RELIGIOUS PRACTICE AND DEPRESSION AMONG GERIATRIC HOME CARE PATIENTS*†

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ABSTRACT

Objective: To examine the relationship between religious practice and depression in a sample of geriatric patients receiving homecare nursing services.

Methods: Patients were sampled weekly for six months from all those aged 65 to 102, and newly enrolled in a visiting nurse agency (N = 130). Depression was assessed by home interviews using the SCID and HRSD. Patients reported their religious service participation prior to receiving homecare and currently. Health status, disability, pain, social support and history of depression were also assessed.

Results: The current prevalence of DSM-IV

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Major Depressive Disorder (MDD) was significantly greater \( (p < .05) \), and depressive symptoms were more severe \( (p < .02) \), among those persons who had not attended religious services prior to receiving homecare. Logistic regression demonstrated that the effect of religious attendance remained significant when controlling for health status, disability, pain, social support and history of depression. A subsequent analysis compared three groups of patients. They were those who had: 1) Not attended religious services; 2) Stopped attending since homecare; 3) Continued attending. Data demonstrated significantly decreasing prevalence of MDD \( (p < .03) \) across the groups. Conclusions: Prevalence of DSM-IV Major Depressive Disorder and the severity of depressive symptoms were significantly lower among homecare patients who attend religious services. Because a large proportion of persons stop attending religious services after initiating homecare, it is suggested that visitation by clergy may improve depressive symptoms for these patients.

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**Key Words:** religion, depression, geriatric, homecare, comorbidity, clergy

**INTRODUCTION**

One hallmark of depression in the elderly is its comorbidity with physical illness and disability [1, 2]. The purpose of this study is to examine the relationship of religious practice to the prevalence and severity of depression within a cross-sectional sample of elderly homecare patients who have significantly reduced health and functioning. Recent studies of community-dwelling elderly found that higher attendance at religious services was associated with lower prevalence of both the emergence and persistence of depression [3]. Other studies found the helpful effects of religion to be most prominent for older persons with poorer physical health [4, 5].

Homecare patients provide an ideal population in which to study the relationship between religious practice and depression in the context of physical disability. Homecare services have rapidly grown into a vital source of health care, especially for older adults who represent 72% of home care recipients [6]. Recognizing the clinical, social and economic value of these services, the American Medical Association has recommended that physicians consider home care as the *first option* over hospitals, emergency departments, or nursing homes whenever care needs can safely be met at home [7].

Our group has previously reported on the prevalence of depression and its comorbid variables within a large sample of geriatric homecare patients admitted over a two-year period \( (N = 539) \) [8]. During the last six months of this period, we
added questions about religious affiliation and practice, which allowed us to
examine the relationship of religious practice to depression within the patients
admitted during those final six months (N = 130).

By studying persons who require skilled nursing services as a result of
medical or surgical problems, we were able to make comparisons not readily
available in community samples of the elderly. First, we examined self-reported
religious activity before the current medical event in relation to current depres-
sion. Among homecare patients, reduced health and functioning may inter-
fere with religious practice. We hypothesized that even with only infrequent
attendance in the past, a sense of psychological membership (operationalized as
attendance at services at least once a year) would more greatly protect these
patients from depression as compared to those who did not participate in religious
services.

We then investigated whether or not the protective effect of religious par-
ticipation is different when comparing homecare patients who stopped going
to their place of worship after the medical event to patients who continued
attending. Our objective was to examine the specific effects of actual attend-
dance—over and above psychological membership—on depression. Similar
rates of depression in the two groups (stopped vs. continued) would indicate
that the benefits of congregational membership are not dependent on attendance
behavior. However, lower rates of depression among homecare patients who
continue to participate in religious services would indicate that the positive
effects of religious involvement might indeed be predicated on attendance.
Alternatively, it may be that depression inhibits religious participation by these
homecare patients.

Finally, we investigated the frequency of visitation by clergy or members of
the congregation to assess its possible impact on depression for persons who
had stopped attending services.

We both measured and controlled for possible confounding variables related
to health status, pain, disability, social support and history of depression. We
examined three questions:

1. Is there greater depression among persons who did not attend religious
services in the past year before beginning homecare, compared to those
who did attend?
2. Is there greater depression among persons who stopped attending religious
services since beginning homecare, compared to those who continued
attending?
3. Is there greater depression among persons who stopped attending
religious services since beginning homecare and have not been visited
by clergy or congregation members, compared to those who have been
visited?
METHOD

Subjects

The subjects were interviewed as part of a two-year study of a random sample (N = 539) of elderly patients newly admitted to a visiting nurse agency [8]. The agency collaborating in this study is a traditional, not-for-profit, Visiting Nurse Service (VNS) that serves all of Westchester County, New York and accepts patients regardless of payment source. Religious practice questions were asked of persons enrolled during the last six months of the study (N = 130).

Eligibility

To enter the study patients met the following criteria: 1) age 65 or over; 2) new admission, defined as not receiving medical homecare from this or any other home care agency in the month preceding the current admission, 3) able to give informed consent, and 4) able to speak and understand English or Spanish (i.e., no communication problems either because of language or impairments such as severe deafness, aphasia, end stage dementia, or intubation).

Sampling

The sampling strategy was designed to recruit a representative sample of VNS patients admitted over a two-year period (12/97–12/99). On a weekly basis the research staff drew a 40% random sample (using a random number generator) from new agency admissions who met the study’s eligibility criteria. From 3,416 potentially eligible patients 1,359 were randomly selected. Of sampled patients, 34.6% (470) were subsequently identified as ineligible for the study. Of the remaining 889 eligible patients, 539 (60.6%) signed consent to participate in the study. On average, patients were interviewed three weeks or 21.2 days (SD = 6.8) after their start of VNS home health care. Aggregate data provided by the VNS indicated that participants were on average two years younger than patients who refused (m = 78.3 vs. 80.2 years, p < .001) but did not significantly differ in terms of patient gender, nurse reported mental status (i.e., oriented, disoriented, forgetful, depressed, agitated), prognosis, or ICD referring diagnosis as recorded in the VNS medical record (HCFA Plan of Care Form 485).

During the last six months of the data collection period (7/99-12/99) questions about religious practice and affiliation were added to the study and administered to the patients (N = 130). These patients did not significantly differ across the variables of gender, age, ethnicity, or prevalence of depression compared to the patients enrolled in the first 18 months.
Measures

Participants received a 90-minute interview in their home. Data reported in this article come from the patient interview, the informant interview, and VNS medical records.

Depression Measures

Depression was assessed by research associates (Ph.D., MA, or experienced BA level), trained in using the Structured Clinical Interview for Axis I DSM-IV Diagnoses (SCID) [9]. Interrater reliability among associates in the assessment of symptoms of the depressive diagnosis was evaluated by joint-ratings of 36 patients. Interrater reliability for the total number of SCID symptoms present was excellent (intraclass correlation: 0.88, 95% CI: .81-.93).

DSM-IV uses an etiologic approach that excludes from diagnostic criteria symptoms judged as solely due to general medical conditions (e.g., thyroid conditions) or medications (e.g., steroids), a distinction that clinicians are able to judge reliably [10]. In this study, a DSM-IV diagnosis of Major Depressive Disorder (MDD) was determined using Best Estimate procedures by consensus of the study’s geriatric psychiatrist, geriatrician, clinical psychologist, and principal investigator using information from the patient SCID, informant SCID, and information on medication and medical status from patient and medical record. Test-Retest reliability was calculated on 30 patients (weighted kappa = .89, 95%: .77–1.0). Severity of depression was measured with the 17-point Hamilton Rating Scale for Depression (HRSD) [11]. The SCID also assessed the patients’ self-reported history of major depressive disorder.

Religion Measures

Patients reported the frequency of their religious service participation in the year previous to their need for homecare (daily, weekly, monthly, yearly, never), and their current level of participation (daily, weekly, monthly, never). These questions were modified from the Multidimensional Measurement of Religiousness/Spirituality for Use in Health Research [12]. In the analysis patients were grouped by those who attended at least yearly prior to homecare and those who had not. The patients also reported the frequency of visits by their clergy or a member of their congregation since starting homecare.

Additional Measures

Cognitive impairment was assessed using the Minimental State Examination [13]. Medical morbidity was scored using the Charlson Comorbidity Index (CCI) [14], coded by a geriatric internist drawing on information from the home care medical record and the structured patient interview. Behavioral disability in Activities of Daily Living (ADL), Instrumental Activities of Daily Living (IADL)
and Mobility was measured by a count of activities in each domain, which the patient was unable to do without assistance [15]. Intensity of pain was assessed by self-report using the single 3-level item from the SF-36 [16]. Social support was measured using the Subjective Support subscale of the Duke Social Support Index [17].

Analyses

As recent studies have found gender differences in the effects of religious practice on health [18, 19], the data in this study were analyzed in the total sample, and then stratified by gender.

Initially we examined religious practice previous to homecare. Chi-Square tests were conducted to compare the prevalence of DSM-IV Major Depressive Disorder (MDD) between two groups: 1) Did not attend religious services in the year before receiving homecare; 2) Did attend. T-tests were used to compare the severity of depression between the groups as determined by the HRSD.

We then compared the prevalence of DSM-IV Major Depressive Disorder (MDD) across three groups: 1) Did not attend religious services in the year before receiving homecare; 2) Stopped attending since homecare; 3) Continued attending. Mantel-Haenszel Chi-Square tests were used to determine if there was a significant linear relationship in the prevalence of MDD when compared across the three groups. One-way ANOVAs were also calculated to determine if there were individual differences between the groups based on the average severity of their depressive symptoms.

Finally, Chi-Square tests were conducted to compare the prevalence of DSM-IV Major Depressive Disorder (MDD) between: 1) Those who had stopped attending since homecare, but had not been visited by clergy or a member of their congregation, 2) Those who had stopped attending since homecare, and had been visited by clergy or a member of their congregation. T-tests were used to compare the severity of depression between the groups as determined by the HRSD.

When significant bivariate differences were found, logistic regression models were estimated to determine whether religious service attendance was independently associated with the prevalence of MDD controlling for characteristics associated with depression in the larger sample: health status, pain, IADL, history of depression, social support [8].

RESULTS

Patient Characteristics

In this sample of 130 patients, 64% were female and 16% were minority. Patients’ ages ranged from 65 to 102, with a mean age of 78 ± 7.85 years. Patients had considerable medical burden as measured by the Charlson Comorbidity Index
Patients' scores on the Duke Social Support Index ranged from 7 to 21, with a mean of 18.94 ± 2.47. In addition, 97% of the patients reported at least one IADL disability, and 60% reported at least one ADL disability. The sample was predominantly Catholic (55%); 29% were Protestant, 8% were Jewish, and 8% reported no religion.

Relationship of Religious Service Attendance in the Past Year to Current Depression

Of all the patients in this sample (N = 130), 47% (N = 61) reported attending religious services at least weekly before needing home care; 55% (N = 71) attended at least monthly and a total of 66% (N = 86) of the patients attended services at least yearly. The yearly attendance rate was 65% among women and 69% among men.

As shown in Table 1, the proportion of patients with MDD was significantly higher for those who did not attend compared with those who did prior to homecare: 23.8% vs. 10.5% (χ² (1) = 3.98, p < .05). Patients who did not attend also reported significantly higher severity of depressive symptoms (as measured by the HRSD) than those who attended: 7.64 vs. 5.26 (t(126) = 2.56, p < .02). The same analyses were then performed for men and women separately. For women who had not attended religious services in the past year, the prevalence of MDD was significantly higher than for attendees: 29.6% vs. 9.4% (χ² (1) = 5.36, p < .03). For men the prevalence of MDD did not significantly differ between attendees (13.3%) and non-attendees (12.1%). In analyses of the severity of MDD symptoms, non-attendees differed significantly for females: 7.93 vs. 5.26 (t(78) = 2.37, p < .03), and there was a difference for males: 7.13 vs. 5.33 (t(46) = 1.11, p < .09), although it did not reach statistical significance.

Logistic regression analysis demonstrated that patients who did not attend religious services were over three times more likely to have MDD than those who did attend services (OR: 3.82, CI: .08–.82, p < .03), while controlling for characteristics associated with the prevalence of depression in the larger sample: health status, pain, disability, history of depression and social support. Linear regression also demonstrated that the greater severity of depressive symptoms among persons who had not previously attended religious services also remained significant while controlling for the above variables. (F(1) = 9.70, p < .01) The interaction of gender with religious attendance was not significant for either the prevalence or the severity of depression.

Relationship of Stopping Religious Service Attendance to Current Depression

Since starting homecare, 85% (73/86) of the persons affiliated with a religious congregation decreased their religious attendance, and 73% (63/86) stopped going to services altogether. Conversely, this shows that a substantial minority of these
Table 1. The Prevalence of DSM-IV Major Depressive Disorder and Severity of Depressive Symptoms According to Religious Service Attendance in the Year Prior to Receiving Homecare Services

<table>
<thead>
<tr>
<th>Religious service attendance in past year</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>Prevalence</td>
<td>N</td>
<td>Prevalence</td>
</tr>
<tr>
<td>Prevalence of MDD&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total sample</td>
<td>(42)</td>
<td>23.8%</td>
<td>(86)</td>
<td>10.5%</td>
</tr>
<tr>
<td>Women</td>
<td>(27)</td>
<td>29.6%</td>
<td>(53)</td>
<td>9.4%</td>
</tr>
<tr>
<td>Men</td>
<td>(15)</td>
<td>13.3%</td>
<td>(33)</td>
<td>12.1%</td>
</tr>
<tr>
<td>Severity of symptoms&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Severity</td>
<td>(SD)</td>
<td>Severity</td>
<td>(SD)</td>
</tr>
<tr>
<td>Total sample</td>
<td>7.64</td>
<td>(6.00)</td>
<td>5.26</td>
<td>(4.37)</td>
</tr>
<tr>
<td>Women</td>
<td>7.93</td>
<td>(5.82)</td>
<td>5.21</td>
<td>(4.28)</td>
</tr>
<tr>
<td>Men</td>
<td>7.13</td>
<td>(6.49)</td>
<td>5.33</td>
<td>(4.57)</td>
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</tbody>
</table>

<sup>a</sup>Best estimate measure of DSM-IV major depressive disorder. <sup>b</sup>Hamilton Depression Rating Scale (HDRS).
Table 2. The Prevalence of DSM-IV Major Depressive Disorder and Severity of Depressive Symptoms According to Religious Service Attendance Since Starting Homecare Services

<table>
<thead>
<tr>
<th>Religious service attendance</th>
<th>Since starting homecare</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No previous attendance</td>
<td>Stopped</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>Prevalence</td>
</tr>
<tr>
<td>Prevalence&lt;sup&gt;a&lt;/sup&gt;</td>
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<td></td>
</tr>
<tr>
<td>Total sample</td>
<td>(42)</td>
<td>23.8%</td>
</tr>
<tr>
<td>Women</td>
<td>(27)</td>
<td>29.6%</td>
</tr>
<tr>
<td>Men</td>
<td>(15)</td>
<td>13.3%</td>
</tr>
<tr>
<td>Severity&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
<td></td>
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<tr>
<td>Total sample</td>
<td>7.64</td>
<td>(6.00)</td>
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<tr>
<td>Women</td>
<td>7.93</td>
<td>(5.82)</td>
</tr>
<tr>
<td>Men</td>
<td>7.13</td>
<td>(6.49)</td>
</tr>
</tbody>
</table>

<sup>a</sup>Best estimate measure of DSM-IV major depressive disorder.  
<sup>b</sup>Hamilton Depression Rating Scale (HDRS).  
<sup>c</sup>χ² mh = Mantel-Haenszel Test of linear association.
patients (27%, 23/86) did continue going to religious services despite physical
infirmities. The rate of continued attendance was 21% (11/53) among women, and
36% (12/33) among men. The prevalence of DSM-IV Major Depressive Disorder
(MDD) and severity of depressive symptoms were compared across groups repre-
senting three categories of religious attendance: 1) Not attended religious services
previously; 2) Stopped attending since homecare; 3) Continued attending. As
shown in Table 2, the Mantel-Haenszel test of linear association demonstrated
significantly decreasing prevalence of MDD in the total sample 23.8% vs. 12.7%
vs. 4.4% ($\chi^2_{mh}(1) = 4.82, p < .03$) and among women 39.6% vs. 11.9% vs. 0%
($\chi^2_{mh}(1) = 6.08, p < .02$). There was a significant variance in the severity of
depressive symptoms as well ($F_{2,125} = 3.25, p < .05$).

Statistical tests of the differences of the prevalence of depression between
patients in the group who stopped attending ($N = 63$) services compared to
those who continued attending ($N = 23$) were not significant: 12.7% vs. 4.3%
($\chi^2(1) = 1.25, p < .27$); neither were tests of the severity of depression: 5.29 vs.
5.17 ($t(84) = .104, p < .92$).

**Relationship of Visitation by Clergy
to Current Depression**

Among those patients who had stopped attending services, 64.9% had not
been visited by clergy or members of their congregation. Statistical tests of the
differences of the prevalence of depression between patients who had not been
visited ($N = 50$) compared to those who had ($N = 27$) were not significant: 12.0%
vs. 7.4% ($\chi^2(1) = .397, p < .53$); neither were tests of the severity of depression:
5.29 vs. 4.26 ($t(53) = .358, p < .72$).

**DISCUSSION**

As with previous research [1, 3], our data indicate that religious practice may
have a protective effect against depression in the presence of declining health and
functioning among the elderly. The homecare patients surveyed for this study who
had not attended religious services in at least a year prior to their need for
homecare had significantly greater prevalence and severity of depression than
those who had attended services in the previous year. The patients who did not
attend religious services were over three times more likely to have DSM-IV Major
Depressive Disorder (MDD) than those who did attend services, even when
controlling for the effects of medical comorbidity variables such as pain and
disability, which can lead to increased rates of depression [20], and controlling
for social support variables which can ameliorate depressive symptoms [21, 22].
These results provide evidence for a psychological-coping variable engendered
by even infrequent religious service attendance.
Among patients who reported religious participation prior to homecare, 73% stopped attending religious services after being admitted to homecare. We then compared the prevalence of MDD across groups representing three categories of religious attendance. Analyses reported in Table 2 suggest a hierarchical relationship between religious practice and depression, with significantly ($p < .03$) decreasing prevalence of MDD across these three groups: 1) Did not attend religious services before homecare (24%); 2) Stopped attending religious services since homecare (13%); 3) Continued attending religious services (4%). These results indicate that the positive effects of religious participation are optimal among those who continue to attend religious services.

Our data support Krause [23], who argues that religious practice is not a static and singular variable but rather a proxy measure of the multidimensional influence of religious action, thought and belief. The role of religious involvement in the mental health of the elderly has been attributed to a combination of the social support of religious institutional networks, and religious beliefs that foster a sense of optimism and religious-based perceptions that may view even suffering in a positive light [24, 25].

One limitation of this study is that it is cross-sectional. We can infer, but we cannot identify a causal relationship between depression and reduced religious participation. Further, we cannot determine the direction of the relationship. Lack of attendance may have brought on depression, or depression may have inhibited attendance [26].

It is also important to note that when the data of men and women were analyzed separately, the results only reached significance for women. However, we did not find a significant interaction effect between gender and religious service attendance on depression. We therefore cannot comment definitively on the gender differences, but do encourage future research to continue comparing results between men and women. Possible gender differences are particularly intriguing because men's yearly attendance (69%) is comparable to women's (66%), and men maintain their religious participation (36%) even more than women (21%), indicating some motivation on the part of men to attend religious services.

Religious practice appears to be helpful both before and after the initiation of homecare services. However, 73% of those who reported religious participation prior to homecare stopped attending religious services. We suggest that one opportunity to promote elderly patients' well-being in the context of physical illness and disability, is through future home-based intervention studies that would facilitate increased home visits from clergy or congregation members to those who have stopped attending services [27-29]. In our sample, 64% never received such visits.

Future analyses will examine the longitudinal effects of religious affiliation, visitation, and renewed attendance on patient outcomes.
REFERENCES


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