Published in final edited form as:

Arch Gerontol Geriatr. 2018 ; 76: 1–5. doi:10.1016/j.archger.2018.01.007.

Physiological and Psychosocial Factors in Spiritual Need Attainment for Community-Dwelling Older Adults

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Abstract

Background—Spiritual well-being enhances older persons' health status. Factors that optimize their spiritual well-being are not well-established.

Objective—To describe spiritual needs attainment and identify factors associated with such attainment among community-dwelling older persons.

Design—Cross-sectional

Setting—Sixty-five U.S. continuing care retirement communities or independent housing facilities

Subjects—4077 persons entering the facilities between January 1, 2007 and November 30, 2016

Methods—Standardized Community Health Assessment and Wellness Survey instruments were used to determine the proportion of subjects reporting their spiritual needs were met. Multivariate logistic regression identified characteristics independently associated with this outcome.

Results—Among the 4077 subjects (mean age 81.6 ± 7.5 ; female, 71.2%; and White race, 70.7%), 93.4% stated their spiritual needs were met. Factors independently associated with a greater likelihood of spiritual needs attainment were: satisfaction with life (adjusted odds ratio (AOR) 2.81, 95% confidence interval (CI) 2.00, 3.96; $p < 0.001$), feeling valued (AOR 2.51, 95% CI 1.61, 3.92; $p < 0.001$), supportive family (AOR 1.99, 95% CI 1.20, 3.29; $p = 0.008$), adequate sleep (AOR 1.59, 95% CI 1.15, 2.19; $p = 0.005$), no pain (AOR 1.35, 95% CI 1.01, 1.82 $p = 0.046$), and having someone to talk to about death among those interested in doing so (AOR 0.39, 95% CI 0.29, 0.54; $p < 0.001$).

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Authors' Conflicts of Interest: None

Conclusions—The majority of community-dwelling older persons reported their spiritual needs were met. Adequate sleep, pain relief, and having a person with whom to discuss death are potentially modifiable factors that may promote spiritual needs attainment in this population, which in turn, may improve their health outcomes.

Keywords

spiritual needs; older adults; community-dwelling; modifiable factors; physiological; psychosocial

Introduction

By 2030, 20% of all Americans will be over the age of 65, with the medical needs of this population putting increasing demands upon the U.S. health care system. (Ortman, Velkoff, & Hogan, 2014) Prior research has shown that spiritual well-being may promote positive physical and psychological health outcomes among relatively healthy (Lawler-Row & Elliott, 2009) and chronically and terminally ill (Chen, Lin, Chuang, & Chen, 2017; Salsman et al., 2015) older persons. Thus, understanding what may promote the outcome of spiritual well-being of older adults, such as those factors associated with the process of spiritual needs being met, may also illuminate ways to improve their general health status.

Prior research focused on the intersection of aging, spirituality, and health has largely investigated the impact of personal spirituality and/or religion on health outcomes. (Daaleman, Perera, & Studenski, 2004; Lawler-Row & Elliott, 2009; McCullough, Hoyt, Larson, Koenig, & Thoresen, 2000; Mofidi et al., 2006; Sawatsky, 2005) Associations in the reverse direction (e.g., how health status affects spiritual needs meeting met), has less grounding in the literature. Studies that have examined the prevalence of and the factors associated with spiritual need attainment have done so in chronically and terminally ill older patients (Balboni et al., 2007; Bussing, Janko, Baumann, Hvidt, & Kopf, 2013; Hermann, 2007; Pearce, Coan, Herndon, Koenig, & Abernethy, 2012). Empirical studies have in fact not established the proportion of individuals with spiritual needs met within the community-dwelling older population. Potential modifiable factors that could optimize spiritual need attainment of community-dwelling older persons also remain largely unexplored. As an exception, one quantitative study from Germany, that administered standardized survey instruments to community-dwelling and institutionalized older persons, found that religious trust and “mood states” (especially “tiredness”) were associated with whether or not spiritual needs were met across a variety of domains of spirituality; however, this study had a small sample size (N=80), was not generalizable to other countries, and the analysis did not distinguish associations in the community versus institutionalized living environments. (Erichsen & Bussing, 2013) We sought to address this knowledge gap by examining spiritual need attainment in a large, exclusively community-dwelling sample. Thus, this report is the first to leverage an inter-RAI standardized assessment instrument administered to a large sample of U.S. community-dwelling older persons (N=4077) to achieve two main objectives: 1. To describe the proportion of individuals who report that their spiritual needs are met, and 2. To identify physical, functional, psychosocial, and health service use factors associated with whether or not spiritual needs were met.

Methods

The conduct of this study was approved by the Hebrew SeniorLife Institutional Review Board.

Setting

Data for this study were derived from older adults living in facilities that were part of the COLLAGE, a national consortium of aging services organizations in the U.S. (COLLAGE Consortium, 2008). These facilities were located in 24 states in Northeast and Midwest regions of the U.S. and include continuing care retirement communities (CCRCs) and independent senior housing facilities (N=65 facilities).

Data Sources

Data were derived from the Community Health Assessment (CHA) and Wellness Survey, two tools that are part of the interRAI suite of instruments that have been used for research purposes. This suite of assessment instruments are related and share common standardized items which are adapted for use in various health settings. For example, the Minimum Data Set (MDS), a well-known instrument mandated for use in all U.S. nursing homes, was originally created by researchers who later founded interRAI and led to a current day version of interRAI's long-term care facilities assessment tools. (interRAI, 2017) Specifically, the CHA was designed to assess the health and well-being of older persons living in the community setting and includes items related to their physical and mental health and cognitive, functional, and psychosocial status. The Wellness Survey is designed for the same population but focuses on quality of life variables, including those related to physical, psychosocial, spiritual, and environmental factors; the tool is used to facilitate development of healthy aging plans based upon individual preferences.

The CHA and Wellness Survey are administered as a pair to older persons living in COLLAGE facilities who opt in to participate during wellness coaching sessions that routinely occur upon facility admission and annually thereafter. CHA data are collected through a semi-structured conversation between a trained staff member (i.e., a nurse or social worker) and the respondents (or their proxies). The Wellness Survey is completed directly by the respondents (or their proxies).

Population

For this report, we utilized admission CHAs and Wellness Surveys from the aforementioned COLLAGE facilities between January 1, 2007 and November 30, 2016. Eligible subjects had to have a Cognitive Performance Scale (CPS) score no more than 3 to maximize the likelihood data were ascertained directly from the subjects rather than their proxies. The validated CPS score uses five CHA variables to group residents into seven cognitive performance categories: 0=intact, 1=borderline intact, 2=mild impairment 3=moderate impairment, 4=moderately severe impairment, 5=severe impairment, and 6=very severe impairment with eating problems. (Hartmaier et al., 1995; Morris et al., 1994; Morris et al., 2016)

Variables

Outcome variable—The outcome variable derived from the Wellness Survey was a dichotomous response to the question: “Do you feel your spiritual needs are being met?”

Independent variables—Independent variables were selected from CHAs and Wellness Surveys that were felt to be potentially associated with spiritual needs being met based on our clinical experience and the literature. (Chen et al., 2017; Erichsen & Bussing, 2013) Only variables with < 10% missing data values were considered.

Demographics: Demographic data from the CHA included age and gender, as well as race (White vs. other) given documented racial differences in the association between spirituality and life satisfaction amongst the elderly. (Cummings & Galambos, 2016) Race was self-reported or reported by a proxy according to a closed-ended question with fixed response options, though respondents were able to report race in an open-ended manner within an “other” category as well.

Medical conditions: Other CHA variables included the presence or absence of common age-related physical conditions (Alzheimer’s disease, cancer, cardiac disease, chronic obstructive pulmonary disease, diabetes, stroke) and mental health symptoms (anxiety and depression) over the last three days.

Cognitive and functional status: Cognitive function was dichotomized into having a CPS score of 0 or 1 (cognitively intact or borderline intact, respectively) versus 2 or 3 (mild or moderate cognitive impairment, respectively). Subjects were categorized either as fully independent in all Activities of Daily Living (ADLs) (personal hygiene, locomotion, toilet use, and eating) or requiring assistance for at least one ADL. Similarly, subjects were categorized as being either fully independent in all Instrumental Activities of Daily Living (IADLs) (meal preparation, housework, finances, medication management, and shopping) or having difficulty with at least one IADL.

Other health-related factors: Self-rated health was categorized into excellent or good versus poor or fair. The CHA measures pain as follows: 0=no pain; 1=pain less than daily; 2=pain as daily with moderate-severe intensity; and 3=pain daily with more than severe intensity. We dichotomized pain into having a score of 0 versus 1. Whether or not the subject had a hospital transfer in the last 90 days (emergency room visit or overnight stay) was also ascertained.

Psychosocial factors: Psychosocial factors included the presence of a “strong and supportive relationship with family” (yes/no), an item from the CHA. A question from the Wellness Survey about satisfaction with life was dichotomized as follows: 0=not satisfied with life (unhappy, mostly dissatisfied, mixed); and 1=satisfied with life (mostly satisfied, pleased, delighted). Whether or not the subject felt lonely was categorized as 0=lonely (only in certain situations or triggered by certain events), occasionally (less than weekly), frequently (less than daily), daily; and 1=not lonely. In addition, responses to the following questions (yes versus no) were ascertained from the Wellness Survey: do you have friends

for daily support, do you feel valued, do you get enough sleep, and do you feel satisfied with your fitness level. Another Wellness Survey question about meditation interest/use (response options: 0=not interested; 1=interested, already participating; 2=interested, not participating) was dichotomized into 0=not interested and 1=interested. Finally, a question asked whether the subject was able to talk to someone about death and dying and/or end-of-life issues with potential answers analyzed as follows: yes (referent); no, but would like to; or no, not interested.

Analysis

Analyses were conducted with SPSS, version 23 (IBM: Armonk, NY). All variables were described using frequencies. For ease of interpreting ORs, age was dichotomized at the median (83.0 years). Bivariate analyses using unadjusted logistic regression examined the association between each independent variable and whether or not the subjects felt their spiritual needs were met (outcome). Variables associated with the outcome at $P < 0.10$ in these bivariate analyses were entered into a multivariate model using forward stepwise logistic regression to select the final set of variables independently associated ($P < 0.05$) with whether or not the subjects felt their spiritual needs were met. Odds ratios (ORs) with 95% confidence intervals (CIs) were calculated.

Results

Subject characteristics

This cohort consisted of 4077 subjects with the following characteristics: mean age 81.6 ± 7.5 (SD) years; male, 28.8%; and White race, 70.7%. (Table 1) The majority of subjects reported “excellent” or “good” health (77.2%) and the presence of the following health conditions: cancer, 16.2%; cardiac disease, 20.9%; COPD, 5.6%; diabetes, 14.2%; and stroke, 6.3%. A total of 10.3% and 16.3% of the cohort reported experiencing symptoms of anxiety and depression, respectively. Only 1.4% of subjects had Alzheimer’s disease, and 91.1% of subjects had a CPS score of 0 or 1. The majority of subjects were independent in all ADLs (94.6%) and IADLs (64.9%).

Variables associated with spiritual needs being met

The majority of the sample indicated their spiritual needs were met ($N=3807$; 93.4%). In the unadjusted analyses, variables associated with spiritual needs being met at a $P < 0.10$ included: age ≥ 83 years, white race, CPS score equal to 0 or 1, no difficulty with IADLs, excellent or good self-rated health, no pain, having strong and supportive relationship with family, being satisfied with life, having friends for daily support, feeling valued, not feeling lonely, sufficient sleep, satisfaction with fitness level, and interested in meditation. The presence of Alzheimer’s disease, anxiety symptoms, depression risk, and not having someone to talk to about death and dying or end-of-life issues were associated with a lower likelihood of having spiritual needs met at $P < 0.10$ in the bivariate analyses. (Table 1)

In the final multivariate model, the following variables remained significantly associated with spiritual needs being met: being satisfied with life (adjusted OR (AOR) 2.81, 95% CI 2.00, 3.96; $p < 0.001$), feeling valued (AOR 2.51, 95% CI 1.61, 3.92; $p < 0.001$), having a

strong supportive relationship with family (AOR 1.99, 95% CI 1.20, 3.29; $p=0.008$), getting enough sleep (AOR 1.59, 95% CI 1.15, 2.19; $p=0.005$), and no pain (AOR 1.35, 95% CI 1.01, 1.82; $p=0.046$). Compared to subjects who have someone to talk to about death, subjects who reported not having someone to talk to but would like to (AOR 0.39, 95% CI 0.29, 0.54; $p<0.001$) and those who reported not having someone to talk to but were not interested (AOR 0.17, 95% CI 0.10, 0.28; $p<0.001$) were significantly less likely to have their spiritual needs met. (Table 1) The C-statistic, indicating the predictive validity of the model for our binary outcome, was 0.759.

Discussion

We found that the vast majority of community-dwelling older persons in this large cohort felt their spiritual needs were met. Nonetheless, we also identified several modifiable physiological (i.e., sufficient sleep, no pain) and psychosocial (i.e., having someone to talk about death) factors significantly associated with a greater likelihood of spiritual needs being met. Targeting these factors may not only help meet the spiritual needs of older persons but may also improve their health outcomes.

This work supports and extends prior work examining the spirituality of older persons. Prevalence of spiritual need attainment for independent, community-dwelling older persons has not previously been addressed in the research literature. Our cohort, in which spiritual needs being met was highly prevalent, contrasts notably with related findings for cancer patients and hospice recipients. (Balboni et al., 2007; Pearce et al., 2012)

One prior study found “tiredness” associated with spiritual need attainment in a cohort of older adults with functional limitations; (Erichsen & Bussing, 2013) however, the investigators questioned whether the term “tiredness” reflected sleeplessness or “tiredness with life”. Our findings clarify, albeit in a more functionally independent cohort, that insufficient sleep is associated with a lower likelihood of spiritual needs being met. What remains unclear is the causal association between these two factors; does insufficient sleep result in spiritual dissatisfaction or does not feeling satisfied spiritually lead to trouble sleeping. Similarly, our finding that the absence of pain was associated with spiritual needs being met is supported by other work, (Bussing et al., 2013) but the direction of the association remains unclear. Nonetheless, as both pain and insufficient sleep are treatable issues that should be considered as part of routine care in older persons, addressing these two physical problems may have the additional benefit of promoting better spiritual health.

Access to discussions about death has also been implicated as a factor related to spiritual need attainment in studies of patients with terminal illness. (Hsiao, Gau, Ingleton, Ryan, & Shih, 2011; Pearce et al., 2012) Our report underscores such a link not only when death is imminent but also upstream before functional and health decline commence. The results also suggest that even the *desire* for such discussions itself is related to spiritual need attainment. Routine care of older persons, within a palliative care context *and* within outpatient settings, should provide opportunities for education and discussion on advance care planning and death and dying concerns.

Our study has its limitations. Its cross-sectional rather than longitudinal design precludes determination of causality between the independent variables (e.g., pain) and spiritual needs being met. It is possible that responses to the CHA and Wellness Survey when answered by proxies were not as accurate as self-report would have been. Our findings also cannot be extended to older adults with more than moderate cognitive impairment and living in other settings (e.g., nursing homes). Further, we lacked information about other factors potentially associated with spiritual satisfaction, such as religious denomination and socioeconomic variables. Finally, our analysis is limited by the language regarding racial categories as written in the CHA which, contrary to recommended guidelines, (Kaplan & Bennett, 2003) uses depersonalizing terms such as “White” and “non-White”.

In sum, this report supports two main conclusions. First, a large majority of community-dwelling older adults without severe cognitive impairment may have their spiritual needs met. For the small minority that do not, targeting a constellation of modifiable factors (i.e., insufficient sleep, pain, end-of-life and death and dying discussion) may help promote the population’s spiritual needs. Wellness coaches (such as in the COLLAGE initiative), outpatient medical providers, and chaplains should consider addressing these factors at the outset of spiritual needs assessment of older persons which may, in turn, optimize their general health status.

Acknowledgments

This work was supported by National Institutes of Health, National Institute on Aging [T32AG023480] [J.A.P.]; and National Institutes of Health, National Institute on Aging [K24AG033640] [S.L.M.]. The financial sponsors did not participate in design, execution, analysis and interpretation of data, or manuscript preparation.

We are also grateful to the COLLAGE consortium housing sites and continuing care retirement communities as well as their residents who provided the information used for this report’s data analysis.

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HIGHLIGHTS

- Most community-dwelling older persons report their spiritual needs are met.
- Life satisfaction, a supportive family, and feeling valued are correlates.
- Modifiable factors are sleep, pain, and having a person with whom to discuss death.

Table 1
Resident Characteristics and Their Associations with Their Spiritual Needs Being Met (N=4077)^a

Resident Characteristic	No. (%) of Residents with Characteristic	No. (%) of Residents with Spiritual Needs Met		Odds Ratio (95% Confidence Interval)	
		Characteristic Present	Characteristic Absent	Unadjusted	Adjusted
Age (83 years)	1899 (48.6)	1792 (94.4)	1858 (92.4)	1.37 (1.06, 1.77)	**
Male	1151 (28.8)	1085 (94.3)	2642 (93.0)	1.23 (0.92, 1.64)	
White	2881 (70.7)	2707 (94.0)	1100 (92.0)	1.36 (1.05, 1.76)	**
<i>Community Health Assessment (CHA) Variables</i>					
Alzheimer's Disease	58 (1.4)	51 (87.9)	3754 (93.4)	0.51 (0.23, 1.14)	*
Cancer	656 (16.2)	619 (94.4)	3156 (93.1)	1.23 (0.86, 1.77)	
Cardiac Disease	843 (20.9)	786 (93.2)	2982 (93.3)	0.98 (0.73, 1.33)	
Chronic Obstructive Pulmonary Disease	226 (5.6)	210 (92.9)	3563 (93.4)	0.93 (0.55, 1.57)	
Diabetes	575 (14.2)	528 (91.8)	3255 (93.6)	0.77 (0.55, 1.07)	
Stroke	253 (6.3)	236 (93.3)	3534 (93.4)	0.99 (0.59, 1.63)	
Anxiety	417 (10.3)	371 (89.0)	3395 (93.9)	0.53 (0.38, 0.74)	****
Depression ^b	624 (16.3)	542 (86.9)	3025 (94.4)	0.50 (0.37, 0.68)	****
No Cognitive Impairment ^c	3714 (91.1)	3482 (93.7)	325 (89.5)	1.75 (1.22, 2.52)	***
Independent in all ADLs ^d	3676 (94.6)	3447 (93.8)	190 (91.3)	1.43 (0.86, 2.35)	
No Difficulty with any IADLs ^e	2636 (64.9)	2493 (94.6)	1298 (91.1)	1.71 (1.33, 2.19)	****
Excellent/Good (vs. Fair/Poor) Self-Reported Health	3113 (77.2)	2952 (94.8)	811 (88.4)	2.40 (1.85, 3.10)	****

Resident Characteristic	No. (%) of Residents with Characteristic	No. (%) of Residents with Spiritual Needs Met		Odds Ratio (95% Confidence Interval)	
		Characteristic Present	Characteristic Absent	Unadjusted	Adjusted
No Pain	2177 (54.0)	2066 (94.9)	1694 (91.5)	1.72 (1.34, 2.22) ****	1.35 (1.01, 1.82) **
Emergency Room Visit +/-or Overnight Hospital Stay in Last 90 Days	386 (10.3)	359 (93.0)	3135 (93.2)	0.96 (0.64, 1.46)	
Strong Relationship with Family	3810 (95.7)	3573 (93.8)	146 (84.4)	2.79 (1.81, 4.29) ****	1.99 (1.20, 3.29) ****
<i>Wellness Survey Variables</i>					
Very or Mostly Satisfied with Life	3560 (87.9)	3386 (95.1)	397 (81.0)	4.56 (3.47, 5.99) ****	2.81 (2.00, 3.96) ****
Has Friends for Daily Support	3457 (85.8)	3268 (94.5)	495 (86.7)	2.65 (2.00, 3.52) ****	
Feels Valued	3802 (95.0)	3585 (94.3)	152 (76.8)	5.00 (3.50, 7.15) ****	2.51 (1.61, 3.92) ****
Not Lonely	2715 (68.0)	2580 (95.0)	1147 (89.6)	2.22 (1.73, 2.84) ****	
Gets Enough Sleep	3220 (79.6)	3046 (94.6)	730 (88.5)	2.28 (1.75, 2.96) ****	1.59 (1.15, 2.19) ****
Satisfied with Fitness Level	2256 (57.4)	2128 (94.3)	1542 (92.1)	1.43 (1.11, 1.84) ***	
Interested in/Uses Meditation	501 (12.5)	477 (95.2)	3260 (93.1)	1.47 (0.96, 2.27) *	
Able to Talk to Someone about Death and Dying / End-of-Life					Referent
--- Yes	2560 (63.8)	2469 (96.4)	1274 (87.8)		Referent
---No, but would like to	151 (3.8)	117 (77.5)	3626 (93.9)	0.30 (0.23, 0.39) ****	0.39 (0.29, 0.54) ****
---No, not interested	1300 (32.4)	1157 (89.0)	2586 (95.4)	0.13 (0.08, 0.20) ****	0.17 (0.10, 0.28) ****

* Represents p-value .10;

** represents p-value .05;

*** represents p-value .01;

**** represents p-value .001.

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^a33.4% (N=3807) of residents reported their spiritual needs are met versus 6.6% (N=270) who reported their spiritual needs are not met.

^bNo cognitive impairment was defined by having a Cognitive Performance Scale of 0 or 1 (cognitively intact or borderline intact) versus 2 or 3 (mild or moderate cognitive impairment). (Morris et al., 2016)

^cADL (Activities of Daily Living) (ADLs) include: personal hygiene, locomotion, toilet use, and eating.

^dIADLs (Instrumental Activities of Daily Living) include: meal preparation, housework, finances, medication management, and shopping.