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Unmet Needs and Depressive Symptoms Among Low-Income Older Adults

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Abstract

Previous studies have found that declining health, decreased social interaction, and inadequate financial resources were significant risk factors for late-life depression, and social support from families and friends and religiosity were significant protective factors. In this study, we examined if low-income older adults' perceived unmet need for home- and community-based services for many aging-associated problems would be independently associated with their depressive symptoms, controlling for these known risk and protective factors. We interviewed a total of 213 community-residing older adults to assess their depressive symptoms, using the Geriatric Depression Scale (GDS), and unmet needs in the areas of personal assistance, instrumental and environmental support, emotional support, and other facilitative/enabling services. We found that the number of unmet needs was significantly positively associated with these older adults' depressive symptoms, although it explained only a small proportion of the variance of the GDS scores. Future research and practice implications are discussed.

Keywords

Depression; environmental press; formal services; instrumental support; low income

INTRODUCTION

A plethora of research on late-life depression over the past 2 decades resulted in a well-established knowledge base about its risk and protective factors. Onset and deterioration of chronic health problems and disability, social isolation and other psychosocial stressors, and financial constraints/worries in later life increase the likelihood of both major and minor depression (Blazer, 2003; Bruce, 2001; Cacioppo & Hughes, 2006; Cole & Dendukuri, 2003; Mills, 2001; Schoevers et al., 2000). Previous studies also found that social support from families and friends, social engagement, regular exercise routines, and religious practice and spirituality may buffer depressogenic effects of physical and psychosocial problems in late life (Bosworth, Park, McQuoid, Hays, & Steffens, 2003; Koenig, George, &

Titus, 2004; Pinquart & Sorensen, 2000; Sjösten & Kivelä, 2006; Wink, Dillon, & Larsen, 2005).

Despite the extensive research findings about declining health, social isolation, and inadequate financial resources in late life as depression risk factors, little research has been done on the relationship between formal supportive services and depression in older adults. Like informal social support from families and friends, formal supportive services may protect older adults from depressionogenic effects of their physical and psychosocial problems and help them age in place, whereas a lack of formal support, despite perceived need for such support, may increase older adults' depressive symptoms. The purpose of this study was to examine the relationship between self-reported unmet need for home- and community-based services and depressive symptoms in low-income, homebound and ambulatory older adults aged 60 and older. The need for formal supportive services for the older-adult population is expected to increase in the future, not only because of the rapid increase in the number of older adults *per se*, but also because of an increasing share of racial/ethnic minority older adults, with the attendant economic and health disparities, as well as the demographic changes in which an increasing proportion of women is expected to be in the workforce (Lyons & Zarit, 1999; Wilmoth & Longino, 2006). It is important to examine the types of unmet needs among community-residing, low-income older adults with or without mobility impairment and the implications of potential negative effects, in terms of depressive symptoms, of their unmet needs.

LITERATURE REVIEW, CONCEPTUAL FRAMEWORK, AND HYPOTHESES

Previous research on unmet need for supportive services among community-residing older adults, especially those with impairments in activities of daily living (ADL) or instrumental activities of daily living (IADL), has focused on the prevalence of unmet personal assistance need, identification of older adults' or their caregivers' sociodemographic characteristics, and the inadequacy of economic and healthcare resources contributing to the unmet need (Allen & Mor, 1997; Desai, Lentzner, & Weeks, 2001; Thomas & Payne, 1998). Negative consequences of unmet need for assistance with ADLs/IADLs were examined in terms of older individuals' inability to meet daily essential needs (e.g., not being able to feed themselves when hungry), experience of physical discomfort and psychological distress, nursing home placement, and death (Allen & Mor, 1997; Desai et al., 2001; Gaugler, Kane, Kane, & Newcomer, 2005). One study found that formal support buffered or reduced the detrimental effects of perceived health problems on changes in life satisfaction among frail older adults over time (Krause, 1990). Studies also showed that older adults' unmet need for instrumental and socioemotional support was associated with a higher level of subjective stress among their caregivers and that the use of formal services significantly moderated negative caregiving consequences such as depression, health deterioration, and social isolation among the caregivers (Bass, Noelker, & Rechlin, 1996; Gaugler et al., 2004). However, little is known about the possible relationship between older adults' perceived unmet needs for formal services and their depressive symptoms.

Environmental Press and Need for Support

Recognizing needs involves values; that is, different groups of people with different values recognize different needs (McKillip, 1987). For community-dwelling older adults, the values governing their perception of unmet needs are likely to reflect their desire to age in place and maintain their independence and autonomy (Doyal & Gough, 1991; Lawton, 1982). With decreasing physical, functional, and cognitive capacities, frail older adults have to utilize adaptive strategies to negotiate the dissonance between their own decreased competence and the personal, social, and built environmental press (Kahana, 1982; Lawton, 1982). The most frequently employed adaptive strategy is informal support from family members, relatives, friends, and neighbors. Another important adaptive strategy is the utilization of supportive services from formal service providers. Personal assistance and other instrumental support from formal service providers that would augment informal support from their family and friends, if any, are essential for many older adults to age in place (Anderson et al., 2000; Desai et al., 2001; Reuben, 2006; Thomas & Payne, 1998). In reality, however, a significant proportion of disabled older adults continue to rely on informal support without utilizing formal services, or resorting to formal services only when they are institutionalized (Kelman, Thomas, & Tanaka, 1994; Lyons, Zarit, & Townsend, 2000). In Whitlatch and Noelker's (1996) study, 35% of disabled older adults received informal care exclusively, 16% received both informal care and formal service, 20% used formal service exclusively, and 29% had no assistance. Another study found that less than 14% of disabled older adults used formal, in-home services (Norgard & Rodgers, 1997).

The low rate of formal service utilization is likely due to availability, accessibility, affordability, and acceptability issues. In underserved geographic areas, formal services may not be available. Isolated and/or misinformed older adults and their informal caregivers may also erroneously perceive that services are unavailable or inaccessible. Certain services may require out-of-pocket expenses or may not be culturally acceptable to older adults and their informal caregivers (Lyons & Zarit, 1999). However, the need for coordinating with or transitioning into formal support services increases as the older adults' or their informal caregivers' physical, functional, cognitive, and emotional conditions deteriorate (Bookwala et al., 2004; Geerlings, Pot, Twisk, & Deeg, 2005; Houde, 1998). Without resorting to formal supportive services, older adults and their informal caregivers will experience unmet need, which may, in turn, result in their decreased physical and psychological well-being.

Range of Needs Among Low-Income Older Adults

Perceived unmet need among older adults is also likely to be influenced by their financial resources. As compared to their financially better-off peers, low-income older adults, especially those with disabilities, are likely to have a greater range of need not only for personal assistance and instrumental/environmental support, but also for emotional support, financial assistance, and health and mental health services. As aforementioned, loneliness and other unmet psychosocial need that results from lack of social interactions and unmet financial need among low-income older adults can significantly affect their quality of life and become depression risk factors. In examining the relationship between unmet need and depressive symptoms in later life, we thus need to conceptualize unmet need as broader than that for impaired ADLs and IADLs only. In this study, we chose to include unmet needs for

personal assistance, instrumental and environmental support, emotional support, and other facilitative/enabling services (for understanding and accessing financial assistance and healthcare benefits, long-term care planning, exercise and health promotion, and volunteering opportunities).

An older adult's subjective perceived unmet need for formal services may differ from professionally evaluated need (McKillip, 1987). Also, an individual's perception of unmet need may not necessarily mean that his or her need is not currently being met or that he or she is experiencing negative consequences from unmet need. Desire for more assistance can arise in the absence of felt unmet need for some older adults and lead to expressed demand for services (see Branch, 2000). However, older adults receiving assistance primarily from their informal support systems may still want to receive formal services to alleviate the caregiving burden and strain of family members and friends. Others may perceive that their needs are not adequately met by the informal support system and wish to supplement informal care with formal services. Especially among low-income older adults and their informal caregivers, with limited caregiving resources, informal care may be inadequate to meet all the caregiving needs. Thus, a low-income older adult's perceived unmet need is more likely to reflect the actual gap between his or her current need stemming from decreased physical, functional, and psychological competence and available caregiving resources than the expressed demand for more services. Moreover, study findings suggest that older adults, especially those with cognitive impairment or other mental and physical health problems, may, in fact, identify fewer unmet psychological or social needs or depressive symptoms than those identified by their informal caregivers or professional service providers (Hancock, Reynolds, Woods, Thornicroft, & Orrell, 2003; McAvay, Raue, Brown, & Bruce, 2005).

Stress-Coping Model and Study Hypotheses

According to the stress-coping model (Lazarus, 1999; Lazarus & Folkman, 1984; Schooler, 1982), an individual's perception and experience of decreased competence in meeting his or her needs poses a threat in his or her cognitive appraisal process. The process of appraising this threat, however, is likely to be influenced by the individual's evaluation of his or her coping resources, such as informal and formal social support and religiosity. An older adult's perception that he or she needs support, either informal or formal, for meeting needs, but is not currently receiving it may contribute to psychological distress and depressive symptoms, independent of the possible deleterious psychological effect of chronic illness, disability, financial worries, and other risk factors (e.g., stressful life events, history of mental health treatment) and of the effect of the current level of social support and religiosity.

Considering that homebound older adults have significantly more functional impairments than ambulatory older adults, we first hypothesized that the homebound would be more likely to have unmet needs for personal assistance, instrumental and environmental support, and emotional support. We also hypothesized that both homebound and ambulatory older adults would have similar needs in regard to services that would help them deal with financial and healthcare benefits and long-term care planning. Finally, we hypothesized that

the higher number of unmet needs for formal supportive services would be associated with higher depressive symptom scores among both homebound and ambulatory older adults.

METHODS

Sample

The study participants consisted of a convenience sample of 81 homebound and 130 ambulatory individuals, aged between 60 and 96. The homebound sample, defined in this study as those who could not freely leave their home without assistance, due to medical conditions and/or mobility-affecting impairments, was referred from a Meals on Wheels (MOW) program, and the ambulatory sample came from participants in four senior centers and/or congregate nutrition programs in low-income neighborhoods of a large Texas city (population, 650,000). The MOW case managers ($n = 8$) referred to the research team 156 homebound older adults, 11.3% of their clientele, who were deemed cognitively intact and physically able to engage in an in-home face-to-face interview process lasting an average of 1.5 hr. The 52% response rate for the homebound sample was deemed reasonable, given the high level of frailty among the sample. Older adults' self-reported sickness and/or frailty and our lack of success in contacting them, due to their not answering or responding and to disconnected telephones, were two major reasons for nonparticipation. The senior center sample represented approximately 40% of all active participants in four centers, and they were directly recruited from their senior centers and interviewed either in a quiet room in their center or in their homes. All interviewees had to pass cognitive screening with the 10-item Short Portable Mental Status Questionnaire (SPMSQ; Pfeiffer, 1975) before proceeding to the full interview, which was conducted by master's- and doctoral-level social workers between June and December 2005. Twelve interviews were conducted in Spanish by a bilingual/bicultural interviewer using the Spanish version of the interview schedule.

The sociodemographic characteristics of the respondents are shown in Table 1. Two thirds, or 66.8%, of the respondents reported annual household incomes below \$15,000, and 82.5% reported annual household incomes below \$25,000. Further analysis showed that, although median income did not differ between homebound and ambulatory respondents, a significantly higher proportion of the ambulatory respondents than the homebound respondents (67.9% vs. 50%, $p < .05$) reported that they "could not make ends meet" or "just about managed to get by." With respect to race/ethnicity, 35.5% were non-Hispanic White, 35.5% were African American, and 29% were Hispanic (largely of Mexican heritage). The income and racial/ethnic distributions of the study participants were similar to those of the older-adult clients served by the MOW and the senior centers from which the participants came. Other than Hispanic respondents' having significantly lower levels of education than their African American and non-Hispanic White counterparts, no racial/ethnic difference was found in any sociodemographic characteristics, including household income, health problems, depressive symptoms, informal social support, and religiosity.

Measures

Depressive symptoms.—Respondents' depressive symptoms were measured by the 15-item Geriatric Depression Scale (GDS; Sheikh & Yesavage, 1986). The respondents rated

each GDS item as either *yes* (1) or *no* (0), and the total scores, ranging from 0 to 15, were calculated. The Cronbach's alpha for the respondents' GDS scores was 0.78. The mean GDS score was 2.98 ($SD = 2.97$), but 24.2% of the respondents (13.1% of the ambulatory and 42% of the homebound, $p < .001$) scored 5 or higher, which was regarded as symptomatic of depression.

Current unmet need.—First, respondents were asked if they were currently receiving any help from family members/relatives for 12 categories of need related to personal assistance, instrumental and environmental support, emotional support, and facilitative/enabling services (see Table 2). Then, they were asked if they were currently receiving any services from “any social service agencies or other providers” for the same 12 categories of need. Finally, for those who reported not receiving any formal service in each category, we asked if they “needed and wanted to use formal service now” (1) or not (0).

The 12 need categories.—The total number of positive responses to the “need and want to use now” questions constituted the number of current unmet needs, which ranged from 0 to 10, with a mean of 1.40 ($SD = 2.04$).

Sociodemographic controls.—Age (in years); race/ethnicity (African American, Hispanic, or non-Hispanic White = reference category); gender; living arrangement (*living alone* = 1, *not living alone* = 0); and the level of education (ordinal values treated as continuous).

Financial situation/worries, health status, and stressful life events.—Financial situation/worries were self-reported: *cannot make ends meet* (1); *just about manage to get by* (2); *have enough to get along, and even have a little extra* (3); and *money is not a problem; can buy pretty much anything* (that I/we want; 4); treated as a continuous variable.

Health status was measured with the number of chronic medical conditions, the number of ADL/IADL impairments, homebound status (*home-bound* = 1, *ambulatory* = 0), and the past history of mental health treatment. Chronic medical conditions were measured with a checklist containing the following nine conditions: arthritis; high blood pressure or hypertension; diabetes; heart diseases (including coronary heart disease, congestive heart failure, angina); emphysema/chronic bronchitis/other lung problems; cancer/malignant tumor (excluding minor skin cancer); stroke; kidney disease; and liver disease. Respondents were asked, first, if they had ever been told by a doctor or other healthcare professional that they had had the condition, and second, if they had, whether the condition continued to be a problem. For each respondent, we counted the total number of conditions that continued to be problems, and the mean was 2.12 ($SD = 1.42$).

The six ADL categories included using the bath or shower; using the toilet; getting dressed or putting on outdoor clothing; combing or brushing hair; getting into and out of bed; and feeding. The six IADL categories included using the telephone; preparing and cooking meals; grocery shopping; doing housework (cleaning, fixing things in and on the house); taking medications; and managing money. The mean number of combined ADL/IADL impairments was 1.19 ($SD = 1.58$) for all respondents; however, the homebound respondents

had significantly more impairments than the ambulatory respondents (2.27 ; $SD = 1.70$; vs. 0.54 ; $SD = 1.05$; $p < .001$). With respect to the past history of mental health treatment, we asked each respondent whether he or she had “ever been treated by a healthcare professional for depression, anxiety, or other mental health problem in your life.” The response was coded as 1 for *yes* and 0 for *no*.

The past stressful life events were measured using a checklist of stressful life events that had occurred in the preceding 2 years: children leaving home; a serious illness or injury; having been robbed or burglarized; the addition of a new family member (baby, immigrant, in-law); death of spouse; death of a child; death of any other family member or friend; spouse’s or other family member’s serious illness or injury; change in residence; and other family difficulty. Respondents were asked whether they had experienced each event and, if they had, whether it had been stressful. Only stressful events were summed into a total score, and the mean was 1.65 ($SD = 1.36$).

Social support and religiosity.—The level of social support was measured by the 18-item Lubben Social Network Scale (LSNS; Lubben & Gironde, 2000). The LSNS is designed to measure the size of older adults’ social support networks—family/relatives, neighbors, and friends—and their actual and perceived levels of social support from these networks. Each item is measured on a 6-point scale ranging from 0 to 5, with a higher score indicating a higher level of actual or perceived social support. Cronbach’s alphas were 0.77 for the family subscale, 0.79 for the neighbors subscale, and 0.82 for the friends subscale; the means were 17.20 ($SD = 6.09$), 10.82 ($SD = 5.99$), and 12.77 ($SD = 6.53$), respectively.

Religiosity was a variable constructed from two indicators of religious practice: frequency of attendance at religious services (0 = *never*; 1 = *less than once a year*; 2 = *once a year*; 3 = *several times a year*; 4 = *once a month*; 5 = *several times a month*; 6 = *once a week*; and 7 = *more than once a week*; treated as a continuous variable) and whether or not the respondent “prays frequently” to “get out of the mood when feeling sad, depressed, or down in the dumps.” If the respondent reported attending services several times a month or more frequently and/or praying frequently, his/her religiosity was coded as 1 for *high*, as opposed to 0 for *low* for the rest of the categories.

Analysis

Univariate and bivariate analyses were used to examine the distribution of family help/informal support, current use of formal services, and unmet need for formal services in the 12 need categories, and to compare the distributions between homebound respondents and ambulatory respondents. Bivariate correlations among the GDS scores and the predictor and control variables were calculated to examine possible multicollinearity. Then, we employed 2-step ordinary least square (OLS) regression models with the GDS score as the continuous outcome variable. In the first step, the number of unmet needs was entered as the only predictor. In the second step, in addition to the number of unmet needs, sociodemographics, financial situation/worries, health status, life stressors, the LSNS score, and religiosity were entered. Because the standard deviation of the GDS scores was almost equal to its mean score, we also ran negative binomial regression analysis (using *Stata 9*). However, because

the results of this analysis were almost identical to the OLS regression results, we chose to report the OLS regression results with R^2 statistics, rather than the negative binomial regression results with pseudo R^2 statistics.

RESULTS

A majority, or 63%, of the respondents, reported that they were receiving family help/informal support in at least one need category, and 78.2% of the respondents reported receiving formal service in at least one need category (without counting home-delivered meals and congregate meals in senior centers): 30.3% were receiving formal service for just one category of need; 17.5% were receiving the services for two categories of need; 13.3% were receiving the services for three categories of need; and 17% were receiving the services for four or more categories of need. As shown in Table 2, about one-half of the homebound respondents were receiving personal care/housekeeping service and medical transportation service, and 40.7% and 22.2% of them were receiving services for house/yard work (including home repair) and shopping (actual shopping or transportation to stores) services, respectively. Almost one-third of the ambulatory respondents were also receiving services for house/yard work, 54.6% were participating in a exercise/health promotion program, and 40.8% were receiving help with volunteering opportunities. The latter two programs/services were offered at two senior centers. Further analysis also showed that homebound respondents received significantly more formal services than did ambulatory respondents (2.30; $SD = 1.86$; vs. 1.75; $SD = 1.85$; $p < .05$).

The proportion of the respondents who indicated that they needed and wanted to use formal services in at least one category of need was 45.5%. As hypothesized, a significantly higher proportion of the homebound respondents than the ambulatory respondents (22.2% vs. 9.2%) needed/wanted personal assistance service. However, a significantly higher proportion of the ambulatory respondents than the homebound respondents needed/wanted to use services for house/yard work, financial assistance, and long-term care planning. It appears that a larger proportion of the ambulatory respondents had unmet need for understanding and obtaining financial assistance and healthcare benefits than for instrumental and emotional support. Further analysis showed that the number of unmet needs for formal service was marginally significantly higher among those without any family help/informal support than among those with any family help/informal support (1.73; $SD = 2.33$; vs. 1.20; $SD = 1.83$; $p < .07$), but it was not significantly associated with the number of formal services received or with homebound versus ambulatory state.

Table 3 shows the results of the OLS regression analysis. The step 1 model shows that the number of unmet needs was significantly positively associated with the GDS score, but the regression model explained only 2.4% of the variance. In the step 2 model, the number of unmet needs remained a significant predictor, but the controls added 38% to the explained variance of the model. Better financial situation and higher perceived family support were associated with lower GDS scores, and higher numbers of ADL/IADL impairments were associated with higher GDS scores. The homebound state and the past history of mental health treatment were also positively associated with the GDS score. Religiosity, age, race/

ethnicity, gender, living arrangement, and level of education were not significantly associated with the GDS score.

DISCUSSION

This study used a broad range of need categories to examine unmet needs for formal services among low-income older adults who were either receiving MOW or participating in senior centers. Most likely attributable to their existing linkage to the formal service system—MOW or senior centers—78.2% of the study respondents were found to be receiving some type of formal service (without counting home-delivered meals and congregate meals in senior centers). As expected, the homebound received more formal services than the ambulatory did. A substantial proportion of both homebound and ambulatory respondents also reported receiving personal assistance, instrumental and environmental support, and/or emotional support from family members. The finding that those receiving any family support had a marginally significantly lower number of unmet needs than those without any family support shows that family was an important source of care in many areas of need. Although it appears that some older adults also received facilitative/enabling services, especially those for financial assistance, healthcare program rules, and long-term care planning, from family members, older adults may also have expected professionals to provide more adequate assistance in those areas than family members; that may be why a high proportion of them (especially ambulatory respondents) needed/wanted the formal service. The high perceived need for facilitative/enabling services among the ambulatory respondents also shows these low-income older adults' desire to prepare for deteriorating health and financial difficulty. It is not clear why a lower proportion of the homebound respondents than the ambulatory respondents need/wanted help with financial assistance and long-term care planning, but their better perceived financial situation may be a reason. Those who needed/wanted to use formal service for emotional support—regular telephone calls, visits, and personal/family counseling—were a small percentage. Nevertheless, it shows that these older adults' emotional need may have not been met by their informal support system and that formal support may be necessary to provide emotional support (see Bass et al., 1996).

As hypothesized, the number of unmet needs was found to be positively associated with the GDS score, controlling for other depression risk and protective factors, although it explained a small amount of variance in the dependent variable. Older adults who experience decreased competence in meeting their needs but do not receive supportive services are likely to experience physically, functionally, and emotionally negative consequences. Given that the unmet need for formal service was found in all categories of personal assistance, instrumental/environmental support, and facilitative/enabling services, as well as in the categories of emotional support, it appears that many low-income respondents were having difficulty dealing with a variety of issues, including personal, social, financial, and built environmental press. A lack of compensatory support for decreasing competence in coping with the environmental press is thus likely to contribute to physical and functional deterioration and depressive symptoms. Especially for low-income older adults, support from the public or nonprofit sector is likely to be the only source of support, other than any that might be provided informally, that would enable the older adults to age in place and

alleviate caregiving burden among informal caregivers (see Bookwala et al., 2004; Lyons & Zarit, 1999). Aging service providers need to assess a broad range of unmet need among low-income older adults and advocate for and provide programs/services that would help these older adults to age in place and reduce the burden of their informal caregivers.

There were limitations to this study. Because of the convenience sample, generalization beyond the study population cannot be claimed. Because of the generally lower level of perceived unmet need in many need categories, we did not examine any association between the GDS scores and each individual category of need. Also, because of the cross-sectional nature of the study, we were unable to examine the question of whether depressed older adults were more likely than their nondepressed peers to have a high level of perceived need. There is the probability of depression as the predictor of unmet need, rather than unmet need as the predictor of depression. Future research needs to examine the longitudinal relationship between unmet need and depressive symptoms among representative samples of older adults. Finally, we did not examine the reasons for not utilizing the needed/wanted services, although barriers to utilizing services such as help with financial assistance (other than the Supplemental Security Income) and long-term care planning are likely to include unavailability of such programs/services for low-income older adults.

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TABLE 1

Sample Characteristics

Characteristic	
Age in 2005 (yr)	73.57 (8.27)
60–69 (%)	35.6
70–79 (%)	37.9
80 and older (%)	26.5
Percentage female	81.0
Race/ethnicity (%)	
African American	35.5
Hispanic	29.0
Non-Hispanic White	35.5
Marital status (%)	
Married	21.3
Widowed	47.4
Divorced/separated	27.5
Never married	3.8
Percentage living alone	60.7
Level of education (%)	
Less than high school	29.4
Some high school	11.4
High school graduate or equivalent	22.3
Some college	23.2
2- or 4-year college degree	8.5
Some or completed graduate school	5.2
Median annual household income range (\$)	\$10,001–\$12,500
Financial situation (%)	
Cannot make ends meet	9.0
Just about manage to get by	47.9
Have enough to get along, and even have a little extra	31.8
Money is not a problem; can buy pretty much anything (that I/we want)	11.4
Number of diagnosed chronic medical conditions	2.73 (1.51)
Number of diagnosed chronic medical conditions that are still problems	2.21 (1.42)
Number of ADL/IADL impairments	1.19 (1.58)
Mobility status (%)	
Homebound (Meals on Wheels client)	38.4
Ambulatory (Senior center participant)	61.6
Number of stressful life events in the preceding 2 years	1.65 (1.36)

Characteristic	
Percentage ever received mental health treatment by a professional	29.9
Social Support Network Scale—Family	17.20 (6.09)
Social Support Network Scale—Neighbors	10.82 (5.99)
Social Support Network Scale—Friends	12.77 (6.53)
Religiosity (%)	
High (attend services at least several times a month and/or pray frequently)	82.9
Low (attend services or pray infrequently or not at all)	17.1
Total number of current unmet service needs	1.40 (2.04)
Geriatric Depression Scale (GDS) score	2.98 (2.97)
0–4 (%)	75.8
5–15 (%)	24.2

Note. Number in parenthesis is standard deviation of the mean. ADL = activities of daily living. IADL = instrumental activities of daily living.

TABLE 2

Current Informal and Formal Support and Unmet Need

Need category	Family help/ informal support	Currently receiving formal service	Need/want to use formal service now
Personal assistance			
Personal care/housekeeping for self or spouse	17.5 (37.0; 5.4 ^{***})	26.5 (49.4; 12.3 ^{***})	14.2 (22.2; 9.2 [*])
Care for self after a hospital stay	22.3 (7.4; 31.5 ^{***})	5.2 (7.4; 3.8)	11.4 (11.1; 11.5)
Instrumental/environmental support			
Transportation to doctor's office	37.0 (44.4; 32.3 [†])	32.7 (54.3; 19.2 ^{***})	9.6 (13.6; 6.9)
Work around house (e.g., repairs) and/or yard	20.9 (23.5; 19.2)	34.6 (40.7; 30.8)	15.6 (9.9; 19.2 [†])
Shopping	17.5 (27.2; 11.5 ^{***})	11.8 (22.2; 5.4 ^{***})	3.3 (6.2; 1.5)
Emotional support			
Regular telephone calls and visits	19.4 (13.6; 23.1)	9.5 (11.1; 8.5)	6.2 (6.2; 6.2)
Personal/family counseling	2.4 (0; 1.5)	2.4 (2.5; 2.3)	7.6 (4.9; 9.2)
Other facilitative/enabling services			
Help with financial assistance	9.0 (3.7; 12.3 [*])	6.6 (2.5; 9.2 [†])	27.0 (8.6; 30.0 ^{***})
Help with healthcare program rules	15.7 (1.2; 8.5 [*])	8.1 (4.9; 10.0)	17.1 (12.3; 20.0)
Help with long-term care planning	10.4 (8.6; 11.5)	4.3 (1.2; 6.2)	15.2 (3.7; 22.3 ^{***})
Exercise/health promotion	1.9 (0; 3.1)	35.1 (3.7; 54.6 ^{***})	7.1 (3.7; 6.9)
Help with volunteering opportunities	0 (0; 0)	26.1 (2.5; 40.8 ^{***})	5.7 (7.4; 6.9)

Note. The percentages inside parentheses represent those for the homebound sample and the ambulatory sample.

^{*}
 $p < .05$.

^{**}
 $p < .01$.

^{***}
 $p < .001$.

[†]
 $p < .09$.

Denote significant difference between the homebound sample and the ambulatory sample.

TABLE 3

Association Between the Number of Current Unmet Needs for Formal Service and the GDS Score: OLS Regression Results

Variable	Step 1		Step 2	
	<i>B</i> (<i>SE</i>)	Beta	<i>B</i> (<i>SE</i>)	Beta
Sum of current unmet needs	0.245 (0.099) *	0.168	0.172 (0.086) *	0.118
Sociodemographics				
Age			−0.026 (0.023)	−0.073
Race/ethnicity				
African American			−0.028 (0.466)	−0.004
Hispanic			0.397 (0.517)	0.061
(Non-Hispanic White)				
Female			−0.176 (0.427)	−0.023
Living alone			0.013 (0.353)	0.002
Level of education			0.020 (0.125)	0.010
Financial worries, health status, and life stressors				
Financial situation/worries			−0.522 (0.223) *	−0.143
Number of medical conditions			0.391 (0.121) ***	0.187
Number of ADL/IADL impairments			0.417 (0.124) ***	0.222
Homebound			1.314 (0.469) **	0.216
Have ever received mental health treatment			0.666 (0.379) †	0.103
Number of stressful life events in the preceding 2 years			0.171 (0.131)	0.078
Social support and religiousness				
Social Support Network Scale—Family			−0.094 (0.031) **	−0.192
Social Support Network Scale—Neighbors			0.027 (0.029)	0.055
Social Support Network Scale—Friends			−0.016 (0.028)	−0.035
High religiosity			−0.151 (0.526)	−0.019
Constant	2.633 (0.245) ***		5.226 (1.903) **	
R ²	0.028		0.451	
Adjusted R ²	0.024		0.403	

Note. *N* = 211. The change in *R*² from the step 1 model to the step 2 model was statistically significant at *p* < .001. GDS = geriatric depression scale. OLS = ordinary least square. ADL = activities of daily living. IADL = instrumental activities of daily living.

*
p < .05.

**
p < .01.

p < .001.

†
p < .09.