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Relationship between spouse/partner support and depressive symptoms in older adults: Gender difference

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Abstract

Based on data from the National Social Life, Health, and Aging Project, Wave 1, the purpose of this study was to examine possible gender difference in the relationship between the level of spouse/partner support and depressive symptoms in late life. Depressive symptoms were measured by the 11-item, four-point Center for Epidemiologic Scale for Depression (CES-D), and spouse/partner support was measured by a four-item scale, an abbreviated version of the original spouse support/strain scale developed by Schuster, Kessler, and Aseltine (1990). The results from regression analyses show that low perceived spouse/partner support, as opposed to unavailability of the support, was associated with higher CES-D scores among women only, while high spouse/partner support was associated with lower CES-D scores for both genders. These relationship patterns were found in both younger and older groups of men and women.

Keywords

depression; social support; mental health assessments

Introduction

Although major depressive disorder is less prevalent among older than younger adults, depressive symptoms are quite common in late life as many older adults experience an onset of physical and functional health problems or deterioration in their health; loss and grief; social isolation; and/or financial problems. Previous studies found that social support from family and friends buffers older adults from depressogenic effects of these life stressors (Blazer, Hughes, & George, 1992; Choi & McDougall, 2007; see also DuPertuis, Aldwin, & Bosse, 2003).

Depressive symptoms are significantly less prevalent among married/partnered older adults than among their nonpartnered single, divorced, or widowed counterparts, suggesting that spouse/partner support may also be an important protective factor. An earlier study indeed found that high-level spouse support had a greater protective effect against depressive symptoms in older adults than support from friends and adult children, while low-level spouse support, regardless of gender, had a significantly worse effect on depressive symptoms than the absence of spousal support (i.e., having no spouse; Dean, Kolody, & Wood, 1990). Studies that focused on married older adults with or without health problems

also found that more positive interactions with a spouse were associated with lower depressive symptomatology and greater life satisfaction, while negative interactions or marital discord were associated with higher depressive symptomatology and lower life satisfaction (Druley & Townsend, 1998; Schuster, Kessler, & Aseltine, 1990; Whisman, Uebelacker, Tolejko, Chatav, & McKelvie, 2006).

Schuster et al. (1990) and Whisman et al. (2006) did not find any gender difference in the relationship between negative interactions with a spouse and depressive symptoms. On the other hand, another study found that women with a closer connection to their spouses reported lower depressive symptoms, while the relationship between spousal support and men's depressive symptoms was more complex, being affected by their perceived independence (i.e., having no need for emotional support) and by the nature of their attachment to their wives (Tower & Kasl, 1996). In general, however, we do not have an extensive body of knowledge about the relationship between depressive symptoms and spouse/partner support. The purpose of this article was to examine the level of spouse/partner support that may be positively and negatively associated with depressive symptoms in late life and gender difference, or lack thereof, in such relationships.

Literature review, conceptual framework, and hypotheses

Extant research provides a well-established knowledge base about gender difference in perceived and actual spousal support. For both young and old, gender is one of the most significant predictors of the source, type, and level of social support (Taylor et al., 2000; Unger, McAvay, Bruce, Berkman, & Seeman, 1999). Women tend to have more extensive social networks than do men and to give and receive more support throughout life (Antonucci & Akiyama, 1987; Glynn, Christenfield, & Gerin, 1999). Findings from the MacArthur Studies of Successful Aging showed that men received emotional support primarily from their spouses, whereas women drew more heavily on their friends, relatives, and children for it (Gurung, Taylor, & Seeman, 2003). Men also reported having received more spousal support over time (at a two-year follow-up), while women reported that social support from their spouses did not increase, but that support from children, friends, and other relatives increased.

Extant research also supports significant gender difference in the effect of spousal support on physical health outcomes and other well-being indicators. Although older women receive less spousal support than men do, it appears that spousal support or marital quality has a stronger impact on older women's physical health outcomes and/or coping following a major health issue (i.e., osteoarthritis, cancer surgery, survival/mortality after congestive heart failure) than on older men's (Coyne et al., 2001; Martire, Stephens, Druley, & Wojno, 2002; Schulz & Schwarzer, 2004). Other studies found that older wives' marital satisfaction and/or general well-being related more to spousal support than in the case of older husbands (Acitelli & Antonucci, 1994; Julien & Markman, 1991). Studies also found that until about the of age 30 years, men and women are fairly similar in their level of marital strain; however, after about the of age 40 years, the baseline level of marital strain is higher for women than men, and women continue to experience a steady increase in marital strain, whereas men experience relative stability in their already-low levels of marital strain (Umberson & Williams, 2005; Umberson, Williams, Powers, Chen, & Campbell, 2005). The gender difference may be due to women's tendency to be more highly sensitive to many kinds of social interactions than are men due to gender-based differences in socialization expectations (Schulz & Schwarzer, 2004). Men are expected to be independent and self-reliant, while women are expected to seek support and to take advantage of it (Hobfoll, 1998). In a couples study, older men were more likely than older women to report that they had no need for emotional support (Tower & Kasl, 1996). Women also reported desiring

significantly higher levels of all types of support from their spouses than did men (Xu & Burleson, 2001). Given these findings on the significant gender difference in reported spousal support and in the effect of spousal support on physical health outcomes, it is expected that gender differences also exist in the relationship between spousal support and depressive symptoms.

The significant role of spousal support for mental health, especially in late life, may be explained by the socioemotional selectivity theory, which posits that awareness and perception of time limitations lead people to prioritize emotionally meaningful social partners over peripheral ones and focus more time and physical, cognitive, and emotional energy and resources on selected social relationships (Carstensen, 1992; Carstensen, Fung, & Charles, 2003; Carstensen, Isaacowitz, & Charles, 1999). Thus, older adults tend to focus on social networks with which they will have emotionally meaningful social interactions to regulate and maintain a desired emotional state (Carstensen, Pasupathi, Mayr, & Nesselroade, 2000). As social networks in late life become smaller due also to deaths of friends and relatives and to decreased social engagement, the significance of core relationships is likely to increase over time. The spouse or partner of a married or partnered older adult is likely to become or expected to become a more important, core source of social support as other sources of support shrink. Regardless of gender, high perceived spouse/partner support is thus likely to contribute significantly to buffering of depression even in the face of many stressors accompanying the aging process. On the other hand, when an increasing emphasis is placed on the marital/partner relationship, the absence of or low perceived spouse/partner support may significantly increase depressive symptoms, especially among older women, given their higher sensitivity to and investment in relationships, greater desire for more spouse/partner support, and lower emphasis on autonomous emotional functioning. Women are more likely than men to be disappointed by a low level of support from their spouses/partners, which in turn may negatively affect their coping and depressive symptoms. Guided by the socioemotional selectivity theory, this study tested the following hypotheses: Controlling for perceived social support from other family and friends, (H1) low-level perceived spouse/partner support, as opposed to the unavailability of spouse/partner support, will be associated with higher depressive symptomatology among women but not among men; and (H2) high-level perceived spouse/partner support, as opposed to the unavailability of spouse/partner support, will be associated with lower depressive symptomatology for both genders. In addition, we explored the question of whether the relationship between perceived spouse/partner support and depressive symptoms will be the same in both younger and older groups within each gender. Whereas most previous studies included married couples only, this study included both married/partnered and nonmarried/nonpartnered individuals to differentiate between unavailability of spouse/partner support and low-level spouse/partner support.

Methods

Data source and sample

The data for this study came from the National Social Life, Health, and Aging Project (NSHAP), Wave 1. The NSHAP is a population-based study of health, social life, and well-being among older Americans. In-home, in-person interviews were conducted in English and Spanish with a total of 3005 nationally representative probability sample members who were community-dwelling individuals aged 57–85 years (1455 men and 1550 women) in 2005 and 2006. The NSHAP oversampled Blacks, Latinos, men, and the 75–84 years age group. In addition to a face-to-face interview that included a brief self-administered questionnaire, an in-home collection of a broad panel of biomeasures and a leave-behind questionnaire were administered (Inter-University Consortium for Political and Social Research, 2008). In this study, we used data from the face-to-face interviews with 2924

respondents (1410 men and 1514 women). We excluded four respondents for whom we lacked data on depressive symptoms and 77 respondents whose race/ethnicity was other than non-Hispanic White, non-Hispanic Black, and Hispanic.

Measures

Depressive symptoms—These were measured by the 11-item, 4-point (0=rarely or none of the time; 1=some of the time; 2=occasionally; and 3=most of the time) Center for Epidemiologic Scale for Depression (CES-D; Kohout, Berkman, Evans, & Cornoni-Huntley, 1993; Radloff, 1977), with a maximum possible score of 33. These were the 11 items: I did not feel like eating; I felt depressed; I felt that everything I did was an effort; My sleep was restless; I was happy; I felt lonely; People were unfriendly; I enjoyed life; I felt sad; I felt that people disliked me; and I could not get going. The Cronbach's alpha for the study sample was 0.80. The CES-D score was used as a continuous variable in bivariate and multivariate analyses. However, to estimate the prevalence of clinically significant depressive symptoms, we calibrated the caseness score of the 11-item scale to match that of the 20-item CES-D. Given that a score of 16 or higher is commonly accepted as representing clinically significant symptoms in the 20-item scale, a score of nine or higher is regarded as representing clinically significant symptoms in the 11-item scale.

Spouse/partner support—Of the study sample, 68.8% ($n=2010$) were married or living with a partner. In addition, 21.5%, 9.0%, and 10.4% of those who reported their marital statuses as divorced/separated, widowed, and never married, respectively, also reported that they had a 'romantic, intimate, or sexual' partner, listed them as spouse/partner, and answered the questions about spouse/partner support. This study included this latter group (4.3% of the study sample, $n=125$) in the married/partnered group as opposed to the nonmarried/nonpartnered group. The spouse/partner support scale in NSHAP was composed of four items: (1) How often can you open up to spouse/partner if you need to talk about your worries? (2) How often can you rely on him/her for help if you have a problem? (3) How often does he/she make too many demands on you? and (4) How often does he/she criticize you? The response categories for each item were hardly ever (or never=1); some of the time (=2); and often (=3), and the combined 4-item scores ranged from 4 (lowest support) to 12 (highest support). Items 3 and 4 were reverse-coded. Cronbach's alphas were 0.46 for men and 0.62 for women. These low alpha coefficients are likely to be due to the abbreviation of the items in the NSHAP, since the original spouse support/strain scale developed by Schuster et al. (1990) consists of 10 items. In this study, the scale scores of 4–8, 9–10, and 11–12 were classified as the low, medium, and high levels, respectively, of spouse/partner support. This classification was intended to better explain the direction of the findings than the use of continuous scores.

Family support and friend support—The original family and friend support/strain scales – five items each for family and friends – were developed by Schuster et al. (1990). The NSHAP used the following four items each to measure family support and friend support: (1) How often can you open up to members of your family (friends) if you need to talk about your worries? (2) How often can you rely on them for help if you have a problem? (3) How often do members of your family (friends) make too many demands on you? and (4) How often do they criticize you? The response categories for each item were hardly ever (or never=1); some of the time (=2); and often (=3). In this study, the family and friend support scores were combined to represent overall social support other than spouse support. (The correlation coefficients between the combined support and family support and between the combined support and friend support for men were 0.75 and 0.85, respectively, $p < 0.000$ for both. The corresponding coefficients for women were 0.68 and 0.84, $p < 0.000$ for both.) The Cronbach's alphas for the combined scales were 0.51 for men and 0.59 for

women. The low alpha coefficients are likely to be due to the abbreviation of the items and their heterogeneous content.

Other covariates—These included the respondent's sociodemographic characteristics, health status, frequency of physical activity, and religious service attendance that may be associated with the respondent's depressive symptoms and that moderate the relationship between spouse/partner support and depressive symptoms.

Sociodemographics—These included age; gender; race/ethnicity (non-Hispanic White, non-Hispanic Black, and Hispanic); level of education (less than high school, high school diploma or equivalent, vocational certificate/some college/associate degree, bachelor's degree or higher); level of annual household income (under \$25,000, \$25,000–\$49,999, \$50,000–\$99,999, \$100,000+, and missing); and employment status (currently working for pay *versus* not working for pay).

Health status—This was measured with the total number of diagnosed (by a medical doctor) chronic medical conditions (range 0–8) and the number of activities of daily living (ADLs) with at least some difficulty (range 0–6). The medical conditions included were arthritis; emphysema, chronic bronchitis, or chronic obstructive lung disease; stroke; high blood pressure or hypertension; diabetes; any heart disease; any cancer other than skin cancer; and kidney disease. The ADLs included walking across a room; dressing; bathing/showering; eating; getting into or out of bed; and using the toilet.

Frequency of physical activity—This referred to the frequency of participation in walking, dancing, gardening, exercise, or sports (never=0; <1 time per month=1; 1–3 times per month=2; 1–2 times per week=3; and 3+ times per week=4). Given that the *physical activity* included group activities (e.g., dancing and sports), this variable, to an extent, was indicative of social engagement. The frequency was treated as a continuous variable, with higher scores indicating higher frequencies in the bivariate and multivariate analyses.

Religious service attendance—Because religious organizations and groups can be an important source of social support and social engagement (e.g., through volunteer opportunities and especially for their members who attend services regularly), we included the frequency of service attendance as an indicator of social support and social engagement.

Analysis methods

First, bivariate analyses were done to identify any gender similarities and differences in the study variables. Then, chi-square tests and one-way analysis of variances (ANOVAs) were used to examine any similarities and differences by the level of spouse/partner support within each gender. Then, with the continuous CES-D score as the dependent variable, three ordinary least squares (OLS) regression equations were employed separately for each gender group: model 1 for all men or women; model 2 for those aged 57–66 years; and model 3 for those aged 67–85 years. Models 2 and 3 were intended to examine the question of whether the relationship between spouse/partner support and depressive symptoms will be the same in both younger and older groups. The age group splits were based on the median age (67 years) of the sample. In each regression equation, dummy variables representing low, medium, and high spouse/partner support, with the unavailability of support as the reference category, were entered with covariates age, other sociodemographic characteristics, health status, frequency of physical activity, religious service attendance, and family and friend support. Because 150 respondents (88 men and 62 women) did not return their leave-behind questionnaires, which included the family and friend support variables, the values of these respondents' combined family and friend support were imputed using an iterative Markov

Chain Monte Carlo method. Comparison between the regression results with the imputed values and those with the original data with listwise deletion of the missing data showed no statistical or substantive difference. Thus, we report the results of the regression models with the original data (i.e., with a listwise deletion of missing data). All statistics were weighted by the individual respondent-level weights, incorporating a nonresponse adjustment based on age and urbanicity.

Results

Sample characteristics and bivariate analysis results

Data in Table 1 present overall gender similarities and differences in sample characteristics. No gender difference was found in racial/ethnic distribution, but women were older and less likely to be married or have a partner and had lower education and income and more health problems than men, while they reported higher frequency of religious service attendance and higher family and friend support than did men. On average, married/partnered women reported a slightly higher level of spouse/partner support than their male counterparts. The mean CES-D score for all women was significantly higher than men's, and 25.8% of women, as compared to 19.2% of men, had clinically significant depressive symptoms (i.e., CES-D score ≥ 9 , $p < 0.001$).

In general, according to data in Tables 2 and 3, nonpartnered groups for both genders were older and had lower education, lower income, lower family/friend support, and more health problems than one or more groups of the partnered separated by the level of spouse/partner support. Among the partnered groups of both genders, age and educational level did not significantly differ by the level of spouse/partner support. However, for women, income level was significantly positively associated with the level of spouse/partner support among the partnered, with those reporting higher income also reporting a higher level of support. Regardless of gender, those who reported high-level spouse/partner support also reported a significantly higher level of family and friend support than those who reported low-level spouse/partner support ($p < 0.01$).

With respect to the CES-D scores, one-way ANOVA results showed that women who reported medium- or high-level spouse/partner support had significantly lower CES-D scores than those who reported low-level spouse/partner support or those without spouse/partner support ($p < 0.001$). Men who reported high-level spouse/partner support had significantly lower CES-D scores than those who reported low- or medium-level spouse/partner support or those without spouse/partner support ($p < 0.001$). As shown in Table 4, bivariate correlation coefficients between the level of spouse/partner support (at four levels) and the CES-D scores were -0.28 for men and -0.18 for women (both at $p < 0.000$), and the coefficients between family/friend support and the CES-D scores were -0.23 for men and -0.24 for women (both at $p < 0.000$). Further analysis showed that bivariate correlation coefficients between spouse/partner support scores (as a continuous variable) and the CES-D scores among the married/partnered were -0.27 for men and -0.23 for women (both at $p < 0.000$). Data in Table 4 also show that multicollinearity between the covariates was not a problem.

Multivariate linear regression results for men

As shown in Table 5, model 1 regression results show that among men, low or medium spouse/partner support, as opposed to unavailability of the support, was not significantly associated with CES-D scores, while high spouse/partner support was significantly associated with lower CES-D scores. Race/ethnicity and level of education were not significant correlates of men's CES-D scores, but older age, current employment, higher

frequencies of physical activity and religious service attendance, and higher family/friend support were associated with lower CES-D scores. On the other hand, having a household income less than \$25,000, between \$25,000 and \$49,999, between \$50,000 and \$99,999, or missing income data (as opposed to \$100,000+) and having higher numbers of chronic medical conditions and ADL impairments were associated with higher CES-D scores. Further analysis showed that the spouse/partner support variable explained 4.1% of the variance of men's CES-D scores. Models 2 and 3 show that the relationship between spouse/partner support and depressive symptoms did not vary between younger and older groups of men. In terms of other significant correlates, the results of models 1 and 2 were almost identical. Compared to model 1, however, age, current employment, number of chronic medical conditions, and the frequency of religious service attendance were no longer significant in the older group (model 3).

Multivariate linear regression results for women

Model 1 regression results for women show that low-level spouse/partner support, as opposed to unavailability of support, was significantly associated with higher CES-D scores, while high-level spouse/partner support was significantly associated with lower CES-D scores. Medium-level support was not associated with women's CES-D scores. Employment status and frequency of religious service attendance were not significant correlates of women's CES-D scores, but older age, being black, higher frequency of physical activity, and higher family/friend support were associated with lower CES-D scores. On the other hand, having less than a high school education (as opposed to a bachelor's degree or higher), having a household income of less than \$25,000 or missing income data (as opposed to \$100,000+), and having higher numbers of chronic medical conditions and ADL impairments were associated with higher CES-D scores. Further analysis showed that the spouse/partner support variable explained 2% of the variance in women's CES-D scores. Models 2 and 3 show that the relationship between spouse/partner support and depressive symptoms did not vary between younger and older groups of women. Compared to model 1, age group and education were no longer significant correlates in model 2 (younger group), and age, race/ethnicity, and income were no longer significant in model 3 (older group).

Discussion

Spouse/partner support has been found to have a significant impact on physical health outcomes and other well-being indicators in late life. A small number of previous studies also found a significant relationship between spouse/partner support and depressive symptoms. This study examined gender difference in the relationship between spouse/partner support and depressive symptoms. The multivariate regression analyses found that low-level perceived spouse/partner support, as opposed to unavailability of spouse/partner support, was significantly associated with higher depressive symptomatology among women only, but high-level perceived spouse/partner support was significantly associated with lower depressive symptomatology for both genders. The results support both H1 and H2. The relationships between spouse/partner support and depressive symptoms did not vary between younger and older groups within each gender. Spouse/partner support explained a larger portion of the variance in men's CES-D scores than in women's, indicating that spouse/partner interaction may be a more important correlate of men's depressive symptoms than women's.

The study findings provide an interesting insight into the ways that spouse/partner support may affect the mental health of older men differently from that of older women. It appears that older men, unlike older women, are not negatively affected by low perceived spouse/partner support, while both older men and women reap psychological benefits from high spouse/partner support. As discussed, the relationship between spouse/partner support and

men's depressive symptoms may be more complex than that of women's and affected by their perceived independence and by the nature of their attachment to their wives (Tower & Kasl, 1996). Previous studies (e.g., Gurung et al., 2003) also found that men received emotional support primarily from their spouses. It is possible that as men grew older, the spouse/partner may have become an increasingly important source of emotional support, if not the primary source. The increasing importance of spouse/partner support in fulfilling their emotional needs may lead older men to be less likely to be disappointed or bothered by even low perceived spouse/partner support.

Unlike older men with unsupportive spouses/partners, older women with unsupportive spouses/partners appear to be worse off emotionally than their peers who lack spouses/partners. As discussed, women are more likely than men to be disappointed and negatively impacted by a low-level of support from their spouses/partners, although they tend to draw their support from a wider circle of networks that include other family members and friends. In addition to having other sources of close emotional support from other family members and friends, many older women who lack a spouse/partner, compared to those with low spouse/partner support, are indeed likely to have higher emotional well-being if they chose to stay unattached and independent. Some studies also found that many divorced people, especially women, are happier than they were while married (Brinig & Allen, 2000; Gardner & Oswald, 2006). In sum, it appears that the perceived quality of spouse/partner interaction and support is more important to older women's mental health than the mere presence of a spouse/partner, providing support to the tenets of the socioemotional selectivity theory. On the other hand, our finding that older men who have low or medium spouse/partner support are not different in depressive symptoms from their peers who do not have such support challenges the socioemotional selectivity theory and begs for more research.

With cross-sectional data, it is difficult to establish a causal relationship between perceived spouse/partner support and depression. Previous studies supported both unidirectional and bidirectional relationships between marital conflict/dissatisfaction and depression (Gagnon, Herson, Kabacoff, & Van Hasselt, 1999; Lemmes, Buysse, Heene, Eisler, & Demyttenaere, 2007). Depression can predate low perceived spouse/partner support and have a detrimental effect on marital or couple relationship quality and on actual and perceived spouse/partner support, while low perceived spouse/partner support can contribute to depression. Low perceived spouse/partner support and depression can reinforce each other in a vicious circle. Low perceived spouse/partner support and depression may also result from other psychological factors.

Another limitation of the study was the abbreviated versions of spouse/partner, family, and friend support scales. Because of the abbreviation, we were not able to construct separate scales for negative and positive interactions, and thus, high negative interaction was considered low-level support rather than a distinct aspect of spouse/partner relationships. The abbreviation was also likely to have resulted in the low alphas for the spouse/partner scale and the family/friend support scales. Given the low alphas, caution is required in interpreting the study's findings.

Despite these limitations, the study provides a good starting point for further research on the mental health impact of spouse/partner support in older adults. Because the data set was based on a nationally representative sample of older adults, the findings are also generalizable to a larger population. Further research with longitudinal data is necessary to sort out the causality or reciprocity of the relationship between spouse/partner support and depressive symptoms. Future research also needs to examine the gender similarities and differences in the effect of negative interactions *versus* low-level support on depressive

symptoms and *vice versa*. Examination of spousal characteristics that are associated with the levels of support would also add an important dimension to the knowledge base.

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Table 1

Sample characteristics and gender difference.

Variable	All N=2924	Men N=1410	Women N=1514
Age ***	68.07 (7.70)	67.59 (7.59)	68.53 (7.78)
Age group (%) **			
57–64	40.9	43.2	38.8
65–74	35.0	35.1	34.9
75–85	24.1	21.6	26.3
Marital/partner status (%) ***			
Nonmarried/no partner	27.0	14.3	38.3
Married/cohabiting	68.8	80.3	58.1
Have romantic, intimate, or sexual partner	4.3	5.4	3.6
Race/ethnicity (%)			
Non-Hispanic White	82.7	83.3	82.2
Non-Hispanic Black	10.3	9.4	11.0
Hispanic	7.0	7.2	6.8
Education (%) ***			
Less than high school	18.6	16.9	20.2
High school or equivalent	26.9	24.3	29.4
Vocational certificate/some college/associate degree	30.1	27.5	32.5
Bachelor's degree or higher	24.4	31.3	17.8
Household income (%) ***			
Under \$25,000	26.0	21.1	30.7
\$25,000–under \$50,000	27.9	28.6	27.2
\$50,000–under \$100,000	22.8	28.1	17.8
\$100,000+	12.7	16.1	9.5
Missing	10.6	6.1	14.9
Employment status (%) ***			
Currently working for pay	34.7	40.7	29.2
Not working for pay	65.3	59.3	70.8
Number of diagnosed chronic medical conditions	1.86 (1.39)	1.81 (1.40)	1.91 (1.37)
Number of ADL impairment ***	0.59 (1.27)	0.50 (1.17)	0.68 (1.36)
Frequency of physical activity ^a ***	3.18 (1.30)	3.35 (1.16)	3.02 (1.40)
Frequency of religious service attendance ***	3.27 (2.13)	3.02 (2.17)	3.49 (2.06)
Family/friend support ***	19.67 (3.45)	19.30 (3.43)	20.01 (3.43)
Spouse/partner support ***			
Unavailable	27.0	14.3	38.3
Low	7.9	8.7	7.1
Medium	22.1	29.2	15.5

Variable	All N=2924	Men N=1410	Women N=1514
High	43.0	47.8	38.6
Mean among the partnered ^a	10.53 (1.51)	10.46 (1.43)	10.62 (1.60)
Mean CES-D score ***	5.35 (5.15)	4.89 (4.99)	5.79 (5.25)
CES-D score (%) ***			
0-8	77.4	80.8	74.2
9+	22.6	19.2	25.8

Notes: Values within parentheses denote SD of the mean.

^aRange of the value: 0 (never) to 4 (3+ times a week).

 $p < 0.001$

**
 $p < 0.01$

*
 $p < 0.05$: denotes gender difference.

Table 2

Characteristics by spouse/partner status among men.

	No partner <i>n</i> =202	Low support <i>n</i> =122	Medium support <i>n</i> =412	High Support <i>n</i> =674	<i>p</i> (all four groups)	<i>p</i> (partnered only)
Age	69.86 (8.47) ^a	68.14 (7.55)	67.54 (7.14)	66.83 (7.47) ^b	0.001	
Race/ethnicity (%)					0.000	0.000
Non-Hispanic White	80.2	73.2	82.5	86.5		
Non-Hispanic Black	13.4	16.3	12.1	5.5		
Hispanic	6.4	10.3	5.3	8.0		
Education (%)					0.002	0.191
Less than high school	26.2	16.3	15.3	15.1		
High school or equivalent	25.2	26.0	26.7	22.3		
Vocational certificate/some college/associate degree	24.8	27.6	30.1	26.7		
Bachelor's degree or higher	23.8	30.1	27.9	35.9		
Household income (%)					0.000	0.000
Under \$25,000	49.3	20.5	18.4	14.4		
\$25,000–under \$50,000	25.4	24.6	36.7	25.4		
\$50,000–under \$100,000	13.4	26.2	25.5	34.3		
\$100,000+	3.5	26.2	14.8	18.9		
Missing	8.5	2.5	4.6	7.0		
Employment status (%)					0.000	0.286
Currently working for pay	23.8	46.7	40.4	44.7		
Not working for pay	76.2	53.3	59.6	55.3		
Number of diagnosed chronic medical conditions	2.11 (1.44) ^a	1.81 (1.41)	1.80 (1.47)	1.72 (1.34) ^b	0.05	
Number of ADL impairment	0.66 (1.30)	0.52 (1.10)	0.49 (1.12)	0.45 (1.17)	0.26	
Frequency of physical activity ^c	3.03 (1.50) ^a	3.30 (1.14)	3.28 (1.15)	3.50 (2.19) ^b	0.001	
Frequency of religious service attendance	2.40 (2.21) ^a	3.22 (2.11) ^b	3.10 (2.10) ^b	3.12 (2.19) ^b	0.01	
Family/friend support	18.64 (4.15) ^a	18.31 (3.22) ^a	19.07 (3.73)	19.81 (3.19) ^b	0.01	
CES-D score						
Mean	7.08 (5.92) ^a	6.34 (5.35) ^a	5.84 (3.35) ^a	3.38 (3.81) ^b	0.001	
0–8 (%)	65.3	68.0	75.0	91.4	0.000	0.000
9+ (%)	34.7	32.0	25.0	8.6		

Notes: Values within parentheses denote SD of the mean.

^aIndicate pairs that are significantly different.^bIndicate pairs that are significantly different.^cRange of the value: 0 (never) to 4 (0 to 3+ times a week)

Table 3

Characteristics by spouse/partner status among women.

	No partner <i>n</i> =587	Low support <i>n</i> =108	Medium support <i>n</i> =234	High Support <i>n</i> =585	<i>p</i> (all four groups)	<i>p</i> (partnered only)
Age	71.53 (8.09) ^a	67.31 (7.51) ^b	67.06 (7.18) ^b	66.32 (6.72) ^b	0.001	
Race/ethnicity (%)					0.000	0.000
Non-Hispanic White	77.9	82.4	82.5	86.2		
Non-Hispanic Black	15.3	13.0	7.7	7.8		
Hispanic	6.8	4.6	9.8	6.0		
Education (%)					0.000	0.099
Less than high school	28.4	13.9	16.7	14.5		
High school or equivalent	30.8	27.8	29.5	28.2		
Vocational certificate/some college/associate degree	27.4	37.0	40.2	33.7		
Bachelor's degree or higher	13.3	21.3	13.7	23.6		
Household income (%)					0.000	0.003
Under \$25,000	53.7	18.7	19.2	14.3		
\$25,000–under \$50,000	24.7	35.5	29.9	27.1		
\$50,000–under \$100,000	8.2	13.1	20.1	27.5		
\$100,000+	2.2	13.1	9.8	15.9		
Missing	11.2	19.6	20.9	15.2		
Employment status (%)					0.004	0.043
Currently working for pay	25.4	38.5	35.5	62.0		
Not working for pay	74.6	61.5	64.5	38.0		
Number of diagnosed chronic medical conditions	2.16 (1.47) ^a	1.58 (1.41) ^b	1.71 (1.30) ^b	1.80 (1.27) ^a	0.01	
Number of ADL impairment	0.94 (1.58) ^a	0.45 (1.06) ^b	0.51 (1.17) ^b	0.54 (1.19) ^b	0.05	
Frequency of physical activity ^c	2.86 (1.53)	3.22 (1.26)	3.02 (1.30)	3.13 (1.32)	0.06	
Frequency of religious service attendance	3.48 (2.10)	2.99 (2.15) ^a	3.45 (2.12)	3.62 (1.97) ^b	0.05	
Family/friend support	19.52 (3.79) ^a	19.16 (3.92) ^a	19.72 (3.40)	20.75 (2.78) ^b	0.01	
CES-D score						
Mean	6.69 (5.51) ^a	7.64 (5.02) ^a	5.67 (4.83) ^b	4.60 (4.91) ^b	0.001	
0–8 (%)	67.8	64.2	77.3	81.4	0.000	0.000
9+ (%)	32.2	35.8	22.7	18.6		

Notes: Values within parentheses denote SD of the mean.

^aIndicate pairs that are significantly different.^bIndicate pairs that are significantly different.^cRange of the value: 0 (never) to 4 (0 to 3+ times a week).

Table 4

Bivariate correlation coefficients.

		2	3	4	5	6	7	8	9
Men									
1.	CES-D	0.07 **	-0.15 ***	0.17 ***	0.28 ***	-0.25 ***	-0.11 ***	-0.23 ***	-0.28 ***
2.	Age		-0.16 ***	0.21 ***	0.10 ***	-0.01	0.06 *	-0.06 *	-0.13 ***
3.	Education			-0.13 ***	-0.09 ***	0.13 ***	0.01	0.13 ***	0.11 ***
4.	Number of medical conditions				0.27 ***	-0.17 ***	0.01	-0.03	-0.09 **
5.	Number of ADL impairment					-0.36 ***	-0.10 ***	-0.05	-0.06 *
6.	Frequency of physical activity						0.06 *	0.05	0.14 ***
7.	Frequency of religious service attendance							0.17 ***	0.09 **
8.	Family/friend support								0.14 ***
9.	Spouse/partner support (four levels)								
Women									
1.	CES-D	0.04	-0.22 ***	0.26 ***	0.37 ***	-0.31 ***	-0.08 **	-0.24 ***	-0.18 ***
2.	Age		-0.22 ***	0.14 ***	0.10 ***	-0.07 **	0.03	-0.11 ***	-0.30 ***
3.	Education			-0.17 ***	-0.17 ***	0.21 ***	0.01	0.15 ***	0.17 ***
4.	Number of medical conditions				0.37 ***	-0.23 ***	0.01	-0.04	-0.12 ***
5.	Number of ADL impairment					-0.37 ***	-0.08 **	-0.10 ***	-0.13 ***
6.	Frequency of physical activity						0.12 ***	0.12 ***	0.08 **
7.	Frequency of religious service attendance							0.10 ***	0.04
8.	Family/friend support								0.16 ***
9.	Spouse/partner support (four levels)								

Note

 $p < 0.001$ **
 $p < 0.01$ *
 $p < 0.05$.

Table 5

Relationship between depressive symptoms and spouse/partner support: OLS regression results.

Variable	Men			Women		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
	All	Age 57–66	Age 67+	All	Age 57–66	Age 67+
	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Age	−0.04 (0.02) *	−0.15 (0.07) *	0.02 (0.04)	−0.07 (0.02) ***	−0.31 (0.07) ***	−0.02 (0.03)
Race/ethnicity						
(Non-Hispanic White)						
Black	0.35 (0.44)	−0.01 (0.58)	0.68 (0.66)	−1.15 (0.41) **	−1.81 (0.59) **	−0.63 (0.57)
Hispanic	0.12 (0.50)	−0.94 (0.68)	1.39 (0.73)	0.38 (0.51)	−0.34 (0.69)	1.29 (0.76)
Level of education						
Less than high school	0.12 (0.42)	−0.08 (0.66)	0.30 (0.56)	1.08 (0.45) *	1.13 (0.66)	1.47 (0.64) *
High school or equivalent	0.01 (0.35)	−0.12 (0.50)	0.30 (0.49)	0.50 (0.39)	−0.02 (0.53)	1.30 (0.58) *
Vocational certificate/ some college/AB degree (bachelor's degree)	0.26 (0.32)	0.16 (0.44)	0.82 (0.47)	0.25 (0.36)	0.33 (0.47)	0.52 (0.56)
Household income						
Under \$25,000	2.34 (0.46) ***	2.70 (0.66) ***	2.07 (0.70) **	1.80(0.53) **	2.31 (0.69) **	1.83 (1.06)
\$25,000–under \$50,000	1.73 (0.41) ***	1.27 (0.56) *	2.18 (0.65) **	0.62 (0.48)	0.41 (0.59)	1.27 (1.03)
\$50,000–under \$100,000	0.82 (0.38) *	0.96 (0.48) *	1.01 (0.64)	0.70 (0.48)	0.60 (0.57)	1.63 (1.06)
(\$100,000+)						
Missing	1.55 (0.59) **	3.56 (0.88) ***	0.37 (0.84)	1.09 (0.53) *	1.35 (0.67) *	1.45 (1.08)
Employment status (%)						
Working for pay (not working for pay)	−0.84 (0.28) **	−0.98 (0.37) *	−0.80 (0.42)	−0.52 (0.29)	−0.52 (0.38)	−0.54 (0.48)
Number of diagnosed chronic medical conditions	0.22 (0.09) *	0.39 (0.14) *	0.08 (0.13)	0.44 (0.10) ***	0.44 (0.14) *	0.46 (0.14) **
Number of ADL impairment	0.74 (0.12) ***	0.42 (0.17) **	0.92 (0.16) ***	0.82 (0.10) ***	0.90 (0.16) ***	0.71 (0.14) ***
Frequency of physical activity	−0.38 (0.11) **	−0.40 (0.16) *	−0.40 (0.16) *	−0.63 (0.09) ***	−0.76 (0.15) ***	−0.51 (0.13) ***
Frequency of religious service attendance	−0.14 (0.06) *	−0.13 (0.08)	−0.18 (0.08) *	−0.02 (0.06)	−0.01 (0.091)	0.05 (0.08)
Family/friend support	−0.22 (0.04) ***	−0.30 (0.05) ***	−0.14 (0.05) **	−0.26 (0.04) ***	−0.32 (0.07) ***	−0.21 (0.05) ***
Spouse/partner support						
(Unavailable)						
Low support	0.21 (0.53)	0.66 (0.80)	−0.37 (0.71)	2.15 (0.50) ***	2.56 (0.73) ***	1.65 (0.70) *
Medium support	−0.21 (0.40)	0.07 (0.61)	−0.64 (0.55)	−0.30 (0.38)	−0.43 (0.58)	−0.04 (0.53)
High support	−2.15 (0.39) ***	−2.07 (0.60) **	−2.32 (0.51) ***	−0.89 (0.31) *	−0.81 (0.47) †	−0.97 (0.43) *
R ²	0.24	0.26	0.25	0.27	0.33	0.24
Adjusted R ²	0.23	0.24	0.23	0.26	0.31	0.22
SE	4.32	4.36	4.21	4.51	4.55	4.43

Notes: $n=1318$ for men and $n=1441$ for women for model 1; $n=675$ for men and $n=696$ for women for model 2; $n=643$ for men; and $n=745$ for women for model 3.

 $p<0.001$

**
 $p<0.01$

*
 $p<0.05$

[†]
 $p<0.09$.