effect; T × E = Treatment × Ethnicity interaction.

<sup>a</sup>F<sub>3,1207</sub>, for the RMBPC conditional, df = 1,165; note that the RMBPC was not given at the 3-month interval if the care recipient had been placed or was deceased.

<sup>b</sup>The effect size values for Cohen’s d correspond to the significant F in each row.

<sup>*</sup>p < .06; <sup>**</sup>p < .05.
tional program developed by using a CBT approach was effective in reducing similar indices of psychological distress (Gallagher-Thompson et al., 2001). Likewise, the results follow the pattern of our earlier work that found skill-building interventions to be superior to a wait-list control (Gallagher-Thompson, Areán, et al., 2000). The current study also compares favorably with research reporting the positive benefits of individual and group CBT with both caregiving and noncaregiving patient samples (see Chambless et al., 1996; Pinquart & Sörensen, 2001; Teri & McCurry, 2000). To our knowledge, there have been no prior studies comparing CBT skill-building interventions with traditionally oriented support groups that are so often provided in the community. In addition, to our knowledge, this study along with the REACH site-specific companion study being completed at the University of Miami are the only attempts to complete a randomized clinical trial to intervene with female Latino caregivers.

These results are particularly encouraging because the psychoeducational intervention was beneficial for participants regardless of educational background. This challenges previous assumptions that psychoeducational interventions are intimidating to individuals with less education (Torres-Matrullo, 1982), and may be especially relevant to female Latino caregivers who may have had less opportunity to receive formal education (O’Brien, 1993; U.S. Department of Health and Human Services, 2001).

There are several reasons for advocating a CBT approach such as CWC for Latinos. According to Miranda (1976), the expectations of traditional Latino patients include immediate symptom relief, guidance and advice, and a problem-centered approach. Although CWC’s CBT concepts were beneficial for both the Latino and Anglo caregivers, it is important to note that the manner in which the information was delivered was tailored to meet the cultural expectations of each ethnic group. For example, although the mainstream value of “taking time out for oneself” is less emphasized in Latino culture, especially for women (Organista & Muñoz, 1996), the CWC intervention encouraged caregivers to participate in pleasurable activities for the purpose of helping them become a better caregiver.

A similar strategy was used when teaching assertiveness skills. In traditional Latino culture, assertiveness can be contrary to the culture’s emphasis on communication that is polite, nonconfrontational, deferential, and indirect. The CWC class taught caregivers the importance of asking for help from others in an effort to be a better caregiver. Moreover, the use of homework assignments and chalkboards helped caregivers perceive this treatment as more of a classroom experience rather than psychotherapy. Given the stigma associated with psychotherapy among Latinos, the educational approach used in the CWC may also have combated the stigma attached to therapy. This study demonstrates that when appropriate modifications are made to intervention materials, caregivers of diverse backgrounds can benefit from CBT concepts.

Given the lack of culturally sensitive services offered to the Latino population, such positive results with female Latino caregivers are particularly important to consider. The psychoeducational intervention, as developed, can be conducted by a variety of professionals who have appropriate interests and interpersonal skills (Thompson, Gallagher, Nies, & Epstein, 1983). This consideration can result in increased dissemination to caregivers in situations in which few highly skilled professionals are available.

However, there are important limitations to this research that warrant discussion. Caregiver knowledge and understanding of the skills developed in the CWC were not assessed and the study did not include measures that assessed the mechanism for treatment response. Thus, comments regarding which aspects of the interventions led to decreases in depression and improved coping strategies are speculative.

Several other study limitations are tied to the generalizability of the results. The study was limited to female caregivers. Whether a psychoeducational intervention versus a traditional support group will result in the same differential effects for male caregivers remains unclear. However, clinical–pilot work in our lab suggests that the CWC with Anglos is an effective and palatable intervention (Lauderdale & Gallagher-Thompson, 2002). Similarly, most female Latino study participants self-identified as Mexican American, and the small number of non-Mexican Latinos prevented us from comparing different Latino groups on outcome measures. Moreover, participants were recruited from only one region of the United States, and therefore it is difficult to generalize these results to caregivers that reside in areas outside of Northern California. This is especially relevant for female Latino caregivers, who may live in areas where access to information and resources in Spanish is limited.

Despite these limitations, our findings contribute important information to the caregiver intervention literature. Psychoeducational approaches grounded in CBT tenets are an effective intervention modality for decreasing depression and increasing effective coping strategies among Latino and Anglo caregivers. Based on the positive findings in this study and our previous work (Gallagher-Thompson et al., 2000b; Gallagher-Thompson et al., 2001), it is reasonable to conclude that using these procedures is more helpful than simply attending a traditional community-based caregiver support group. It is important to note that although the information conveyed in the intervention was the same for both ethnic groups, the manner in which the information was conveyed was tailored to be sensitive to the cultural concerns of Anglo and Latino caregivers.
Future research has to address issues such as differential response patterns of wives compared with daughters, and it must more closely examine the impact of caregiving on physical health variables. Our center is beginning a project to study patterns of diurnal variation in cortisol, as well as diurnal sleep patterns before and after intervention, to determine the extent to which these systems are dysregulated and the degree to which they may respond beneficially to psychoeducational interventions.

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