

NIH Public Access

Author Manuscript

Ann Behav Med. Author manuscript; available in PMC 2013 May 18.

Published in final edited form as:

Ann Behav Med. 2004 June; 27(3): 162–171. doi:10.1207/s15324796abm2703_4.

Social Support and Psychological Adjustment Among Latinas With Arthritis: A Test of a Theoretical Model

Ana F. Abraído-Lanza, Ph.D.

Columbia University

Abstract

Background—Among people coping with chronic illness, tangible social support sometimes has unintended negative consequences on the recipient's psychological health. Identity processes may help explain these effects. Individuals derive self-worth and a sense of competence by enacting social roles that are central to the self-concept.

Purpose—This study tested a model drawing from some of these theoretical propositions. The central hypothesis was that tangible support in fulfilling a highly valued role undermines self-esteem and a sense of self-efficacy, which, in turn, affect psychological adjustment

Methods—Structured interviews were conducted with 98 Latina women with arthritis who rated the homemaker identity as being of central importance to the self-concept.

Results—A path analysis indicated that, contrary to predictions, tangible housework support was related to less psychological distress. Emotional support predicted greater psychological wellbeing. These relationships were not mediated by self-esteem or self-efficacy. Qualitative data revealed that half of the sample expressed either ambivalent or negative feelings about receiving housework support

Conclusions—Results may reflect social and cultural norms concerning the types of support that are helpful and appropriate from specific support providers. Future research should consider the cultural meaning and normative context of the support transaction. This study contributes to scarce literatures on the mechanisms that mediate the relationship between social support and adjustment, as well as illness and psychosocial adaptation among Latina women with chronic illness.

INTRODUCTION

A substantial body of research attests to the beneficial effects of social support on psychological adjustment to chronic illness (1). A growing number of studies and theoretical formulations, however, indicate that although support often is motivated by good intentions, it sometimes has unintended negative consequences on the recipient's psychological health (2,3).

It is useful to draw distinctions concerning which types of support might have negative effects. Across a variety of chronic conditions, including rheumatoid arthritis (4,5), multiple sclerosis (6), and cancer (7), individuals consistently indicate that emotional support is helpful and desirable. Furthermore, emotional–esteem support benefits psychological wellbeing among people with various conditions (1), including rheumatic diseases (8–11).

^{© 2004} by The Society of Behavioral Medicine.

Reprint Address: A. F. Abraído-Lanza, Ph.D., Columbia University, Mailman School of Public Health, Department of Sociomedical Sciences, 722 West 168 Street, 9th Floor, New York, NY 10032. AFL7@columbia.edu.

Esteem support is probably relevant for a wide variety of stressors, both because ego-threat is a common element in stressful life events and because a large proportion of negative events involve conflict in interpersonal relationships, which implicitly or explicitly involves criticism or devaluation by other persons. (13, p. 68)

It is interesting, however, that there is a paucity of empirical research testing whether selfesteem mediates the relationship between emotional support and psychological well-being.

In contrast to emotional or esteem support, other types of support, specifically, tangible or instrumental assistance, are not consistently beneficial. Some studies report beneficial effects of tangible support on psychological well-being (14); in others, it is related to distress (15,16). In still others, the beneficial effects and perceived helpfulness of tangible support depend on who provides the help or the recipient's level of disability (5,17–19). The negative effects of well-intended tangible support are not trivial. A recent study of older individuals with disabilities documented long-term consequences of negative reactions to tangible support. After controlling for age, gender, and disability, distress in response to receiving assistance with activities for daily living was related to depressive symptoms 1 year later (2).

These studies demonstrate that tangible social support sometimes has unintended negative consequences on the psychological health of people with chronic illness. But why does tangible support "backfire"? Identity processes may provide clues. One adaptive task of illness involves maintaining a satisfactory self-image. This requires finding the balance between accepting help and maintaining some sense of competence and mastery, despite the reliance on others for care and support (20). In contrast to emotional support, instrumental assistance may threaten self-esteem and the sense of competence and mastery.

It is useful to draw from symbolic interactionist theory, identity theory, and helping theory in predicting why and for whom tangible support may have this effect. According to symbolic interactionist theory (21), interpersonal transactions form and maintain identity. Social support that helps an individual fulfill a highly valued role identity can be appraised negatively as the action symbolically reflects the inability to perform the role. This can be detrimental because, according to identity theory, roles that one values (such as being a parent, a worker, or a spouse) provide a sense of self-affirmation, identity, and self-worth (22,23). If fulfilling or enacting important roles contributes to self-esteem and psychological well-being (23), then well-intended support or help from others can actually make the recipient feel worse. Well-intended support may undermine competence and self-esteem in performing valued roles. Providing social support aimed at helping an individual fulfill an important role can make the inability to fulfill that role more salient. Heightening a sense of incompetence in a central role may adversely affect self-esteem and psychological wellbeing. In symbolic interactionist terms, the support symbolizes incompetence, reflected by the support provider's action and, ultimately, the help recipient's own view of herself or himself. These ideas are also consistent with helping theory, which proposes that reactions to help can be understood in terms of the recipient's perceived threat to self-esteem (3). Help may "imply a threatening failure to exhibit competence where one is supposed to be an expert" (3, p. 49). Thus, help can threaten the self-concept, as receiving help in fulfilling an important role is inconsistent with the self-image. Help may also underscore dependency by emphasizing incompetence and the inability to meet ideals, thereby threatening the recipient's self-esteem. If help is perceived as self-threatening, recipients exhibit defensive

reactions (e.g., negative affect). Thus, well-intended tangible social support can backfire by undermining competence and self-esteem.

A Focus on the Homemaker Role Among Latinas With Arthritis

Several perspectives, including symbolic interactionist, identity, and helping theories, suggest that tangible support aimed at helping an individual with chronic illness to fulfill a highly valued role can actually make the help recipient feel worse. This hypothesis was tested by focusing on the homemaker role and role-specific tangible support—help with housework—among Latina women with arthritis.

Arthritis often involves pain, discomfort, and disability, symptoms that are associated with psychological distress and lower self-esteem and mastery over the illness (11,24,25). There is evidence that a sense of competence (the ability to accomplish important activities) mediates the relationship between illness stressors (e.g., pain) and psychological well-being (25), suggesting that illness symptoms may operate, in part, by decreasing a sense of mastery or self-efficacy. Self-efficacy over the illness, in turn, plays an important role in adjustment to arthritis (19,25,26).

The ability to fulfill valued role activities may be particularly important among people with chronic diseases such as arthritis (27,28). Because of pain and disability, however, arthritis interferes with the ability to perform various activities associated with the homemaker role (29). At the same time, a sense of competence is one of the most rewarding aspects of the homemaker role (30). In one study of people with rheumatoid arthritis (most of whom were women), respondents frequently reported feeling distressed by their diminished role as homemaker and aimed to keep up with normal housework activities to maintain their self-images (31).

Given the demands of arthritis, receiving help with housework may be distressing for those women who place high value on the homemaker role—regardless of ethnic background. Cultural norms, however, influence the extent to which roles are valued. Family roles, for example, are prominent in Latino culture. The orientation toward home and family is considered a core feature of Latino value systems (32). In an ethnographic study of older Puerto Rican women, respondents largely defined themselves in terms of their roles as mothers, and activities centered around the family, home, and household (33). Family-related identities, such as the homemaker role, are particularly relevant to the experiences of Latina women (34,35). Little is known, however, about social support and other psychosocial adaptation processes among Latinas with rheumatic diseases, who constitute an overlooked population in this field of research. In general, there is a great need for more studies on the health of Latina women (36), particularly theoretically and culturally grounded research. This study tested a theoretical model that espouses some of the cultural values of Latina women, a historically understudied population in arthritis research.

There is some debate concerning the appropriate methods for studying ethnically diverse populations. Qualitative data are needed to help identify constructs and guide the development of theories that are relevant to diverse samples. In this study, both quantitative and qualitative data were therefore used. Qualitative data were collected in order to better understand Latinas' own experiences concerning social support.

A Proposed Model of Social Support

Drawing from a number of theoretical assertions, I propose a conceptual model to explain how social support may actually make individuals with chronic illness feel worse. Figure 1 depicts this model and its principal hypotheses. Arthritis symptoms, such as pain and disability, lead to a lowered sense of self-esteem and competence or self-efficacy over the

illness (Paths a and b). In contrast, social support involving emotional assurances contributes to self-esteem and a sense of competence that one has the resources to deal with the illness (Paths c and d). Self-esteem and self-efficacy, in turn, enhance psychological adjustment (Paths e and f). However, social support in fulfilling *highly valued* roles makes individuals feel worse. In these situations, social support reflects and makes salient the inability to perform important roles. Therefore, among individuals for whom the homemaker role is an important identity, housework support undermines self-esteem and a sense of self-efficacy or competence (Paths g and h), which, in turn, affect psychological adjustment.

METHODS

Procedure

Respondents were recruited from a rheumatic disease specialty clinic of a major hospital in New York City that serves a large Latino population. Eligibility criteria were female, 18 years of age or older, Hispanic ethnicity (defined as individuals of Puerto Rican, Mexican, Cuban, South or Central American, or other Spanish culture or origin), and diagnosis of rheumatic disease. There were 127 Latina women asked to participate in the study. Only 9 (7%) declined. Although 118 women gave consent, nine interviews could not be scheduled. Therefore, 109 Latina women were interviewed. As explained in more detail in the Results section, however, the final sample consisted of 98 respondents because analyses were limited to those women who rated the homemaker identity as central to their self-concepts.

Data were collected using a structured interview, conducted in the respondent's language and site (home or clinic) of choice. Interviews lasted an average of 80 min. The majority (84.4%) were conducted in Spanish. Most (70.6%) took place in respondents' homes, and the remainder were in a private room at the clinic. Respondents were paid \$25 for their participation.

Measures

Spanish versions of the self-efficacy, pain, and functional disability instruments used in this study were developed by the Stanford Patient Education Research Center for the Spanish Arthritis Self-Management Program (SASMP). The measures were translated for use with various Hispanic subgroups, avoiding region-specific phrases and terminology, using a highly effective back-translation procedure (37). González, Stewart, Ritter, and Lorig (38) provided details concerning the translation and validation of the measures. The Spanish version of the depression inventory used in this study was developed by the National Center for Health Statistics for use in the Hispanic Health and Nutrition Examination Survey and validated for use among Latinos with arthritis by the SASMP group (38).

A research team in New York City developed the Spanish versions of the remaining scales. A back-translation technique using two iterations with four independent translators was used (37). All translators were native Spanish speakers with formal training in psychology or the humanities. The English version was translated into Spanish by Translators A and B, working independently. Translators C and D, working separately, then translated the scales back to English. Discrepancies between versions were settled by the principal investigator (Ana F. Abraído-Lanza), consulting with one or more team translators. In addition, pilot tests were conducted to ensure that participants understood questionnaire items. On the basis of pilot test results, a small number of items were revised to assure the accuracy and understandability of items. Internal consistency reliability estimates (Cronbach's alpha) for each scale are shown on the diagonal in Table 1.

Pain was measured by a six-item instrument used in the Medical Outcomes Study (39) to assess frequency and intensity of pain over the past 4 weeks (e.g., "During the past four

weeks, how often have you had pain?"). The six items are summed, yielding scores that may range from 4 to 43, with high scores indicating more severe pain.

Disability was measured by the functional disability subscale of the Health Assessment Questionnaire (HAQ) (40). The HAQ is a self-report measure with established reliability and validity among arthritis populations (41) and shows adequate agreement with physicianrated disease status (42). The measure is composed of 24 questions that assess mobility and ability to perform activities of daily living (e.g., eating, dressing), rated on a 4-point scale ranging from 0 (*without any difficulty*) to 3 (*unable to do*). The mean is calculated to obtain a disability score. In this study, the mean was 1.85 (SD = .61), indicating that the average respondent performed activities with "much difficulty," or a moderately high level of disability.

Homemaker role importance, the importance of the homemaker role identity to the selfconcept, was assessed with the Identity subscale of Luhtanen and Crocker's (43) Collective Self-Esteem scale. Respondents indicate the extent to which they agree with four statements concerning the homemaker role (e.g., "Overall, being a homemaker has very much to do with how I feel about myself") on a 7-point response scale ranging from 1 (*strongly disagree*) to 4 (*neutral, neither agree nor disagree*) to 7 (*strongly agree*). Although two items in the original scale are reverse-keyed, to avoid confusion, all statements were worded such that agreement indicated importance. The homemaker role importance score was obtained by averaging the four items, yielding scores that could range from 1 to 7. The Identity subscale of the Collective Self-Esteem scale has shown good psychometric properties in studies of Latinos (44).

Emotional support was assessed with an eight-item subscale of a social support measure developed for arthritis populations (45). In this study, respondents were asked to name the two people who help them most often when they are not feeling well, that is, their primary and secondary providers of support. Next, they were asked to indicate the extent to which they receive various types of support from each provider. Eight items assessed emotional and esteem support (e.g., "Listens to you," "Makes you feel you have something positive to contribute to others"), rated on a 7-point scale ranging from 1 (*never*) to 7 (*always*). Housework support was measured with three items created for this study ("Cleans the apartment/house," "Helps with other housework tasks," "Helps cook meals"). Scores for emotional and housework support were obtained by averaging items across the two providers and could therefore range from 1 to 7.

Self-esteem was measured by Rosenberg's (46) 10-item scale, which assesses general feelings of self-worth (e.g., "I feel that I have a number of good qualities") rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores could range from 10 to 50. The scale demonstrates high reliability in rheumatoid arthritis samples (e.g., 11).

Self-efficacy reflects general feelings or beliefs about competence or performance capabilities. This study used two subscales from a self-efficacy measure developed for arthritis populations (47). The first subscale (six items) measures the extent to which the respondent believes she is able to control pain and continue daily tasks (e.g., "How certain are you that you can continue most of your daily activities?"). The second (seven items) assesses control over other symptoms such as fatigue (e.g., "How certain are you that you can regulate your activity so as to be active without aggravating your arthritis?"). Ratings are made on a 10-point scale ranging from 1 (*very uncertain*) to 10 (*very certain*), and scores are obtained by summing items within each subscale. As the two subscales were highly correlated in this study (r = .79), they were combined to form a single self-efficacy score, which could range from 13 to 130.

Psychological adjustment—Because psychological well-being and ill-being constitute different dimensions of psychological adjustment, various measures were used to assess adjustment. The Positive and Negative Affect Schedule (PANAS) (48) is a 20-item scale. Respondents rate how often they experienced 10 positive (e.g., "excited") and 10 negative (e.g., "nervous") feelings over the past week. Psychological well-being was also assessed with the Index of Affect, a validated instrument used in large-scale national surveys (49). This 8-item semantic differential scale assesses feelings about life as a whole (e.g., *boring-interesting, enjoyable-miserable*), with high scores indicating greater psychological wellbeing. Depressive symptoms were measured with the Center for Epidemiologic Studies Depression scale (CES–D)(50).Respondents indicate how often they experienced 20 symptoms of depression during the previous week, using a 4-point scale ranging from 0 (*rarely*) to 4 (*most of the time*). The PANAS and CES–D have been used extensively in prior research on arthritis populations and show excellent psychometric properties (e.g., 42,45,51).

A factor analysis of the psychological adjustment measures revealed that a two-factor model best fit the data, $\chi^2(1, N = 109) = 0.50$, p = .49; goodness-of-fit index = .98. The first factor could be described as a general psychological well-being factor, the second, as psychological distress. Therefore, two measures of psychological adjustment were created. Psychological well-being is composed of the summed score of the Index of Affect and PANAS positive items, yielding scores with a possible range of 18 to 106. Psychological distress consists of the sum of the CES–D and PANAS negative items, yielding scores that could range from 10 to 110. The correlation between these two factors was –.59 (p < .0001), suggesting that they are related but tap somewhat different dimensions of psychological adjustment.

It is common practice to use self-reports of pain and other psychosocial variables in arthritis research. Moreover, the PANAS and CES–D are commonly used indicators of subjective well-being in this population (e.g., 51). There has been some debate, however, about the extent to which self-reports of pain, psychological adjustment, and other psychosocial variables are "contaminated" by Neuroticism or Negative Affectivity (NA) (52). Of importance, a large-scale, 7-year longitudinal study of individuals with arthritis demonstrated that self-reports of pain and other psychosocial variables (including social support) do indeed reflect disease-related indicators and not simply NA (53).

Data Analyses

The theoretical model was tested by conducting a path analysis with EQS (Version 5.7) software (54). This method is advantageous as it simultaneously tests the effects of independent variables on various dependent variables in one model, as well as direct and indirect (mediating) effects. Furthermore, the fit of different models to the data can be compared.

The path model contained 18 parameters to be estimated: variances of 4 independent variables (pain, disability, emotional support, and housework support), 10 regression (path) coefficients, and 4 error variances for dependent variables (self-efficacy, self-esteem, psychological well-being, and psychological distress). For sufficient statistical power, a general guideline that was proposed (54) is a minimum of 5 participants per parameter, suggesting that the sample size (N=98) was adequate for testing the proposed model.¹

Goodness of fit was evaluated with the comparative fit index (CFI), as it avoids fit underestimation in small samples, as well as the non-normed fit index (NNFI) (56). Values greater than .90 on both of these indices signify good fit (56). Model fit was also determined by a ratio of chi-square to degrees of freedom (χ^2/df) less than 3, and an RMSEA equal to

or less than .05 (57). For models that were inadequately specified, post hoc modifications were incorporated. Lagrange multiplier modification indices were used to determine which path, if added to the model, would promote fit (54,56). Only theoretically meaningful paths were added. After modifying and reestimating the model, the changes in chi-square and multiple fit indexes were evaluated to determine model fit. Finally, to yield a parsimonious model, nonsignificant parameters were eliminated based on Wald test results (58).

RESULTS

Sample

The sample consisted of Latina women with various forms of arthritis, all of which are characterized by pain. The majority of the sample had rheumatoid arthritis (54.1%); the remainder had systemic lupus erythematosus (15.6%), osteoarthritis (15.6%), more than one rheumatic disease (9.2%; usually involving either rheumatoid arthritis or lupus), or another type of rheumatic disease (5.5%). A one-way analysis of variance of each of the key variables in this study indicated that pain, disability, emotional support, housework support, self-efficacy, self-esteem, psychological well-being, and psychological distress did not vary as a function of diagnosis.

The average respondent was 50.6 years old (SD = 14.1, range = 19–86 years) and had been ill for 13.9 years (SD = 10.6). Half of the sample was Puerto Rican (51.4%); the remainder was from the Dominican Republic (12.8%), South America (24.8%), Central America (4.6%), or Cuba (6.4%). Most respondents (88%) were foreign-born. The average participant had lived in the United States for 27.9 years (SD = 10.8). Most of the sample (73%) had annual family incomes of less than \$10,000 and had 8.9 years (SD = 4) of education on average. Half of the sample (48.6%) was not working because of disability. Most respondents (55.3%) were separated or divorced, 11.9% were widowed, 8.3% were never married, and about one fourth (24.8%) were married or lived with a partner. The majority of participants (87.2%) had a least one child, and few (21.1%) lived alone.

Descriptive Statistics

Reflecting Latino cultural values, the majority of the full sample of 109 respondents considered the homemaker role identity to be of central importance. The modal score (n = 46; 42.2% of the sample) of the homemaker identity measure was 7 (the highest possible score), and the mean score was 5.95 (SD = 1.40), indicating strong agreement with statements concerning the importance of the homemaker role to the self-concept. Nonetheless, 11 respondents had a mean homemaker role importance score equal to or less than 4.00. Such scores reflect either an average level of disagreement concerning the importance of the homemaker role for the self-concept the importance of the homemaker role or "neutral" responses. As mentioned earlier, because this study's aim was to test hypotheses concerning participants for whom the homemaker identity is of central importance to the self-concept, respondents scoring 4.00 or less were excluded from further analyses testing the theoretical model. This resulted in a total sample size of 98.

We next examined bivariate intercorrelations between illness characteristics, social support, self-efficacy, self-esteem, and measures of psychological adjustment (see Table 1). As anticipated, emotional support was related to greater psychological well-being, but

¹Because the general sample size rule of 5 participants per parameter is not universally applicable or accepted, a reviewer suggested that a power analysis be performed. MacCallum, Browne, and Sugawara's (55) formula was used to estimate power based on the root mean square error of approximation (RMSEA) fit index. Power for testing a "close fit" of the model (the probability of rejecting the null hypothesis of close fit, i.e., that H_0 :e .05, when true model fit is mediocre, i.e., $\varepsilon_a = .10$) in this study was .46, indicating that power was limited.

unexpectedly, it was not associated with psychological distress. Of particular interest is that housework support had a marginally significant correlation with psychological distress (but no relationship with psychological well-being). Among this sample of women who highly value the homemaker role, however, the association of housework support with psychological distress was not in the expected (i.e., inverse) direction. The bivariate intercorrelations between self-efficacy, self-esteem, and psychological distress and wellbeing were significant and in the expected direction.

Test of the Theoretical Model

I commenced by testing the direct paths illustrated in Figure 1 (note, however, that psychological adjustment consists of two outcome measures, psychological well-being and distress, as described in the Measures section). Inspection of the bivariate correlations indicated that disability was highly associated with pain but not with any other predictors, outcomes, or mediators in the model, except for self-efficacy(seeTable1).Therefore, disability was not included in the test of the theoretical model. A model was specified whereby pain, emotional support, and housework support predict self-efficacy and self-esteem, which, in turn, predict psychological well-being and distress.

The causal sequence hypothesized in the initial model did not fit the data, $\chi^2(11, N=98) = 48.45$, p < .001; CFI = .77; NNFI = .56; $\chi^2/df = 4.40$; standardized root mean squared residual (SRMR) = .02; RMSEA = .19 (90% confidence interval [CI] = .14, .24). Lagrange multiplier tests suggested that two modifications would substantially increase model fit. The first involved adding a direct path from pain to psychological distress. The second entailed adding a correlation between emotional and housework support. Previous research on arthritis populations has documented an effect of pain on psychological adjustment, that is, depressive symptoms (e.g., 33). In addition, emotional and housework support are two forms of the same underlying construct (social support). Therefore, on the basis of prior empirical findings and on theoretical grounds, both modifications were incorporated and the model was reestimated.

The addition of these paths increased model fit, decreasing the chi-square value, $\chi^2(9, N=98) = 28.45$, p < .001 ($\Delta \chi^2[2, N=98] = 20$, p < .01), but the CFI of .88, the NNFI of .72, the χ^2/dr of 3.16, the SRMR of .002, and the RMSEA of .15 (90% CI = .09, .21) indicated that the model remained misspecified. Inspection of Lagrange modification indices revealed that model fit would be improved by adding two additional direct paths: the first from housework support to psychological distress and the second from emotional support to psychological well-being. Because these paths are consistent with theoretical assertions concerning the effects of social support on psychological adjustment, the model was modified accordingly. This modification substantially improved model fit, reducing the chi-square value, $\chi^2(7, N=98) = 17.71$, p = .01 ($\Delta \chi^2[2, N=98] = 10.74$, p < .01), and yielding a CFI of .93, an NNFI of .80, a χ^2/dr of 2.53, an SRMR of .001, and a RMSEA of .13 (90% CI = .05, .20).

Because a parsimonious model is preferable to one with more parameters (e.g., for replication purposes), we next examined Wald test results to identify nonsignificant paths that could be eliminated from the model. The Wald test identified five such nonsignificant paths. Three of these were the paths predicting self-esteem (i.e., paths from pain, emotional support, and housework support to self-esteem). The remaining two paths involved the effects of social support (emotional support and housework support) on self-efficacy. The model was respecified, dropping these five nonsignificant paths, and reestimated. The resulting model maintained a good degree of fit to the data, $\chi^2(12, N=98) = 24.17, p = .02$; CFI = .93. The Lagrange multiplier test of the revised model, however, suggested adding one additional path from self-esteem to self-efficacy. Because prior research on women with

Abraído-Lanza

chronic illness documented a similar effect of self-esteem (59), this path was added to the model. Incorporation of this final modification significantly decreased the chisquare, $\chi^2(11, N=98) = 13.22$, p = .28 ($\Delta \chi^2[1, N=98] = 10.95$, p < .01), and yielded a CFI of .99, an NNFI of .97, a χ^2/df of 1.20, an SRMR of .003, and an RMSEA of .05 (90% CI = .00, .12). Therefore, this model was accepted as best fitting the data.

Figure 2 illustrates direct effects of the final model. Psychological distress was predicted by greater pain and by lower self-efficacy and self-esteem. In addition, housework support had an effect on psychological distress, but not in the expected direction. Psychological wellbeing was predicted by greater self-efficacy and self-esteem. Furthermore, emotional support had a direct effect on psychological well-being.

We next examined indirect effects. The original theoretical model predicted that the effects of social support on psychological adjustment would be indirect, that is, mediated by self-efficacy and self-esteem. Contrary to expectations, the effects of both emotional and housework support on psychological adjustment were direct (note the lack of paths from social support variables to self-efficacy and self-esteem). Inspection of indirect effects, however, did indicate that self-efficacy mediated the effects of pain and self-esteem on psychological adjustment. Pain and self-esteem had significant indirect effects (.13 and -.12, respectively) on psychological distress. Self-esteem also had a significant indirect effect (. 11) on psychological well-being. The effect of pain on well-being (-.12) was entirely indirect, mediated by self-efficacy.

Qualitative Findings

The qualitative data provided additional sources of information to supplement the quantitative results. Prior to administration of the quantitative social support scale, in an open-ended question, women were asked to describe how they felt about getting help with housework: "Can you tell me how it makes you feel when [named individual, e.g., your daughter] helps you?" Responses were tape-recorded by the interviewer. A second, bilingual and bicultural Latina researcher then played each tape in its entirety, transcribed the relevant text passages, and coded the entries. Two tapes were inaudible and could not be transcribed.

The text passages were coded as expressing positive (1), negative (2), or ambivalent (3) feelings about receiving help with housework. Typically, text passages consisted of one to three sentences for each code. To assess the reliability of the coding scheme, the responses of 49 participants (50% of the sample) were randomly selected. The original interviewer reviewed each of the selected transcriptions and independently coded the text passages. The interrater reliability of the codes assigned by the two raters was computed using the kappa statistic (60). A kappa of .90 was obtained, indicating a good level of reliability.

Frequencies of the various reactions to support codes (positive, negative, ambivalent) were generated. About one third of the sample (36.7%) expressed positive feelings about receiving housework support. For example, one respondent, discussing help from her daughter, stated, "I feel good about it, I am glad that she is doing it … maybe because it is the way that I was brought up, I feel that she should do it. She should help."

Half of the sample (51.1%) expressed either ambivalent (18.4%) or negative (32.7%) feelings about receiving housework support. These responses often reflected themes concerning role responsibilities. For example, a woman who expressed ambivalent feelings about housework support from her husband stated,² "Part of me feels good about the help,

 $^{^{2}}$ English translations are shown for this and subsequent text passages. The original quotes in Spanish are available from Ana F. Abraído-Lanza.

but the other part feels bad because I am the one who should be doing it [the housework], but I cannot." Responses concerning role responsibilities were also common among women expressing negative feelings about support. One respondent, referring to help from her husband, stated, "I feel bad when he helps because he has to be doing what I should do, which is my job as a homemaker."

Negative reactions to housework support from nonkin members usually involved feelings of incompetence and dependence rather than failure to fulfill role responsibilities. Women receiving help from their home attendants often expressed feelings of incompetence: "I like to do things myself, I like to feel useful, I don't like being dependent on anyone." A second woman indicated that help from her home attendant made her feel like an invalid.

DISCUSSION

Drawing from a number of theoretical perspectives, this study tested a conceptual model concerning the effects of well-intended social support, specifically, emotional and tangible housework support, on the psychological adjustment of Latina women with arthritis. Results raised a number of issues pertinent to role identity and social support theory, cultural norms, and adaptation to chronic illness.

Social Support and Psychological Adjustment

Among this sample of Latina women who highly value the homemaker identity, greater help with housework was predicted to have an adverse effect on psychological adjustment. Instead, more support was related to lower distress.

This unexpected finding may be explained by considering cultural norms and the source of the housework support, that is, who provided help with housework. In a previous analysis, my colleagues and I found that many respondents (45% of the full sample of 109 women) listed a daughter as one of their two principal support providers (61). Latino culture ascribes great importance to family relationships and family support (33,62). Furthermore, support norms center on gender roles, such that women care for sick family members, and daughters are often principal caregivers to their mothers (33,63,64). These normative role expectations about who should provide support may explain results in this study that contradicted hypothesized effects. As many support providers were daughters and other family members, these findings are consistent with cultural norms about who should help with housework. The issue is not that Latina women have different primary support providers than non-Latinas—for example, daughters often provide support to parents (65)—but rather that role expectations may determine what types of support are helpful and from whom. Other studies have shown that the perceived helpfulness of support depends on the provider (5-7) and, more specifically, that support benefits self-esteem when it is received from a desired provider (66). As Wethington and Kessler (18) noted, the effects of support might depend on "a complex interaction among the source of support, the type of support offered, and the event" (p. 83). These observations suggest that role-appropriate helping relationships do not threaten self-esteem or self-efficacy. In essence, daughters and other family members provide role-appropriate housework support. One might hypothesize, then, that receiving housework support from providers who violate cultural norms (such as husbands or nonkin network members) would have the adverse effects on psychological well-being predicted in this study. Unfortunately, this hypothesis could not be tested with the quantitative measures, as examining support by type of provider would result in small sample sizes.

Qualitative data provided further insights into the unexpected quantitative findings. In an analysis of women's reaction to housework support, a significant proportion of the sample— about half—expressed either negative or ambivalent feelings about receiving help. Of

interest, responses often reflected themes concerning role responsibilities, such as the inability to perform homemaker role activities. These sentiments were especially common in response to help from the spouse. Several women commented that housework help from their spouses evoked many unpleasant feelings because household tasks were their responsibility, not their spouses. In contrast, these views were not expressed in regard to support from daughters. Instead, respondents believed that daughters *should* help, and they had many positive responses to support from their daughters. As suggested earlier, these results are consistent with traditional Latino norms and role responsibilities. In other words, many women were glad to have the support, but the desire to do their own housework tasks may have created discordant or negative feelings about the help they received, especially from role-inappropriate support providers. Thus, the apparent inconsistency between the qualitative findings (that housework support is associated with less distress) and the qualitative data (that help with housework often elicits ambivalent or negative reactions) might be reconciled by considering the cultural meaning and normative context of the support transaction.

Normative role expectations raise another issue regarding social support transactions: People are not merely passive recipients of social support. Instead, they actively seek it, selectively choosing support providers (14,67). Participants in this study may have actively sought help with housework from role-appropriate providers (e.g., daughters) who did not pose strong threats to their self-esteem and self-efficacy.

Mediators of the Relationship Between Social Support and Psychological Adjustment

One goal of this study was to test the hypothesis that emotional–esteem support benefits psychological adjustment by enhancing self-esteem. Emotional support had an effect on psychological well-being, but it was not mediated by self-esteem. In fact, the final model indicated that self-esteem was best represented as an exogenous (independent) variable. Another study of adults with arthritis (68) also failed to find evidence that self-esteem mediates the relationship between emotional support³ and psychological adjustment (i.e., depressive symptoms). Thus, among people with arthritis, self-esteem as a mediator of the relationship between emotional–esteem support and psychological adjustment has not been established.

I also expected, but did not find, that self-efficacy would mediate the relationship between tangible support and psychological adjustment. Specifically, it was predicted that, among this sample of Latina women who highly valued the homemaker identity, housework support would adversely affect psychological adjustment by decreasing feelings of self-efficacy. Instead, housework support was related to decreased distress, and this effect was direct. These unexpected findings raise intriguing possibilities for further theory development. If I am correct in my earlier suggestion that in this study, the primary providers of housework support (e.g., kin members) were appropriate in terms of normative and cultural expectations, then the effects of support on psychological adjustment may be direct because the help is irrelevant to one's sense of self. That is, the sense of self-efficacy is not threatened because the person providing support is behaving in a manner congruent with cultural expectations of support (e.g., "Daughters should help their mothers") (33,63). On the other hand, if the support provider is inappropriate, the sense of competence and self-efficacy is threatened, which, in turn, adversely affects adjustment. In support of some of these propositions, the qualitative data indicated that housework support from nonkin

³Druley and Townsend (68) used a measure of *positive interactions*. I refer to it as *emotional support* because of the similarity between their three-item measure and the eight-item emotional support subscale used in this study (45). Two items ("Makes you feel he or she cares" and "Listens to you") are nearly identical to those of Druley and Townsend's positive interaction measure.

Ann Behav Med. Author manuscript; available in PMC 2013 May 18.

members, home attendants in particular, evoked feelings of incompetence in many women. These issues should be pursued in future research.

In conclusion, the mechanisms by which social support contributes to psychological adjustment have not been clearly identified. This study did not find evidence for the proposal that emotional support operates by enhancing the recipient's general feelings of self-esteem (69) or that self-efficacy mediates this relationship. Firm conclusions regarding these mediating mechanisms (or lack thereof) should not be reached, however, pending further studies. Additional research is warranted that does not rely on cross-sectional data and that assesses long-term effects. The failure to find mediating effects of social support on adjustment is consistent with a prior cross-sectional study of non-Latino Whites with arthritis (68). One longitudinal study, however, found some evidence that, over time, perceived competence mediates the effects of instrumental support on psychological adjustment (25).

Study Limitations

In this study, many women were unable to work because of disability. The paid worker role, however, was highly valued among the few women who worked outside the home (70). Research on Latino health would benefit by adopting a more expanded view of how nontraditional roles affect psychological well-being among Latinas (70) and by studying social support processes in different contexts. Support needs and reactions to help will differ depending on the constellation of Latinas' roles and their health status (71).

A few other words of caution are in order. First, the term Latina was used to describe the sample, but roughly one half of respondents were Puerto Rican. There are sociodemographic, political, migrant status, and family constellation differences between Latino groups (72) that could relate to variables in this study. Separate path analyses could not be conducted for the different Latino groups in this study, however, because of sample size limitations. Second, reflecting the disproportionate rates of poverty among Latinos in the United States, the sample was predominantly of low socioeconomic status (SES). Low SES is associated with greater morbidity and mortality (73) and reduced psychological wellbeing (74). Arthritis stressors may be relatively minor compared with the larger social problems that people with limited socioeconomic resources encounter on a daily basis. The extent to which the stress of poverty affected variables in the present study cannot be estimated. The SES confound also raises issues of generalizability to other Latino (and non-Latino) samples of different SES levels. Third, this study used a cross-sectional design and path analysis. The words effect and predict, common path-analytic terminology, were used to describe results. Neither causal directionality nor the potential long-term effects of social support on psychological well-being can be inferred, however, without longitudinal data. Fourth, an important study limitation concerned statistical power. Specifically, there was limited power for testing the null hypothesis of close model fit (see Footnote 1). Finally, although post hoc modifications to increase model fit were incorporated carefully, adding only theoretically meaningful paths or those based on prior research, there are limitations to this method. These modifications may reflect particular characteristics of the sample under study that are not generalizable to other samples or populations, resulting in capitalization on chance (75). Thus, the findings from this study are subject to replication in other studies with more elaborate designs and larger samples.

Despite its cross-sectional design and other limitations, this study contributes to a scarce literature testing potential mediators of the relationship between social support and adjustment to chronic illness. Of importance, the study also begins to address a significant gap in researchers' understanding of illness and psychosocial resources among ethnically diverse populations. There is a paucity of research on psychological adjustment among

Latinos with rheumatic diseases, as well as other chronic conditions. This study takes one step toward closing this significant gap in the literature.

Acknowledgments

This research was basedonaportionofAnaF.Abraído-Lanza's dissertation, which was conducted at the City University of New York (CUNY) and supported primarily by a Dissertation Grant from the Minority Fellowship Program of the American Psychological Association, a grant from the Spring Foundation for Contemporary Research on Women, and a CUNY President's Dissertation Year Award from the MAGNET program. Support for preparing this article was provided by Grant AR46858 from the National Institute of Arthritis and Musculoskeletal and Skin Diseases.

Special thanks to Robert J. Lanza, Esq., and to Tracey A. Revenson, Ph.D., who provided invaluable support and feedback on this work. Thanks also to Peter Messeri, Ph.D. for advice concerning statistical power; to Allan Gibofsky, M.D. for facilitating access to the research site; and especially to the research participants who made this study possible.

REFERENCES

- Wills, T.; Filer, Fagen M. Social networks and social support. In: Baum, A.; Revenson, TA.; Singer, JE., editors. Handbook of Health Psychology. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.; 2001. p. 209-234.
- Newsom JT, Schulz R. Caregiving from the recipient's perspective: Negative reactions to being helped. Health Psychology. 1998; 17:172–181. [PubMed: 9548708]
- 3. Fisher JD, Nadler A, Whitcher-Alagna S. Recipient reactions to aid. Psychological Bulletin. 1982; 91:27–54.
- 4. Affleck G, Pfeiffer C, Tennen H, Fifield J. Social support and psychosocial adjustment to rheumatoid arthritis. Arthritis Care and Research. 1988; 1:71–77.
- Lanza AF, Cameron AE, Revenson TA. Perceptions of helpful and unhelpful support among married people with rheumatic diseases. Psychology and Health: An International Journal. 1995; 10:449–462.
- 6. Lehman DR, Hemphill KJ. Recipients' perceptions of support attempts and attributions for support attempts that fail. Journal of Social and Personal Relationships. 1990; 7:563–574.
- Dakof GA, Taylor SE. Victim's perceptions of social support: What is helpful from whom? Journal of Personality and Social Psychology. 1990; 58:80–89. [PubMed: 2308075]
- Weinberger M, Tierney WM, Booher P, Hiner SL. Social support, stress and functional status in patients with osteoarthritis. Social Science and Medicine. 1990; 30:503–508. [PubMed: 2315733]
- Dobkin PL, Fortin PR, Joseph L, et al. Psychosocial contributors to mental and physical health in patients with systemic lupus erythematosus. Arthritis Care and Research. 1998; 11:23–31. [PubMed: 9534490]
- Brown GK, Wallston KA, Nicassio PM. Social support and depression in rheumatoid arthritis: A one-year prospective study. Journal of Applied Social Psychology. 1989; 19:1164–1181.
- 11. Fitzpatrick R, Newman S, Lamb R, Shipley M. Social relationships and psychological well-being in rheumatoid arthritis. Social Science and Medicine. 1988; 27:399–403. [PubMed: 3175723]
- Cohen S, Wills TA. Stress, social support, and the buffering hypothesis. Psychological Bulletin. 1985; 98:310–357. [PubMed: 3901065]
- Wills, TA. Supportive functions of interpersonal relationships. In: Cohen, S.; Syme, SL., editors. Social Support and Health. New York: Academic; 1985. p. 61-82.
- Revicki DA, Mitchell JP. Strain, social support, and mental health in rural elderly individuals. Journal of Gerontology. 1990; 45:S267–S274. [PubMed: 2229953]
- Ingersoll-Dayton B, Antonucci TC. Reciprocal and nonreciprocal social support: Contrasting sides of intimate relationships. Journal of Gerontology. 1988; 43:S65–S73. [PubMed: 3361097]
- Arling G. Strain, social support, and distress in old age. Journal of Gerontology. 1987; 42:107–113. [PubMed: 3794188]

- Roberts BL, Matecjyck M, Anthony M. The effects of social support on the relationship of functional limitations and pain to depression. Arthritis Care and Research. 1996; 9:67–73. [PubMed: 8945115]
- Wethington E, Kessler RC. Perceived support, received support, and adjustment to stressful life events. Journal of Health and Social behavior. 1986; 27:78–89. [PubMed: 3711634]
- Penninx BWJH, Van Tilburg T, Deeg DJH, et al. Direct and buffer effects of social support and personal coping resources in individuals with arthritis. Social Science and Medicine. 1997; 44:393–402. [PubMed: 9004373]
- Moos, RH. Coping with acute health crises. In: Millon, T.; Green, C.; Meagher, R., editors. Handbook of Clinical Health Psychology. New York: Plenum; 1982. p. 129-149.
- 21. Mead, GH. Mind, Self, and Society. Chicago: University of Chicago Press; 1934.
- 22. Rosenberg, M. Conceiving the Self. New York: Basic Books; 1979.
- 23. Thoits PA. On merging identity theory and stress research. Social Psychology Quarterly. 1991; 54:101–112.
- Dickens C, McGowan L, Clark-Carter D, Creed F. Depression in rheumatoid arthritis: A systematic review of the literature with meta-analysis. Psychosomatic Medicine. 2002; 64:52–60. [PubMed: 11818586]
- Smith CA, Dobbins CJ, Wallston KA. The mediational role of perceived competence in psychological adjustment to rheumatoid arthritis. Journal of Applied Social Psychology. 1991; 21:1218–1247.
- 26. Schiaffino KM, Revenson TA. The role of perceived self-efficacy, perceived control, and causal attributions in adaption to rheumatoid arthritis: Distinguishing mediator from moderator effects. Personality and Social Psychology Bulletin. 1992; 18:709–718.
- Blalock SJ, Orlando M, Mutran EJ, DeVellis RF, DeVellis BM. Effect of satisfaction with one's abilities on positive and negative affect among individuals with recently diagnosed rheumatoid arthritis. Arthritis Care and Research. 1998; 11:158–165. [PubMed: 9782807]
- Rejeski WJ, Martin KA, Miller ME, Ettinger WH, Rapp S. Perceived importance and satisfaction with physical function in patients with knee osteoarthritis. Annals of Behavioral Medicine. 1998; 20:141–148. [PubMed: 9989320]
- Reisine ST, Goodenow C, Grady KE. The impact of rheumatoid arthritis on the homemaker. Social Science and Medicine. 1987; 25:89–95. [PubMed: 3616700]
- Kibria N, Barnett RC, Baruch GK, Marshall NL, Pleck JH. Homemaking-role quality and the psychological well-being and distress of employed women. Sex Roles. 1990; 22:327–345.
- 31. Wiener, CL. The burden of rheumatoid arthritis. In: Strauss, AL.; Corbin, J.; Fagerhaugh, S., et al., editors. Chronic Illness and the Quality of Life. St. Louis, MO: Mosby; 1984. p. 88-98.
- 32. Marín, G.; Gamba, RJ. Acculturation and changes in cultural values. In: Chun, KM.; Balls Organista, P.; Marín, G., editors. Acculturation: Advances in Theory, Measurement and Applied Research. Washington, DC: American Psychological Association; 2003. p. 83-93.
- 33. Sánchez-Ayéndez M. Puerto Rican elderly women: The cultural dimension of social support networks. Women and Health. 1988; 14:239–252.
- 34. Toro-Morn, MI. The family and work experiences of Puerto Rican women migrants in Chicago. In: McCubbin, HI.; Thompson, EA.; Thompson, AI.; Fromer, JE., editors. Resiliency in Native American and Immigrant Families. Resiliency in Families Series. Vol. Vol. 2. Thousand Oaks, CA: Sage; 1998. p. 277-294.
- 35. Ybarra L. When wives work: The impact on the Chicano family. Journal of Marriage and the Family. 1982; 44:169–178.
- Zambrana, RE.; Ellis, BK. Contemporary research issues in Hispanic/Latino women's health. In: Adams, DL., editor. Health Issues for Women of Color. Thousand Oaks, CA: Sage; 1995. p. 42-70.
- 37. Marín, G.; Marín, BV. Research With Hispanics. Newbury Park, CA: Sage; 1991.
- González VM, Stewart A, Ritter PL, Lorig K. Translation and validation of arthritis outcome measures into Spanish. Arthritis and Rheumatism. 1995; 38:1429–1446. [PubMed: 7575693]

- Sherbourne, CD. Pain measures. In: Steward, AL.; Ware, JE., editors. Measuring Functioning and Well-Being: The Medical Outcomes Study Approach. Durham, NC: Duke University Press; 1992. p. 220-234.
- 40. Fries JF, Spitz P, Kraines RG, Holman H. Measurement of patient outcome in arthritis. Arthritis and Rheumatism. 1980; 23:137–145. [PubMed: 7362664]
- Liang MH, Larson MG, Cullen KE, Schwartz JA. Comparative measurement efficiency and sensitivity of five health status instruments for arthritis research. Arthritis and Rheumatism. 1985; 28:542–547. [PubMed: 4004963]
- Goodenow C, Reisine ST, Grady KE. Quality of social support and associated social and psychological functioning in women with rheumatoid arthritis. Health Psychology. 1990; 9:266– 284. [PubMed: 2340818]
- 43. Luhtanen R, Crocker J. A collective self-esteem scale: Self-evaluation of one's social identity. Personality and Social Psychology Bulletin. 1992; 18:302–318.
- 44. Ethier K, Deaux K. Hispanics in ivy: Assessing identity and perceived threat. Sex Roles. 1990; 22:427–440.
- 45. Revenson TA, Schiaffino KM, Majerovitz SD, Gibofsky A. Social support as a double-edged sword: The relation of positive and problematic support to depression among rheumatoid arthritis patients. Social Science and Medicine. 1991; 33:807–813. [PubMed: 1948172]
- 46. Rosenberg, M. Society and the Adolescent Self-image. Princeton, NJ: Princeton University Press; 1965.
- Lorig K, Chastain R, Ung E, Shoor S, Holman H. Development and evaluation of a scale to measure the perceived self-efficacy in people with arthritis. Arthritis and Rheumatism. 1989; 32:37–44. [PubMed: 2912463]
- Watson D, Clark LA, Tellegen J. Development and validation of brief measures of positive and negative affect: The PANAS Scales. Journal of Personality and Social Psychology. 1988; 54:1063–1070. [PubMed: 3397865]
- 49. Campbell, A.; Converse, PE.; Rogers, WL. The Quality of American Life. New York: Russell Sage Foundation; 1976.
- 50. Radloff LS. The CES-D Scale: A self-report depression scale for research in the general population. Applied Psychological Measurement. 1977; 3:385–401.
- Zautra AJ, Burleson MH, Smith CA, et al. Arthritis and perceptions of quality of life: An examination of positive and negative affect in rheumatoid arthritis patients. Health Psychology. 1995; 14:399–408. [PubMed: 7498110]
- 52. Watson D, Pennebaker JW. Health complaints, stress, and distress: Exploring the role of negative affectivity. Psychological Review. 1989; 54:1063–1070.
- Smith CA, Wallston KA, Dwyer KA. On babies and bathwater: Disease impact and Negative Affectivity in the self-reports of persons with rheumatoid arthritis. Health Psychology. 1995; 14:64–73. [PubMed: 7737076]
- Bentler, PM. EQS Structural Equations Program Manual. Encino, CA: Multivariate Software; 1995.
- MacCallum RC, Browne MW, Sugawara HM. Power analysis and determination of sample size for covariance structure modeling. Psychological Methods. 1996; 1:130–149.
- Bentler PM. Comparative fit indexes in structural models. Psychological Bulletin. 1990; 107:238– 246. [PubMed: 2320703]
- 57. Bollen, KA. Structural Equations With Latent Variables. New York: Wiley; 1989.
- 58. Byrne, BM. Structural Equation Modeling With EQS and EQS/Windows. Thousand Oaks, CA: Sage; 1994.
- Crigger NJ. Testing an uncertainty model for women with multiple sclerosis. Advances in Nursing Science. 1996; 18:37–47. [PubMed: 8660011]
- 60. Cohen J. A coefficient of agreement for nominal scales. Educational and Psychological Measurement. 1960; 20:37–46.
- 61. Abraído-Lanza AF, Guier C, Revenson TA. Coping and social support resources among Latinas with arthritis. Arthritis Care and Research. 1996; 9:501–508. [PubMed: 9136294]

- 62. Sabogál F, Marín G, Otero-Sabogál R, Marín BV, Pérez-Stable EJ. Hispanic familism and acculturation: What changes and what doesn't? Hispanic Journal of Behavioral Sciences. 1987; 9:397–412.
- Markides KS, Boldt JS, Ray LA. Sources of helping and intergenerational solidarity: A threegeneration study of Mexican Americans. Journal of Gerontology. 1986; 41:506–511. [PubMed: 3722736]
- 64. Burnette D. Social relationships of Latino grandparent caregivers: A role theory perspective. Gerontologist. 1999; 39:49–58. [PubMed: 10028770]
- Christensen KA, Stephens MAP, Townsend AL. Mastery in women's multiple roles and wellbeing: Adult daughters providing care to impaired parents. Health Psychology. 1998; 17:163–171. [PubMed: 9548707]
- Hoffman MA, Levy-Shiff R, Ushpiz V. Moderating effects of adolescent social orientation on the relation between social support and self-esteem. Journal of Youth and Adolescence. 1993; 22:23– 31.
- 67. Barbee AP, Cunningham MR, Winstead BA, et al. Effects of gender role expectations on the social support process. Journal of Social Issues. 1993; 49:175–190.
- Druley JA, Townsend AL. Self-esteem as a mediator between social support and depressive symptoms: A comparison of healthy individuals and individuals coping with arthritis. Health Psychology. 1998; 17:255–261. [PubMed: 9619475]
- 69. Cohen S. Psychosocial models of the role of social support in the etiology of physical disease. Health Psychology. 1988; 7:269–297. [PubMed: 3289916]
- Abraído-Lanza AF. Latinas with arthritis: Effects of illness, role identity and competence on psychological well-being. American Journal of Community Psychology. 1997; 25:601–627. [PubMed: 9485576]
- Krause N, Markides KS. Employment and psychological well-being in Mexican American women. Journal of Health and Social behavior. 1985; 26:15–26. [PubMed: 3998431]
- 72. Falcón, A.; Aguirre-Molina, M.; Molina, CW. Latino health policy: Beyond demographic determinism. In: Aguirre-Molina, M.; Molina, C.; Zambrana, RE., editors. Health Issues in the Latino Community. San Francisco: Jossey-Bass; 2001. p. 3-22.
- Adler NE, Boyce T, Chesney MA, et al. Socioeconomic status and health. American Psychologist. 1994; 49:15–24. [PubMed: 8122813]
- 74. Belle D. Poverty and women's mental health. American Psychologist. 1990; 45:385–389.
- MacCallum RC, Roznowski M, Necowitz LB. Model modifications in covariance structure analysis: The problem of capitalization on chance. Psychological Bulletin. 1992; 111:490–504. [PubMed: 16250105]

Abraído-Lanza



FIGURE 1.

Conceptual model of the effects of social support on psychological adjustment.

Abraído-Lanza



FIGURE 2.

Results of path analysis showing significant direct effects.

TABLE 1

Intercorrelations, Means, and Standard Deviations of Pain, Social Support, Self-Efficacy, Self-Esteem, and Psychological Adjustment

Abraído-Lanza

| | I | 2 | 3 | 4 | 5 | 9 | 7 | 8 | Μ | SD |
|-----------------------------------------|----------------|-------------|--------------|-----------|-----------|----------|--------|-----|-------|-------|
| 1. Pain | <i>91</i> . | | | | | | | | 34.72 | 6.81 |
| 2. Disability | .55 **** | .80 | | | | | | | 1.88 | 0.60 |
| 3. Emotional support | .04 | .05 | 96. | | | | | | 5.72 | 1.64 |
| 4. Housework support | 06 | .15 | .36**** | .85 | | | | | 3.93 | 1.91 |
| 5. Self-efficacy | 36**** | 29*** | .04 | 02 | .93 | | | | 77.16 | 28.72 |
| 6. Self-esteem | 14 | 17 | .17 | .01 | .35 **** | .81 | | | 39.03 | 6.39 |
| 7. Psychological distress | .39**** | .18 | 13 | 19* | 58 | 52 **** | .93 | | 45.52 | 21.14 |
| 8. Psychological well-being | 23 ** | 13 | .25 ** | .14 | .52 **** | .57 **** | 58**** | 80. | 70.04 | 16.56 |
| <i>Note</i> . Cronbach's alpha reliabil | lity estimates | for each sc | ale are shov | vn on the | diagonal. | | | | | |
| $_{p<.10.}^{*}$ | | | | | | | | | | |
| $^{**}_{p < .05.}$ | | | | | | | | | | |
| p < .01. | | | | | | | | | | |
| **** p < .001. | | | | | | | | | | |