

A PSYCHOSOCIAL MODEL OF FUNCTIONAL DISABILITY

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With advancing age, many older adults are vulnerable to a decline in physical functioning. Functional disability has been shown to affect the subjective well-being of the individual, and has been associated with increased morbidity and mortality. Social support is commonly assumed to protect people from the experience of psychological distress and enhance well-being. Other studies have demonstrated that satisfaction with social support, rather than the frequency with which support was received, is a powerful predictor of self-reported health status. The present study tests a psychosocial model of functional disability in two elderly populations (61 years of age and older): 178 seniors living in the community (136 females and 42 males) and 168 in-patients in a rehabilitation hospital following total hip and knee arthroplasty (118 females and 50 males). Predictors of functional disability were age, gender, and satisfaction with support. In this model, functional disability, with its related loss of independent functioning, was expected to lead to depression. Results indicated that the two samples differed slightly. Specifically, the elderly in the community sample were significantly older than the rehabilitation patients, whereas the hospital sample reported greater functional disability and were more satisfied with their social relations than the community-residing elderly. Results of path analysis in both samples showed that women reported more functional disability than men and satisfaction with support was associated with lower functional disability. Furthermore, functional disability led directly to depression in both samples. Practical implications for the maintenance and enhancement of daily functioning, as well as well-being in later life are discussed.

Since people in general are living longer than in the past, the elderly population is growing, and functional disability associated with increasing age is a growing concern. Functional disability refers to the inability to perform basic self-care

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and instrumental activities of daily living, such as bathing, dressing, grooming, transferring, doing housework, and shopping chores. High functional disability in the elderly is associated with greater use of homecare, as well as higher rates of institutionalization and premature mortality (Johnson & Wolinsky, 1999).

A comprehensive understanding of functional disability may be gained from examining this construct as the outcome of a larger process of disablement. In this vein, Verbrugge and Jette (1994) proposed the Disablement Process Model, which includes pathology, impairment, functional limitation, and disability. According to this model, pathology (presence of disease or diseases) leads to impairment, that are abnormalities at the physiological, anatomical, or mental level. Impairment then leads to functional limitations (i.e., limitations in basic physical and mental actions), which results in disability (i.e., difficulty doing activities of daily life). Research has indeed demonstrated a temporal relationship between functional limitations and functional disability (Femia, Zarit, & Johansson, 2001; Lawrence & Jette, 1996; Peek et al., 2003; Peres et al., 2005).

The difficulty induced by disability not only affects the physical aspects of one's life but also erodes subjective perceptions of emotional well-being. Numerous studies have found an association between depression and disability. For example, Zeiss et al. (1996) conducted a longitudinal study of community based older adults and found that the onset of functional impairment was also a significant risk factor for depression. Stuck et al. (1999) reviewed and evaluated 78 articles on predictors of functional decline in community-dwelling elderly persons and found depression among the strongest contributing factors to functional decline. In the case of community-living elderly, a central research concern is to identify those at greatest risk of losing functional abilities and particularly, the ability to lead an independent life in their community. Early detection may make it possible to develop interventions that can slow down the loss of functioning.

Risk Factors Affecting Functional Disability

Several sociodemographic characteristics have been identified as predictors of functional disability. It is well documented that functional disability increases with age (Hebert, Brayne, & Spiegelhalter, 1997; Rathouz, Kasper, & Zeger, 1998). Researchers have also demonstrated significant gender differences in the prevalence of functional disability in the elderly. Specifically, functional disability is more common among elderly women than it is among elderly men (Leveille et al., 2000; Murtagh & Hurbert, 2004; Wray & Blaum, 2001). Therefore, it would seem that while women live longer than men (Manton, 1997; Verbrugge & Wingard, 1987), they do not necessarily live better (Leveille et al., 2000; Murtagh & Hurbert, 2004; Wray & Blaum, 2001). These findings, however, should be interpreted with some caution. The demonstrated gender differences may have more to do with differences in life expectancy and rates of disclosure. Women have a higher life expectancy than men and they also tend to report poor health and disability more frequently (Kandrack, Grant, & Segall, 1991). Lower socioeconomic status has

also been linked to disability (Chiu et al., 2005; Liu et al., 1995), and elderly women, in general, have a lower socioeconomic status than their male counterparts. It seems plausible that these various risk factors interact in the production of functional disability.

Certain chronic health conditions become more prevalent with age, such as arthritis, diabetes, respiratory illness, stomach problems, and vision and hearing impairments. These conditions also contribute to impairment of functional ability (Keppen et al., 1999). Osteoarthritis is the leading cause of long-term disability in the United States and Canada (Katz, 2001). The resulting pain and disability can limit mobility, contribute to social isolation and depression, and decrease functional independence (Rissanen, Aro, & Sintonen, 1996). Osteoarthritis, coupled with the rise in the proportion of older individuals (> 65 years old) has resulted in a significant increase in the number of North Americans needing total joint arthroplasty, including both knee and hip replacements. Hawker et al. (2000) found that women had a higher prevalence of arthritis, worse symptoms, and greater disability than men. Many joint replacement patients are referred to a rehabilitation hospital where the goal is to provide services and rehabilitation treatment to help patients achieve a degree of functional independence following surgery.

Social Support and Depression in the Elderly

Among the elderly, resilience is an important attribute that is needed for successful adjustment to change. Meaningful social relationships contribute to the resilience needed for successful adjustment to the difficulties associated with aging (Carstensen, 1992). Inadequate social support is directly or indirectly associated with poor physical and mental health (House, Robbins, & Metzner, 1982; Schoenbach et al., 1986). Numerous studies link social support, health, and well-being outcomes in older populations (Antonucci & Jackson, 1987). Social support is associated with positive affective states such as increased feelings of belonging, intimacy, heightened self-worth, and an increased sense of control. Social support can be a source of useful information that enhances coping. Oxman and Hull (1997) found that a higher number of social support providers was related to less impairment and depression in a sample of patients after undergoing open heart surgery.

Several studies have found that greater satisfaction with social support is associated with lower levels of distress. For example, Antonucci, Fuhrer, and Dartigues (1997), using a sample of 3,777 non-institutionalized older adults (65 years of age and older) living in southern France, found that respondents with more people in their social network, and those who were satisfied with the quality of their social relations reported significantly lower levels of depressive symptomatology. Similarly, Jang et al. (2002) found that greater satisfaction with social support had a significant direct effect on depression, whereas received social support was not. Satisfaction with social support also interacted with disability to mitigate the harmful effects of disability on depression. More recently, Cummings and Cockerham (2004) examined the effect of satisfaction with social support on depression in assisted

living older adults. They found that residents who viewed their social network more negatively and required greater assistance with functional activities experienced higher levels of depressive symptoms. In a prospective analysis over a 12-month follow-up period, Melchior et al. (2003) examined the relationship between social networks, satisfaction with social relations and social support, and self-reported health among 15,175 middle-aged men and women participating in the French Gazel cohort study. Their findings showed that a lack of social support and dissatisfaction with social relations were predictive of poor health status. Taken together, these results suggest that perceived adequacy of, or satisfaction with, social support plays an important role in well-being. To the extent that individuals are satisfied with their social support, they should experience more positive health outcomes. Social support provides people with a sense of security and control that makes them feel more positive about themselves. This, in turn, should motivate them to approach stressful situations with a sense of competency and determination to cope with these situations. Thus, social support is a likely mechanism by which functional disability can be minimized.

The Present Study

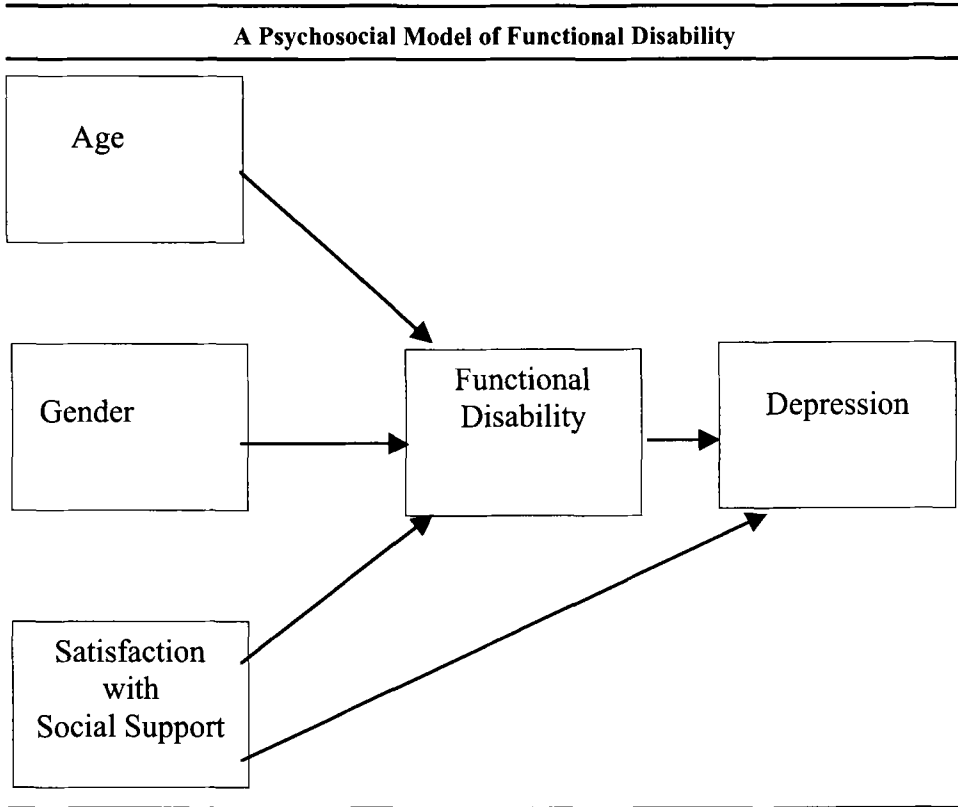
While several studies have examined the relationships between age, gender, social support, and functional disability, few have incorporated these variables into a comprehensive model. As such, we do not have a clear understanding of the ways in which they jointly contribute to functional disability. The present study, therefore, aimed to add to the existing literature by testing a psychosocial model of functional disability that incorporated multiple simultaneous predictors. Specifically, we examined the effects of age, gender, and satisfaction with social support as predictors of functional disability. Furthermore, we examined depression as a potential outcome of functional disability, hypothesizing that functional disability leads to depression. We also hypothesized that satisfaction with social support would be associated with lower levels of depression (see Figure 1). To test the model, two elderly populations were sampled: seniors living in the community and in-patients in a rehabilitation hospital following total hip and knee arthroplasty. These two samples were selected in order to compare the efficacy of the model in different populations of older adults (i.e., healthy and hospitalized older adults). This is a standard dichotomy in research involving older adults (Fry, 2000; Kim, Shin, & Yoon, 2002; Reker, 1997; Rinaldi et al., 2003).

Method

Participants: Seniors Living in the Community

Respondents were 178 community-residing older adults attending various community centers offering programs for seniors. The age of the respondents ranged from 62 to 98 years, with an average age of 75 years ($SD = 6.74$). Approximately

Figure 1



one-half lived alone (47.8%) and most were retired (87.6%). They were predominantly female (76.4%). Forty-one percent were widowed, 42.1% were married, and 16.9% were single, separated, divorced, or common law. Fifty-five percent were involved in volunteer work, on average 7.34 hours per week ($SD = 6.37$). The respondents were also involved in a variety of hobbies and general interest classes, such as traveling, cooking, gardening, knitting, yoga, bowling, and cards. Only 11.1% reported less than a high school education; 52.9% had completed high school; and 36.1% had community college or university degrees.

Measures

Functional Disability. Functional disability was assessed using Krause's (1998) Functional Disability Scale. This measure assessed how much difficulty respondents experienced with everyday activities such as dressing, washing, shopping, and using the telephone. It also included more strenuous physical activities such as doing heavy work around the house (shoveling snow, washing walls), stooping, crouching or kneeling, and lifting or carrying something as heavy as 25 pounds. The original scale, derived from the work of Liang (1990), contains 14 items. For this study, it was modified slightly, by adding the item "going to the toilet." In

addition, in order to allow for direct comparisons between the two samples, items that referred to strenuous activities were excluded, as they were not relevant to rehabilitation patients. Respondents indicated if they experienced difficulty in performing any of the daily living activities. A higher score indicated greater difficulty. In the present study the alpha coefficient was .91.

Depression. Depression was measured using 4-items from the Brief Symptom Inventory (BSI; Derogatis, 1993), a self-report inventory of psychopathology and psychological distress ($\alpha = .86$). Although the BSI is often used with psychiatric populations, it has also been used successfully with medical patients, community samples, college students, and the elderly (Derogatis, 1993). A sample item is, "Feeling no interest in things." Respondents were asked to indicate on a 5-point scale that ranged from 1 (not at all) to 5 (extremely), how much they were distressed in the past seven days by a particular complaint. Higher scores indicated the endorsement of a greater number of depressive symptoms.

The BSI has been shown to be a reliable and valid measure (Derogatis, 1993). Stukenberg, Dura, and Kiecolt-Glaser (1990) assessed the relative efficacy of three depression-screening scales (i.e., the short form of the Beck Depression Inventory (BDI), the depression symptom dimension from the BSI, and the Hamilton Depression Rating Scale (HDRS) in identifying cases of depression. Using 177 community-dwelling adults, with a mean age of 67.70 years (age ranged from 56–88 years), Stukenberg, Dura, and Kiecolt-Glaser (1990) found that all three instruments identified major depression and depressive disorder NOS, and none were consistently sensitive to assessing cases of dysthymia. The BSI depression symptom dimension was able to correctly identify 79% of the cases, while the BDI was able to correctly identify 74% of the cases of depression. Stukenberg, Dura, and Kiecolt-Glaser (1990) also used receiver operating characteristics (ROC) curves to compare the relative prevalence of the three measures at all possible cutoff points. They found the area under the HDRS was larger (.85) than the areas under the BDI (.82), and the BSI (.83), though the differences were not significantly larger. Thus, the BDI and BSI were comparable to the HDRS in sensitivity and specificity in screening for cases of depression in an elderly community-dwelling sample. Moreover, Stukenberg, Dura, and Kiecolt-Glaser (1990) found a strong correlation between the BDI short form and the BSI Depression scale ($r = .71$).

Further evidence for the validity of the BSI was found by Scocco et al. (2001), who reported that elderly with death or suicidal ideation manifested depressive symptoms on the BSI. In a community-dwelling elderly sample, Magni et al. (1996) found positive correlations between the BSI depression scale scores and reported somatic pain and/or discomfort levels (e.g., hands, arms, shoulders, back, and neck).

Satisfaction with Social Support. Satisfaction with social support was measured by a single item, "How satisfied are you in general with the total amount of support you currently receive from others around you?" The response format was a 4-point scale ranging from 1 (not at all satisfied) to 4 (very satisfied).

Demographic Information. Respondents were also asked to answer general demographic questions, such as age, gender, level of education, marital status, and living arrangements.

Procedure

Data were collected using self-report questionnaires. Older adults attending various community centers that offered programs for seniors were approached and asked to participate in a study on reactions to day-to-day events in the elderly. Once respondents completed the questionnaire, they were instructed to deposit the questionnaire in an envelope in a sealed box.

Participants: Rehabilitation Patients

Participants were 168 in-patients in a rehabilitation hospital following joint replacement (hip = 56.5% and knee = 43.5%).¹ Mean hospital stay was 19.44 days ($SD = 8.84$). Age of the respondents ranged from 61 to 89 years with an average age of 72.44 years ($SD = 7.02$). Approximately one-quarter (25.6%) lived alone, and about two-thirds (68%) were retired. They were predominantly female (70.2%). Approximately 23% were widowed, 65.5% were married, and 11.9% were single, separated, divorced, or common law. Among those who were employed, 81.5% occupied white-collar jobs. Approximately half of the sample (50.3%) had completed trade school, community college, or university, 40.7% completed high school, and only 9.0% reported less than a high school education.

Measures

Functional Disability. Functional disability was assessed using the modified version of Krause's (1998) Functional Disability Scale. For this sample, given that they were in hospital at the time of testing, the scale was modified by eliminating items that did not pertain to hospital patients, such as shoveling snow and washing walls. A higher score indicated greater difficulty. The alpha coefficient for this sample was .73

Depression. Depression was measured using the depression-dejection scale from the Profile of Mood States (POMS), an eight-item, well-validated adjective rating form that assesses mood reactions to current life situations (McNair, Lorr, & Droppleman, 1992; Peterson & Headen, 1984). An example item is, "Sad." On a 5-point scale ranging from 0 (not at all) to 4 (extremely), respondents were asked to indicate how much they were depressed in the past seven days by the particular complaint. Higher scores indicated the endorsement of a greater number of depressive symptoms. Internal reliability was .85.

The POMS has demonstrated acceptable test-retest reliability and high levels of validity. Test-retest reliability for the Depression scale was $r = .74$ with a median

delay of 20 days (McNair, Loor, & Droppleman, 1992). Using a multitrait, multimethod approach, Nyenhuis et al. (1999) assessed the scale's convergent and discriminant validity in a sample of 400 adults ranging from 18–94 years of age. The POMS Depression scale correlated significantly with the BDI ($r = .69$) and the Geriatric Depression Scale ($r = .78$). Convergent and discriminant validity was also shown in that the POMS scales were consistently more highly related to measures of corresponding mood scales than non-corresponding mood scales.

Satisfaction with Social Support. Satisfaction with social support was assessed with the same single item described above for the community-dwelling sample.

Demographic Information. Respondents were also asked to answer general demographic questions.

Procedure

Prospective participants were identified by asking hospital staff to indicate diagnostic categories of the newly admitted patients. Patients who had joint replacement surgery were approached after the second day of admission to the hospital and asked to participate in the study. Participants were given a description of the study and were told their participation was voluntary, confidential, and that they could terminate their involvement at any time during the study. After they agreed to participate, they were asked to sign an informed consent form. A response rate of 79% was obtained. Respondents completed a questionnaire that was read and filled out by the interviewer. Respondents were given a copy of the questionnaire so they could follow along. This method was chosen in order to allow participants to ask for clarification when necessary.

Results

A series of t-tests were conducted to compare seniors in the community with those in a rehabilitation hospital, in terms of functional disability, satisfaction with social support, and age.² Although the elderly in the community were significantly older than rehabilitation patients ($t(344) = 3.60, p < .001$), the latter group reported greater functional disability ($t(344) = 13.00, p < .001$). In addition, rehabilitation patients reported greater satisfaction with social support than community-dwelling seniors ($t(344) = 4.77, p < .001$). Table 1 displays means and standard deviations for each sample.

Tables 2 and 3 present correlation coefficients for all of the variables for the rehabilitation respondents and elderly living in the community, respectively. In both samples, perceived satisfaction with social support was inversely related to functional disability. That is, individuals who were more satisfied with the support they received had less difficulty in performing everyday tasks. In addition, functional disability was positively related to depression for both groups. Age correlated posi-

Table 1

	Means and Standard Deviations by Sample				
	Community Sample		Rehabilitation Patients		
	Mean	SD	Mean	SD	<i>t</i>
Functional Disability ¹	1.49	.56	2.28	.57	13.00***
Satisfaction with Social Support ²	3.33	.80	3.68	.53	4.77***
Age	75.11	6.81	72.44	7.02	3.60***

*** $p < .001$

¹Higher values indicate more self-reported functional disability

²Higher values indicate more satisfaction with support

tively with functional disability for the elderly living in the community only. As respondents got older, their functional disability increased. Perceived satisfaction with social support was inversely related to depression for the elderly living in the community only.

Path Analysis for the Elderly Living in the Community

Path analysis, using structural equation techniques (SEM), was used to explore the relationships among age, gender, social support, functional disability, and depression. AMOS version 4.0 (Arbuckle & Wothke, 1999) was used to provide path coefficients and tests of the overall goodness of fit of the model. The maximum likelihood method of parameter estimation was utilized. The independence model that tests the hypothesis that the variables are uncorrelated with one another was

Table 2

	Correlation Matrix for the Rehabilitation Sample				
	1	2	3	4	5
1. Satisfaction with Social Support	1.00				
2. Gender ¹	.06	1.00			
3. Age	-.20**	-.07	1.00		
4. Functional Disability	-.16*	-.18*	.07	1.00	
5. Depression	-.11	-.10	-.05	.34***	1.00

¹1 = female, 2 = male

*** $p < .001$

** $p < .01$

* $p < .05$

Table 3

Correlation Matrix for the Elderly Living In the Community Sample					
	1	2	3	4	5
1. Satisfaction with Social Support	1.00				
2. Gender ¹	.08	1.00			
3. Age	-.05	-.05	1.00		
4. Functional Disability	-.28**	-.15*	.31***	1.00	
5. Depression	-.47***	.00	.08	.49***	1.00

¹1 = female, 2 = male

*** $p < .001$

** $p < .01$

* $p < .05$

easily rejected ($\chi^2(10) = 126.604, p = .001$). The χ^2 goodness of fit statistic ($\chi^2(5) = 5.710, p = .335$) and the ratio of degrees of freedom to chi-square (1.142) indicated that the model provided an adequate fit to the data. Other fit indices, GFI (.988), AGFI (.963), CFI (.994), IFI (.994), and RMSEA (.028), were highly satisfactory. No *post hoc* modifications were indicated.

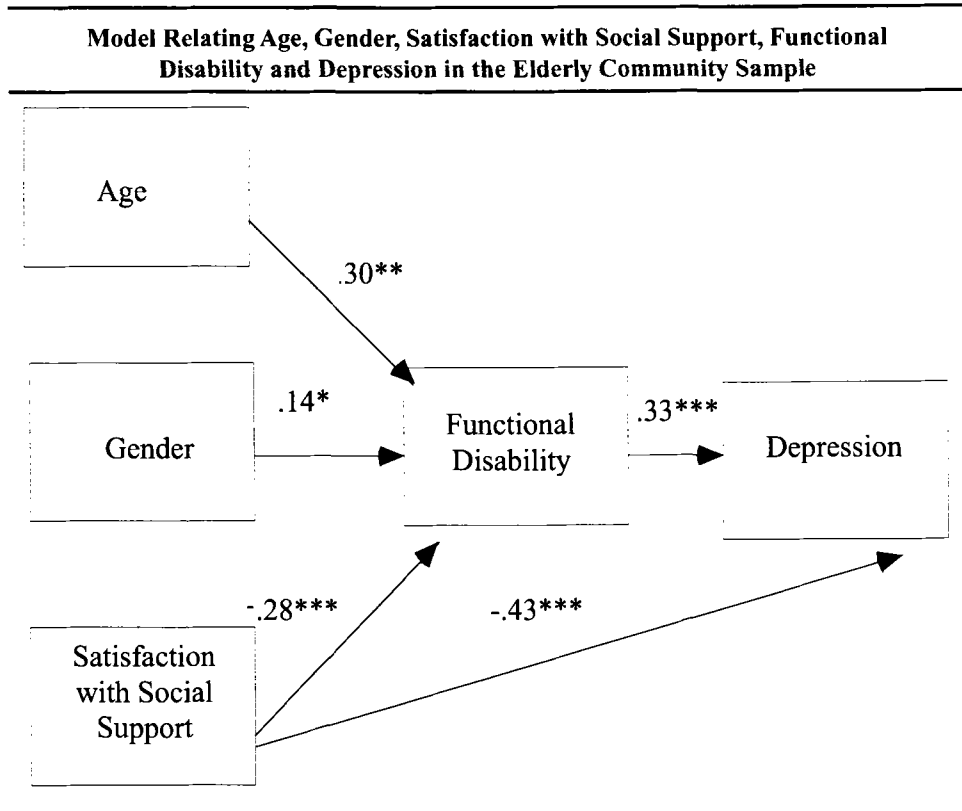
Relations between Components of the Model

As indicated in Figure 2, perceived satisfaction with social support was directly and negatively linked to functional disability ($\beta = -.28$) and depression ($\beta = -.43$). That is, individuals who were satisfied with the support they received reported less depression and lower functional disability. Further findings showed that the older the respondent, the greater the functional disability ($\beta = .30$). Women reported greater difficulty in performing everyday tasks than men ($\beta = -.14$). Functional disability mediated the effects of age, gender, and satisfaction with social support on depression ($\beta = .30 * \beta = .33, \beta = -.14 * \beta = .33, \beta = -.28 * \beta = .33$, respectively). The values of the squared multiple correlations are as follows: functional disability (.19) and depression (.37).

Path Analysis for the Rehabilitation Patients

Path analysis, using structural equation techniques (SEM), was used to explore the relationships among age, gender, social support, functional disability, and depression. Again, AMOS version 4.0 (Arbuckle & Wothke, 1999) was used to provide path coefficients and tests of the overall goodness of fit of the model. The independence chi-square ($\chi^2(10) = 126.604, p < .001$) confirmed the presence of inter-correlations in the data and, therefore, its suitability for SEM analysis. The χ^2 goodness of fit statistic ($\chi^2(5) = 8.251, p = .143$) and the ratio of degrees of freedom to chi-square (1.650) indicated that the model provided an adequate fit to

Figure 2



*** $p < .001$

** $p < .01$

* $p < .05$

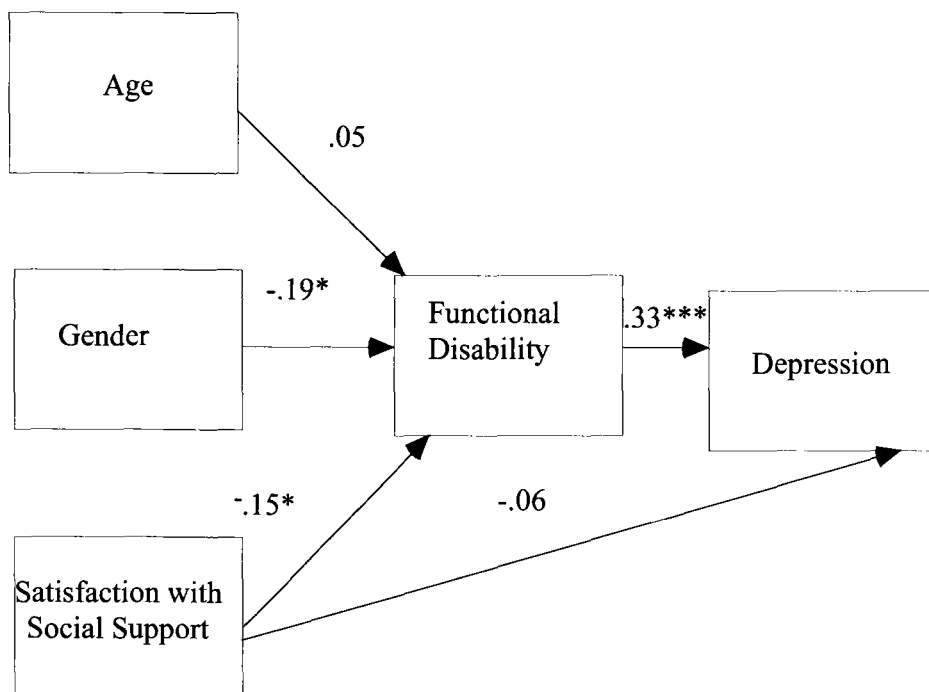
the data. Other fit indices, GFI (.981), AGFI (.943), CFI (.893), IFI (.908), and RMSEA (.062), were satisfactory. No *post hoc* modifications were indicated.

Relations between Components of the Model

As indicated in Figure 3, perceived satisfaction with social support was directly and negatively linked to functional disability ($\beta = -.15$). That is, individuals who were satisfied with the support they received reported lower functional disability. Women reported greater difficulty in performing everyday tasks than men ($\beta = -.19$). Moreover, increasing age did not lead to greater functional disability. Further findings revealed that functional disability mediated the effects of gender, and satisfaction with social support on depression ($\beta = -.19$ * $\beta = .33$, $\beta = -.15$ * $\beta = .33$, respectively). The values of the squared multiple correlations are as follows: functional disability (.06) and depression (.12).

Figure 3

Model Relating Age, Gender, Satisfaction with Social Support, Functional Disability and Depression in Rehabilitation Patients



*** $p < .001$

* $p < .05$

Discussion

The purpose of this study was to test a psychosocial model of functional disability in which predictors of functional disability were age, gender, and satisfaction with social support. It was expected that functional disability would lead to depression. It was also hypothesized that satisfaction with social support would be associated with lower depression. We tested this model in two different populations: a sample of community-dwelling seniors and a rehabilitation hospital sample of seniors who had recently undergone joint arthroplasty. The fact that the model applied to both of these populations serves as further evidence of its validity. The generalizability of the present model also contributes to current understandings of the ways in which diverse elderly populations experience and cope with functional disability. Our findings suggest that older adults living in the community and those currently in a rehabilitation hospital have relatively similar experiences of functional disability.

While the relationships between the variables in the model were comparable across samples, there were some significant differences between the two groups.

For example, although the average age in both samples was greater than 72, the elderly in the community were significantly older than the rehabilitation patients. While increasing age is commonly associated with greater functional disability (Hebert, Brayne, & Spiegelhalter, 1997; Rathouz, Kasper, & Zeger, 1998), our results indicated greater functional disability in the younger rehabilitation sample. This result is expected given that rehabilitation patients usually report pain following joint replacement surgery, particularly when undergoing daily physiotherapy exercise (Kendell et al., 2001) and joint pain would lead to greater perceived functional disability. Therefore, despite being older, the community-dwelling sample reported significantly lower levels of functional disability than the younger hospital sample. In addition, higher functional disability in the hospital sample may have masked any age-related differences in disability that would otherwise have been found.

Rehabilitation hospital patients reported significantly more social support satisfaction than their community-dwelling counterparts. Part of the reason for this may have to do with the process of rehabilitation which has been defined as the process by which physical, sensory and mental capacities are restored or developed in people with disabling conditions (Brandt & Pope, 1997). The goal of physical rehabilitation is to assist patients in regaining physical function to facilitate living independently or with minimal assistance. Given that assistance from the hospital staff is part of the rehabilitation service provided for patients, social support was likely more salient for the hospital sample. The daily availability of social support to hospital patients may have resulted in their greater satisfaction with support.

As expected, in both samples, women reported more functional disability than men. This result corroborates previous findings. While women may be more likely to report distress than men (Piccinelli & Simon, 1997), women also report more functional disability (Dunlop, Hughes, & Manheim, 1997; Oman, Reed, & Ferrara, 1999), thus providing a physical basis for their greater reported distress.

Results in both samples indicate that satisfaction with social support leads to lower functional disability. Thus, to the extent that the elderly sample perceived greater assistance with performing tasks and daily routines, satisfaction with social support increased. This coincides with previous findings that satisfaction with social support is associated with lower functional disability (Johnson & Wolinsky, 1999), suggesting that it may not be the amount of support the person is receiving that is important, but the extent to which the support that is received is perceived as satisfying an individual's needs and expectations related to their performance of daily activities. This result was found in both samples, thus indicating increased validity for the finding.

It was also anticipated that satisfaction with social support would lead to lower depression. Results of the SEM analysis in the elderly community sample strongly supported this finding, in that there was a significant and negative path from satisfaction with social support to depression. However, the path from satisfaction with social support to depression was not significant in the rehabilitation sample. Thus, this part of the proposed model was moderately supported by the data presented

here. Taken together, the data presented from two samples, a community-dwelling elderly sample and a sample of rehabilitation patients, provide moderate to strong support for the psychosocial model put forward here that links functional disability and depression. Predictors of functional disability are gender, age, and satisfaction with support. Functional disability leads directly to depression. There is also moderate evidence that satisfaction with social support leads to lower depression. While there was no direct relationship between gender and depression observed in the present data, as has been reported in the past (Bebbington, 1996; Kuehner, 2003; Marcus et al., 2005; Piccinelli & Wilkinson, 2000; Sprock & Yoder, 1997), our findings suggest that functional disability is a mediator between gender and depression in both samples, suggesting that women's greater observed depression, particularly in the elderly, could be due to their greater functional disability. Whether it is partial or full mediation could be investigated in future studies.

A few limitations of the present study are noted. First, the study is based on self-report, which increases the possibility of contamination of the reported relationships through common-method variance. A further limitation of the study is that the data are cross-sectional. Consequently, we cannot infer a causal relationship, nor can we rule out the possibility that reverse causation exist among the study variables. Additional research of a longitudinal nature is needed to further investigate this issue. A final limitation of this study is that satisfaction with social support was measured with a single item. Given that respondents were asked to indicate the extent to which they were satisfied with the total amount of support they received from others, it is not possible to ascertain which aspects of social support (e.g., emotional meaning, quantity of resources, intimacy of resources) are most helpful or appropriate. Future investigations should include a multidimensional approach to measuring satisfaction with social support.

Bearing these limitations, the results of the study have important implications for quality of life in the elderly. As expected, aging is associated with increased disability and, as a result, prospects of less independence in daily living. Given that higher functional disability leads to greater depression, the prospect of becoming less independent may lead to increased feelings of hopelessness and sadness. However, the more satisfied one is with social support, the lower the functional disability and the lower the depression one experiences. To the extent that satisfaction with support in the elderly can be improved, they should report higher quality of life, including less functional disability, and less depression. As reported in previous work, because elderly women are the most likely to experience greater functional disability, they stand to benefit the most from programs that provide increased social support within the community. It is worth noting that the present results can be generalized both to the elderly residing in the community as well those in a rehabilitation hospital following arthroplasty. While research tends to employ measures of social support that focus either on the number of support providers or the total amount of support received, our data suggest that satisfaction with support is an important factor contributing to health in the elderly. Thus, programs designed to enrich satisfaction with support in the elderly will be useful in

protecting these individuals from depression. Interventions should also target support providers to help them gain a better understanding of the needs and expectations of the elderly.

Biographical Notes

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Notes

1. The original sample consisted of 228 participants. For the purposes of these analyses, the sample was reduced to 168 to approximate the age range in the community-dwelling elderly sample.
2. A direct comparison could not be made with respect to depression, given that the two samples used different measures.

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