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Brief communication

Depressed mood and social support as predictors of quality of life in women receiving home health care

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Abstract

We examined relationships among depressed mood, social support and quality of life in 58 medically ill low-income women 40 years and older receiving home health care. Analyses showed a negative relationship between depressed mood and quality of life (p's $\leqslant$ 0.05). Positive relationships were found between number of people available for support and two of three quality of life domains as well as satisfaction with support and all three domains (p's $\leqslant$ 0.05). Results also provided preliminary support that belonging to a church is related to emotional well-being ($p = 0.039$) and among those belonging to a church, recent increased activity was related to social/family well-being ($p = 0.004$). Mediational analyses revealed a cycle of depressed mood, dissatisfaction with social support, and loss of social support providers underlying the poor quality of life of many participants. This highlights the need to address the relationship between depression and social support when treating patients with chronic illness.

Introduction

Chronic illness can have a devastating impact on social, family and occupational functioning. It often is associated with pain, disability, mood disturbance and fear of death. These sequelae can be more pronounced among people with restricted mobility [1–4]. How they cope with the stresses of illness may have important consequences for their quality of life (QoL). In the present study we hypothesized that both depressed mood and social support would contribute to the prediction of health-related QoL in medically ill women receiving home health care. We also examined the impact of age and religious involvement on health-related QoL.

Method

Participants and procedure

The Baylor College of Medicine Institutional Review Board approved the study and consent procedures. Participants were a convenience sample of patients receiving services from the Primary Home Care Program of the Visiting Nurse Association (VNA) of Houston, Inc. in Harris County, Texas between April 1999 and April 2000. Eligibility criteria included living within a 30-minute drive of the Texas Medical Center and ability to read and understand English and give informed consent. Primary care nurses from the VNA identified eligible patients from their caseloads and contacted

them for consent to a home visit by a research assistant. Patients were told that they would be asked to complete a brief (30–45 minute) questionnaire about coping with medical illness. Several potential participants had died or been hospitalized by the time they were called by a research assistant. Many potential participants' phone numbers either had been disconnected or were not in service. Patients who agreed to participate signed an informed consent read aloud by the research assistant, completed a brief mental status examination, and were given a packet of questionnaires. Patients who had difficulty reading or filling out the questionnaires were provided with assistance. Patients' primary home care nurses completed a rating scale documenting their health status. Seventy-one patients agreed to participate. Fifty-eight women 40 years of age or older with scores of 11 or higher on the Abbreviated Mini-Mental State Exam [5–6] participated in this study.

Measures

Health-related quality of life
The Functional Assessment of Chronic Illness Therapy – General (FACIT-G) [7] is a 27-item self-report measure that assesses four domains of QoL: physical well-being (PWB), social/family well-being (SWB), emotional well-being (EWB) and functional well-being (FWB). Cronbach's α's for three of the four subscales were acceptable in this study (SWB, $\alpha = 0.76$; EWB, $\alpha = 0.69$; FWB, $\alpha = 0.68$). Cronbach's α for the PWB subscale was too low to be reliable ($\alpha = 0.56$) and was dropped as an outcome measure.

The Geriatric Depression Scale – Short Form
The Geriatric Depression Scale – Short Form (GDS) [8] was used to assess depressed mood. This 15-item scale is a reliable and valid self-report measure for the assessment of depression in elderly populations. Cronbach's α for this measure was acceptable ($\alpha = 0.73$).

Social support
Social support was measured by the Social Support Questionnaire (SSQ) [9], a 12-item self-report measure that assesses two dimensions of social support: number of people available for support

and satisfaction with support. High scores indicate more sources of support and greater satisfaction with support. Cronbach's α's for these variables were high (number of social supports, $\alpha = 0.88$; satisfaction with social support, $\alpha = 0.91$), and their intercorrelation was relatively low ($r = .38$).

Religious involvement
Participants indicated either 'Yes' or 'No' to whether they belonged to a church, congregation, or religious group and if they did, said when they last were active. Response choices were coded 2 = 'Active less than or equal to three months ago' and 1 = 'Active greater than three months ago'.

Results

Sample characteristics

The average age of the participants was 71 years (SD = 14.1, range = 43–99). Racial/ethnic distribution was 76% African American, 19% Caucasian and 5% Hispanic. Twenty-nine per cent had completed 0–8 years of formal education, 57% grades 9–12/GED/technical or trade school and 14% some college/graduate school. Only 16% were married. The vast majority (78%) had incomes of $9600 per year or less. Eighty-five per cent were Protestant, 10% Catholic and 5% 'other.' Seventy-two per cent reported membership in a church, congregation or religious group. Fifty-four per cent of those belonging to a religious organization or group reported being active in their religious groups within the preceding three months.

To determine how closely our sample approximated the larger patient population from the VNA, we examined demographic characteristics of 1232 patients served by the VNA from April 1999 to April 2000. Most were between the ages of 55 and 94 (78%) and female (75%). To qualify for the Primary Home Care program, patients had to have monthly incomes of $1500 or less or total resources of no more then $2000 per month. This comparison indicated that our sample closely approximated the total population served by the Primary Home Care Division of the VNA during that period.

Table 1. Correlations between quality of life variables (FACIT subscales) and predictor variables

Predictor	FACIT subscales		
	Social/family well-being	Emotional well-being	Functional well-being
Age	0.12	0.29*	0.31*
Depressed mood	−0.29*	−0.54***	−0.62***
SSNO	0.39**	0.30*	0.24
SSAT	0.46***	0.31*	0.28*

*$p \leqslant 0.05$, 2-tailed; **$p \leqslant 0.01$ 2-tailed; ***$p \leqslant 0.001$, 2-tailed.
Note. FACIT: Functional Assessment of Chronic Illness Therapy; SSNO: number of social supports; SSAT: satisfaction with social support.

Bivariate analyses

Tables 1 and 2 present the correlations between the non-dichotomous independent and dependent variables, and among the independent variables, respectively. Positive correlations were found between age and two QoL domains (EWB and FWB). Negative relationships were found between number of medical conditions and FWB and between depressed mood and all three QoL measures. Positive relationships were found between number of people available for support and two of the three QoL domains (SWB and EWB), as well as between satisfaction with support and all three QoL domains.

Between-group analyses

Independent *t*-tests were performed to examine differences between religiously active and inactive participants on measures of QoL. Patients who belonged to a church, congregation or religious group had higher EWB scores than those who did not (M = 17.6, SD = 4.0; M = 14.6, SD = 6.5, respectively; $p = 0.039$). Those who had participated actively in their religious group or organization during the preceding 3 months had higher SWB

Table 2. Correlations among predictor variables

	Depressed mood	SSNO	SSAT
Age	−0.21	−0.12	−0.02
Depressed mood	–	−0.30*	−0.43*
SSNO	–	–	0.38**

*$p \leqslant 0.05$, 2-tailed; **$p \leqslant 0.01$, 2-tailed.
Note. SSNO: Number of social supports; SSAT: Satisfaction with social support.

scores than those who had not (M = 22.9, SD = 5.1; M = 18.0, SD = 6.4, respectively; $p = 0.004$).

Mediational analyses

To explore further the relationships among social support, depressed mood and quality of life, we tested four mediational models. From the univariate analyses, we predicted that depressed mood would mediate the relationship between social support (satisfaction and number of supports) and QoL. However, recognizing that the relationship between depressed mood and social support might be bi-directional, we also tested social support as a mediator of the relationship between depressed mood and QoL to identify the best-fitting models. Z-tests supported the four models (all p's < 0.05).

GDS scores accounted for 50% of the variance in emotional well-being associated with number of social supports and almost 70% of the variance in emotional well-being associated with satisfaction with social support. As depicted in Figure 1, more social support providers predicted less depression, which in turn predicted better emotional well-being. Furthermore, greater satisfaction with social support predicted less depression, which in turn predicted better emotional well-being (Figure 2). GDS scores also accounted for 95% of the relationship between satisfaction with social support and functional well-being (Figure 3), indicating that depressed mood almost completely mediated this association. The relationship between GDS and social/family well-being (with satisfaction with social support in the model) was not significant. However, satisfaction with social support accounted for approximately 21% of the total effect of depressed mood on social/family well-being (Figure 4).
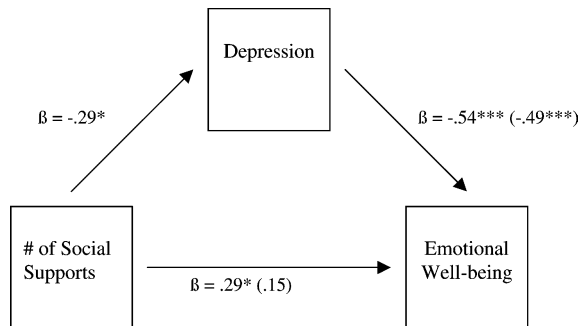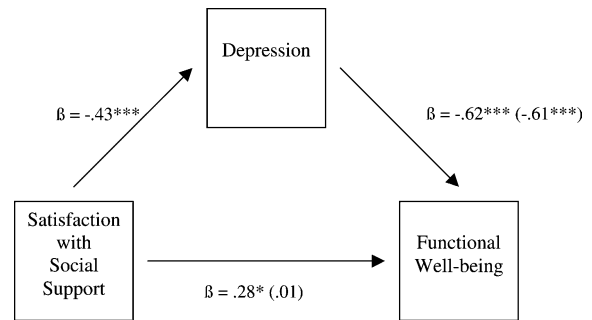
Figure 1. Path diagram of a model testing depression as a mediator of the association between number of social supports and emotional well-being. Standardized β weights for variables entered into the model individually are outside the parentheses. Values in parentheses represent standardized β weights when all variables were simultaneously entered into the regression analysis. Significant relationships are signified by single (*$p < 0.05$), double (**$p < 0.01$), or triple (***$p < 0.001$) asterisks.
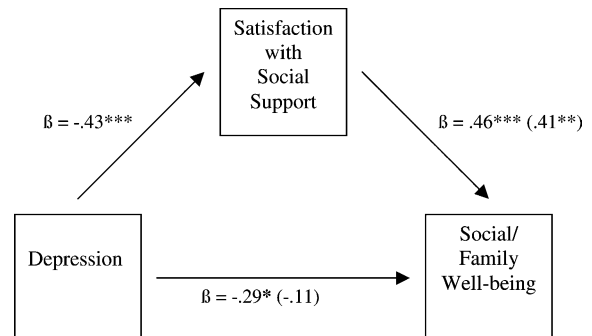

Figure 3. Path diagram of a model testing depression as a mediator of the association between satisfaction with social support and functional well-being. Standardized β weights for variables entered into the model individually are outside the parentheses. Values in parentheses represent standardized β weights when all variables were simultaneously entered into the regression analysis. Significant relationships are signified by single (*$p < 0.05$), double (**$p < 0.01$), or triple (***$p < 0.001$) asterisks.
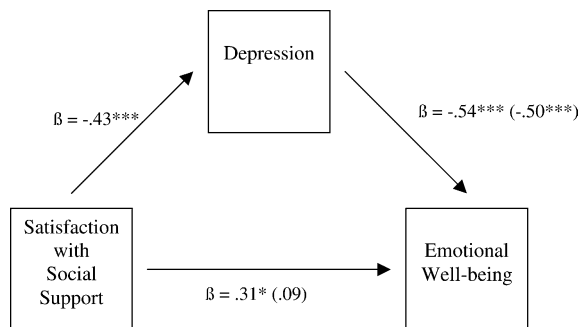
Figure 2. Path diagram of a model testing depression as a mediator of the association between satisfaction with social support and emotional well-being. Standardized β weights for variables entered into the model individually are outside the parentheses. Values in parentheses represent standardized β weights when all variables were simultaneously entered into the regression analysis. Significant relationships are signified by single (*$p < 0.05$), double (**$p < 0.01$), or triple (***$p < 0.001$) asterisks.

Figure 4. Path diagram of a model testing satisfaction with social support as a mediator of the association between depression and social/family well-being. Standardized β weights for variables entered into the model individually are outside the parentheses. Values in parentheses represent standardized β weights when all variables were simultaneously entered into the regression analysis. Significant relationships are signified by single (*$p < 0.05$), double (**$p < 0.01$), or triple (***$p < 0.001$) asterisks.

Discussion

This study examined the impact of depressed mood and social support on health-related QoL in medically ill women receiving home health care. We also explored the relationship between religious involvement and QoL. Consistent with other studies of elderly persons receiving home health care [2, 10], our study showed that depressed mood has important implications for QoL. In our study,

a complex picture emerged for relationships among social support, mood and QoL. It appears that several inter-related paths lead to different dimensions of QoL. The number of social supports inversely influenced participants' level of depression, which in turn negatively affected their emotional well-being. Furthermore, depression adversely affected participants' satisfaction with social support, which in turn was directly related to perceived social/family well-being. In addition, the direct relationships between satisfaction with

social support and both emotional and functional well-being were mediated by depression: less satisfaction with social support fostered depressed mood, which adversely impacted quality of life.

Our results also provided preliminary support that belonging to a church, congregation, or religious group is related to emotional well-being, and that among those belonging to a religious organization or group, recent increased activity is related to social/family well-being. These results are consistent with previous studies [11–15] and highlight the importance of clerical and congregational outreach to people dealing with chronic illnesses, especially those who have limited physical mobility.

There are several methodological considerations that need to be taken into account when interpreting our results. Since participants were female and predominantly low-income, Protestant and African American, the generalizability of our results is limited. Different factors may be related to psychological functioning in medically ill older adults who are more ethnically and socioeconomically diverse, as well as for men. Furthermore, since our study was cross-sectional, we cannot determine directionality of the effects. For example, we do not know if belonging to a church increases emotional well-being or if emotional well-being leads to greater church involvement. Despite these limitations, the current study highlights the complexity of the relationships among psychological, social and health variables. It also emphasizes the need for healthcare practitioners to assess multiple aspects of psychosocial functioning, so that treatment planning will target all relevant domains.

Acknowledgements

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