Spiritual Needs of Geriatric Hospitalized Patients and the Associations with Depressive Symptoms and Pain Intensity: A Cross-Sectional Study in Belgium

Geriatric patients are confronted with the context of hospital admission and their process of aging, which might influence their spiritual needs. Earlier studies pointed out that spiritual needs might be related to aspects of patient functioning such as mental health or pain experiences. In this study, we aimed to provide insight into the prevalence of religious, existential, inner peace and giving/generativity needs in a convenience sample of geriatric patients in Flanders, Belgium. We also investigated the group differences in religious and existential needs based on patients' religious or spiritual background. Furthermore, we aimed to clarify how these needs are related to two indicators of patient functioning, more precisely depressive symptoms and pain intensity. Our results showed that items related to inner peace needs, giving/generativity needs, and religious needs were reported as most prevalent whereas existential needs scored lowest. Religious needs were mostly reported by religious patients, whereas existential needs were reported by patients with various religious or spiritual backgrounds. Regression analysis showed that existential needs were a significant predictor of depressive symptoms and of pain intensity, whereas religious needs did not function as a predictor. Caregivers interested in taking care of the whole person, might profit from the results of this study in order to get more insight into geriatric patients' spiritual needs.

Keywords: spiritual needs, geriatric patients; depressive symptoms; pain intensity

Introduction

The shift towards person-centered care has increased the focus on patient-reported needs. Within this increased attention for the overall needs of patients, also attention for other needs than physical needs is growing. Especially care and consideration for the spiritual needs of patients is currently one of the burgeoning fields (Best et al., 2014; Puchalski et al., 2009).

Most studies on spiritual needs are done with chronic pain patients, cancer patients and palliative patients (Höcker et al., 2014; Murray et al., 2004; Offenbaecher et al., 2013; Vilalta et al., 2014). Only a dozen studies focus on geriatric patients' spiritual needs. This is remarkable since specific characteristics in the life stage of advanced age, such as increased losses and

approaching finality, might easily trigger spiritual concerns and needs (Desmet et al., 2020). In the limited available studies, spiritual needs are often described as a reflection of people's inner being (Narayanasamy et al., 2004; Ramezani et al., 2019; Shih et al., 2009). According to Monod (2012), spiritual needs are the externalization of patients' current spiritual state and unmet spiritual needs can lead to spiritual distress. However, an overall consensus on the definition of spiritual needs is still lacking. The absence of a clear definition engenders that the concept of spiritual needs remains vague and is interpreted in different ways among researchers.

Insight into geriatric patients' spiritual needs is indispensable because of two reasons. First of all, despite the fact that spirituality and religion can be defined in different ways, a considerable number of older adults identify themselves as religious and/or spiritual (Zimmer et al., 2016). Studies show that the role of religion and spirituality in life increases when aging (Lavretsky 2010; Moberg 2005). For example, the longitudinal study of Wink and Dillon (2002) pointed out that participants rated religion and spirituality more important in late life than in middle adult life. Secondly, the context of hospital admission and illness can affect spiritual needs. The physical and emotional challenges accompanied with hospitalization often trigger or intensify spiritual needs (Hodge et al., 2012). Moreover, the challenging context can hinder patients from fulfilling their spiritual needs (Ross, 1995). The prevalent role of religion and spirituality in late life together with the chance for intensified spiritual needs during hospital admission, point out that further research into geriatric patients' spiritual needs is needed.

In order to understand the spiritual needs of geriatric patients, we need to measure how many and what kind of spiritual needs are present in geriatric patients. One of the difficulties of identifying and measuring spiritual needs is the wide variety of interpretations of the concept (Jackson et al., 2016). Most of the time, spiritual needs are explained as an overarching term including existential, psychological, social and religious items (Erichsen & Büssing, 2013; Galek et al., 2005; Hermann, 2006; Monod et al., 2010). Although each of these needs is

discussed separately, the combination of these various categories is classified as spiritual needs. The advantage of this approach is that it takes into account that spiritual needs encompass different fields. The disadvantage of this approach is that the uniqueness of these specific needs may be overlooked and that the differential associations between different types of spiritual needs and outcome variables are blurred hindering the advance of the field.

One way of measuring spiritual needs is presented by Büssing's (2010) categorization of religious needs, existential needs, inner peace needs and giving/generativity needs. These four categories have been researched in specific contexts such as chronic pain patients, cancer patients, and in older adults in residential care (Büssing et al., 2013; Erichsen & Büssing, 2013; Höcker et al., 2014; Man-Ging et al., 2015; Riklikienė et al., 2020). The first category of religious needs is based on beliefs and values integrated in a religious tradition. It is characterized by the connection with the transcendent, divine or sacred and include "both private and public domains of religiosity" (Büssing et al., 2010, p. 271; Koenig, 1998). The second category of existential needs expresses psychological items such as seeking meaning in life or coping with death anxiety. These needs reflect the challenge in handling existential givens as described by Irvin Yalom (1980). Yalom, for example, indicates that the search for meaning in life is one of the core components in life and a common quest for all humans. Furthermore, in Büssing's categorization of existential needs also people's reflection on finality and death, and the need for forgiveness are also included. The third category of needs encompasses the connection with nature, the experience of inner peace and quietness, and the possibility to share fears and worries with others. Finally, the fourth category of giving/generativity needs is based on an active attitude towards others, the feeling of connection with loved ones, and the recognition of being valued and loved by others (Flannelly et al., 2013; Höcker et al., 2014).

Only one study using the framework by Büssing with geriatric patients in Iran has been published to date (Ramezani et al., 2019). In this study, the association between spiritual needs with anxiety and depression was investigated. Despite the use of Büssing's categories, this study used an overall score of spiritual needs instead of the distinction between religious needs, existential needs, inner peace needs and giving/generativity needs. This prevents a more fine-grained analysis of how specific needs are associated with patient's functioning.

Geriatric patients are not only confronted with spiritual needs, also depressive symptoms and pain intensity often appear in late life. Depressive symptoms are common in older adults as they face various negative life events such as the loss of loved ones, the loss of physical abilities, and severe illness (Kraaij et al., 2002). Results of the German Longitudinal Study of the Aged showed that 38.2% of the community-dwelling individuals aged 75 years and over reported depressive symptoms (Luppa et al., 2012). Geriatric patients and older adults living in nursing homes report even higher levels of depressive symptoms compared to community-dwelling adults. In the review of Jongenelis and colleagues (2003), an average of 43.9% of the older adults in nursing homes had depressive symptoms. Prevalence rates of depressive symptoms in geriatric wards vary from 8% to 45%, as pointed out by Dennis and colleagues' review (2012). Besides the risk for depressive symptoms in aging, older people regularly suffer from pain as well. In a study with older adults with and without cancer, 46.1% reported moderate pain levels, and 21.31% experienced severe pain (Davidoff et al., 2019). Despite the prevalence of spiritual needs, depressive symptoms and pain intensity in late life, the association between spiritual needs and these two aspects of ill-being is still unclear.

Only one cross-sectional study with geriatric patients investigated the relationship between spiritual needs and depressive symptoms, proving that depressive symptoms were positively associated with spiritual needs (Ramezani et al., 2019). Studies in other populations like cancer patients and heart failure patients, pointed out that unmet spiritual needs were related

to more depressive symptoms (Park & Sacco, 2017; Pearce et al., 2012). In a sample of patients suffering from fibromyalgia, results showed that based on the categorization of spiritual needs by Büssing, inner peace needs were significantly positively associated with depressive symptoms (Offenbaecher et al., 2013). Although findings in various patient populations suggest that depressive symptoms and spiritual needs are positively related, we are unsure whether this association holds in the specific context of older adults undergoing a hospitalization.

Studies on the relationship between spiritual needs and pain intensity in geriatric patients are lacking and studies with other patient groups are scarce and show a mixed picture. On the one hand, Bussing and colleagues' (2013) study with patients with chronic pain and cancer showed no significant association between religious needs, existential needs, inner peace needs, giving/generativity needs and self-reported pain intensity. On the other hand, recent research in a sample of non-terminally ill cancer patients illustrated that patients who reported medium or strong pain, scored significantly stronger on Büssing's spiritual needs categories, compared to patients who reported no pain (Riklikienė et al., 2020). Still, we are unsure how this relationship turns out in geriatric patients.

Additionally, it might be interesting to get insight into specific characteristics of geriatric patients who report spiritual needs. For example, religious needs scored significantly higher in cancer patients who consider themselves as spiritual or religious compared to the group of nonspiritual or nonreligious cancer patients (Hocker et al., 2014; Riklikienė et al., 2020). When including the other three categories of Büssing, studies pointed out that existential needs, inner peace needs and giving/generativity needs were not only present in religious patients, but also among nonbelievers and among patients skeptic towards having faith in the transcendent, divine or sacred (Büssing et al., 2013; Offenbaecher et al., 2013). In Belgium, the Catholic faith played a crucial role in society in which older adults grew up. Still, the relationship between religious, existential, inner peace and giving/generativity needs and the

religious or spiritual background is rarely researched in geriatric patients. Based on the Catholic context in which Belgian older adults grew up, the link between the religious or spiritual background of older adults and their reported needs will be included in this study.

Aims of the Study

This cross-sectional study is part of a larger research on the relationship between geriatric patients' spiritual needs and ill-being[1]. This article aims to investigate three hypotheses.

The first aim of this study is to investigate the prevalence of religious needs, existential needs, inner peace needs and giving/generativity needs in a convenient sample of patients in geriatric wards. This is required in order to get a better understanding of geriatric patients' spiritual needs (considered as the overarching term for the four groups of spiritual needs). Moreover, this study wants to acknowledge the specificity of the different types of needs in geriatric patients. We assume that, in line with earlier findings (Erichsen & Büssing, 2013; Hocker et al., 2014; Offenbaecher et al., 2013), inner peace needs and giving/generativity needs will be rated highest and religious needs and existential needs will be rated lowest.

Second, we seek to investigate the group differences in religious needs, existential needs, inner peace needs and giving/generativity needs based on patients' religious or spiritual background. As described above, there is little information provided on this topic in geriatric patients. We hypothesize that, based on the prominent role of Catholic religion in older adults' life, the religious or spiritual background will affect the religious needs of geriatric patients and to a lesser extent existential needs, inner peace needs and giving/generativity needs. The religious and spiritual identifiers in this study include the extent to which religion/spirituality is important in life, people's religious affiliation, and the extent to which people practice religion through praying and religious activities.

Last, this study aims to investigate the way religious needs, existential needs, inner peace needs and giving/generativity needs are related to depressive symptoms and pain

intensity. Although studies with other patient groups reported a positive association between depressive symptoms and spiritual needs (Offenbaecher et al., 2013; Park & Sacco, 2017; Pearce et al., 2012), it is still unclear how this relationship appears in geriatric patients. Moreover, a distinction between various types of needs in line with the framework by Büssing is lacking in these studies and will therefore be investigated in this study. Also, this study wants to achieve a better understanding of how the relationship between religious needs, existential needs, inner peace needs, giving/generativity needs and pain intensity occurs in geriatric patients. We expect, based on the limited results from different patient groups, that that the religious needs, existential needs, inner peace needs and giving/generativity needs are positively related to depressive symptoms and pain intensity.

Methods

Procedures

In-room standardized interviews were conducted by the first author with geriatric patients in two general hospitals and in one university hospital in Flanders (Belgium) from June to August 2020. The researcher informed all eligible patients both in writing and verbally about the research design. After obtaining a verbal informed consent, closed-ended questions in a standardized format were asked and input electronically in the Qualtrics software tool.

Inclusion criteria were being aged 65 years and over, admitted to geriatric wards, capable to understand and answer the questionnaire, and being able to express informed consent. Patients were excluded when suffering from severe mental health problems and severe forms of memory loss, being mentally disabled or terminally ill. Based on these criteria, the head nurse of each ward provided a list of room numbers of potential participants. Sixteen geriatric patients refused to participate in the research. In total, a convenience sample of 202

geriatric patients were interviewed. One patient had to be excluded from the data collection, due to age.

The study was approved by the Ethics Committee Research UZ/KU Leuven (ID S63617) and confirmed by the local Ethics Review Board of each hospital involved. Strict guidelines and measures concerning the SARS-CoV-2 virus provided by the hospital settings were applied by the researcher and the interviewees. Patients did not receive any form of compensation for participation in the research.

Participants

Two hundred and one geriatric patients were finally enrolled in the study aged 68 to 100 (M = 84.81, SD = 5.52), 64.7% of them were female. 53.7% of the participants identified as widowed, 35.3% as married, 5.0% as single, 4.0% as divorced, and 2.0% reported being in a relationship. Most people received lower secondary education until the age of fourteen/sixteen years old (51.7%), 3.0% received primary education, 30.3% went to secondary school until 18 years old, and 15% had a university or college degree. Hospital admission was a couple of days up to one week for the majority of the sample (75.0%) and 18.0% was admitted to hospital for two to five weeks. 2.5% stayed in the hospital for a longer period, namely six to fifteen weeks. 4.5% of the participants did not report the length of their stay in the hospital. 6.0% of the patients were admitted to rehabilitation wards for geriatric patients, all others to geriatric wards.

The religious and spiritual background of each geriatric patient was assessed. In general, 41.3% declared that religion or spirituality was not important at all or somewhat important in their lives. 58.7% considered religion or spirituality as important or very important in life. More specifically, 15.4% of the sample described themselves as nonbelievers, 12.4% were believers without any religious affiliation, and 72.2% identified as believer and affiliated to a specific religious tradition. According to participants' religious background; 76.6% classified themselves as Catholic, 2.0% as Christian, 0.5% as Muslim, and 2.0% had another religious

affiliation than the specified categories. 18.9% did not identify themselves with any kind of religion. According to the frequency of praying, 34.9% never or rarely prayed, 22.9% prayed occasionally or weekly, and 42.2% prayed daily. Finally, 47.2% were never or rarely involved in religious activities, 19.4% now and then, 32.9% on a weekly basis and 0.5% daily. A lot of participants that were never, rarely or occasionally involved in religious activities, noticed that they were not able to attend religious activities, because of their physical disabilities.

Measurements

Spiritual Needs Questionnaire (SpNQ-20)

To assess geriatric patients' needs, the 20-item Spiritual Needs Questionnaire (SpNQ-20) by Büssing (2018) was used. The scale differentiates four subscales: religious needs (6 items, e.g., "the need to pray with others"), existential needs (6 items, e.g., "the need to find meaning in illness and/or suffering"), inner peace needs (4 items, e.g., "the need to plunge into the beauty of nature"), and giving/generativity needs (4 items, e.g., "the need to pass one's own life experiences on to others"). A conditional two-step set-up was applied while asking questions so that firstly the presence of the need was assessed (with answering possibilities yes (1) or no (0)), followed by the intensity when the need was confirmed to be present. The intensity was scored on a 3-point scale ranging from somewhat (1), strong (2) to very strong (3). Finally, the answers were combined into a 4-point scale with answer categories totally not (0), somewhat (1), strong (2) and very strong (3). Since no Flemish SpNQ-20 is available, a Flemish translation was provided using forward-backward translation. Item 17 ("the need to read religious/spiritual books") was eliminated after the data collection, because this item was not applicable to most people due to vision loss. Internal consistency of the subscales was determined and turned out to be more than acceptable for religious needs (Cronbach's $\alpha = .83$), acceptable for existential needs (Cronbach's $\alpha = .66$), not acceptable for inner peace needs (Cronbach's $\alpha = .57$), and not

acceptable for giving/generativity needs (Cronbach's α = .54). Due to this low level of internal consistency, inner peace and giving/generativity needs will only be analyzed when discussing the prevalence of the SpNQ-items. In other words, the last two research questions will be limited to religious needs and existential needs.

Geriatric Depression Scale (GDS-8)

The Dutch 8-item nursing home version of the Geriatric Depression Scale by Jongenelis et al. (2007) was used to measure the presence of depressive symptoms rated as yes (1) or no (0) (e.g., "Do you often get bored?"). The sum of the item-scores on a scale from 0 to 8 shows the presence of depressive symptoms in geriatric patients. Higher scale scores indicated more depressive symptoms. The GDS-8 showed good internal consistency (Cronbach's α = .69) given the dichotomous character of the items (Sun et al., 2007).

Pain Intensity

The pain intensity of patients was evaluated using the Visual Analogue Scale (Hayes & Patterson, 1921). The scale consisted of one question: "How much pain do you experience today?" and was rated from no pain at all (0) to worst pain imaginable (10).

Religious and Spiritual Identifiers

In order to gather information about patients' religious and spiritual background, five single questions were asked to all patients. The first item measured how important spirituality or religion is in people's life on a scale from not important (1) to very important (4). As older adults do not always make a distinction between religion and spirituality and use them interchangeably, both terms were mentioned in this item (Musick et al., 2000; Thauvoye et al., 2019). The second question concerned the presence or absence of a religious affiliation in patients' life. Possible answers were nonbeliever (1), believer without any religious affiliation

(2), and believer and affiliated to a specific religious tradition (3). In the third question, patients' religious background was assessed as Catholic, Christian, Protestant, Muslim, Jewish, Humanist, not applicable or others. Results were grouped into three categories; a group of participants identifying themselves as Catholic, Christian or Muslim (1), a group of participants for which the question was not applicable (2), and a group of participants having a different belief system than the answer options (3). The last two questions focused on the frequency of praying from never (1) to daily (5) and involvement in religious activity with the same possible answers. As only one person reported being involved in religious activities on a daily basis, this category was merged with the group of weekly involvement (4). Each question was scaled separately.

Data Analysis

Data were analyzed using SPSS 26.0. Descriptive statistics, t-tests, analysis of variances followed by Tukey's HSD or Games Howell post hoc test, correlation (Pearson) and regression analyses have been conducted to test the hypotheses. In the regression analysis, tolerance and variance inflation factor (VIF) statistics were calculated to check for multicollinearity. A VIF less than 10 and a tolerance higher than 0.2 affirms no problem of multicollinearity.

The dataset was screened for missingness and missing patterns. Scores on pain intensity and on religious/spiritual identifiers had no missing data. Two scores from two participants were missing on the GDS. Concerning the SpNQ, twelve answers were missing in total. Missing data patterns indicated that missing values were missing in a random way. The Expectation Maximization algorithm, was applied to impute the missing data. The EM method is an iterative procedure that produces maximum likelihood estimates in order to impute missing values (Graham, 2009).

At the start of the analyses, it was considered whether participants from the same hospital provided similar answers and thus whether the particular hospital setting explained

variance in the outcome variables. Therefore, the nesting of participants within hospital settings was tested. The Intraclass Correlation Coefficients (ICC) were calculated, explaining whether the variables were dependent on the setting. Results showed that the ICC was zero for the outcome variables, which implies that there was no between-site variation. In other words, all the variance could be explained by the participants and was not influenced by the hospital settings. Multilevel modeling was therefore not required.

Results

Preliminary Analysis

The mean score for depressive symptoms was 2.09 (*SD* = 1.88, range: 0-8). Ranging from 0 to 10, the mean level of reported pain intensity was 4.52 (*SD* = 2.91). Religious needs correlated positively with existential needs ($r = .42$, $p < .001$). Depressive symptoms correlated positively with pain intensity ($r = .27$, $p < .001$). Existential needs correlated positively with both depressive symptoms ($r = .17$, $p = .015$) and pain intensity ($r = .18$, $p = .011$). On the contrary, there were no significant correlations between religious needs and depressive symptoms ($r = .03$, $p = .714$) on the one hand and pain intensity ($r = .09$, $p = .221$) on the other hand.

Except for gender, none of the sociodemographic or other background variables (age, nationality, civil status, educational level, length of hospitalization) showed significant differences in religious and existential needs. Gender differences were found in religious needs, $t(199) = -2.92$, $p = .004$. Women ($M = 0.85$, $SD = 0.75$) reported stronger religious needs in comparison to men ($M = 0.54$, $SD = 0.64$). No significant gender differences were revealed in existential needs, $t(199) = .64$, $p = .525$.

Significant differences in depressive symptoms were exclusively found for distinct education levels, $F(3, 197) = 3.34$, $p = .020$ and civil status, $F(4, 196) = 3.93$, $p = .004$. Participants with a university or college degree, reported significant lower levels of depressive

symptoms (M = 1.20, SD = 1.63, p = .036) compared to participants who went to school until 18 years old (M = 2.32, SD = 2.11, p = .036). In addition, divorced participants scored higher on depressive symptoms (M = 4.13, SD = 2.90) than widowed people (M = 2.16, SD = 1.82, p = .030), married people (M = 1.73, SD = 1.75, p = .005) and single people (M = 1.65, SD = 1.42, p = .038).

Prevalence of Religious, Existential, Inner Peace and Giving/Generativity Needs

Except for one person, every participant pointed out at least one religious, existential, inner peace or giving/generativity need out of nineteen (M = 7.97, SD = 4.25, range: 0-19). As shown in Table 1, the five most frequent reported needs were the need "to be assured that your life was meaningful and of value", the need "to plunge into beauty of nature", the need "to pray for yourself", the need "to find inner peace", and the need "to dwell at a place of quietness and peace". The lowest scored needs were religious and existential needs, namely the need "to talk with someone about the possibility of life after death", the need "to forgive someone", the need "to dissolve open aspects of your life", the need "be forgiven", and the need "to pray with someone". In general, the needs with the highest intensity (rated on a 3-point scale) were at the same time the needs most frequently reported (rated on a yes/no scale).

On average, religious needs (M = 0.74, SD = 0.72) and existential needs (M = 0.39, SD = 0.42) were of low relevance for the participants in our sample. However, according to religious needs, the need "to pray for oneself" and the need "to turn to a higher presence (i.e., God, Allah, …)" were two of the most frequently mentioned needs.

[Table 1 here]

Relationship between Religious/Spiritual Identifiers and Religious and Existential Needs

As shown in Table 2, significant group differences in religious and/or existential needs were found for all religious and spiritual identifiers. Analysis of variances (ANOVA) was calculated to test these variations in combination with post hoc Tukey's HSD test. For religious needs and for frequency of praying, Games-Howell post hoc test was applied together with the Welch-test for the F-ratio due to the absence of homogeneity of variances.

Results showed significant differences between participants who considered religion/spirituality (very) important in life (VI, I) and participants who considered religion/spirituality not or somewhat important in life (NI, SI). Highest values of religious and existential needs were found in the group of participants reporting that religion/spirituality is a (very) important aspect of life (VI, I).

Furthermore, significant group differences were found based on the extent of praying and the extent of being involved in religious activities. However, the groups of patients that prayed occasionally (O), weekly (W) or daily (D) and the groups of patients that were religious involved on an occasional (O), weekly/daily (WD) basis, reported no significant differences in existential needs.

Also, significant group differences were found according to the religious affiliation of participants. Participants with a religious affiliation (RA) reported more religious needs than people without religious affiliation (WRA) or nonbelievers (NB). However, this was not the case for existential needs. No significant difference was found between people feeling religious affiliated (RA) and people feeling not religious affiliated (WRA) for levels of existential needs.

Finally, religious identification showed only significant group differences in religious needs scores, not in existential needs scores. Specific means and standard deviations of religious

and existential needs for each group and significant levels of group differences are presented in Table 2.

[Table 2 here]

Religious and Existential Needs as Predictors of Depressive Symptoms and Pain Intensity

Examining the third research question, simple linear regression analyses and hierarchical linear regression analyses were performed to evaluate the role of religious and existential needs as predictors of depressive symptoms and pain intensity. Sociodemographic variables that showed significant group differences in the preliminary analyses were added as control variables in the regressions. This implies that for depressive symptoms, the model was controlled for civil status and education level. For pain intensity, no control variables were included.

In a first step, educational level and civil status were entered in the prediction of depressive symptoms, $R^2 = .105$, $F = 4.572$, $p = .001$. In a second step, religious needs were entered but this did not add to the prediction of depressive symptoms, $R^2 = .106$, $\Delta R^2 = .001$, $\Delta F = .171$, $p = .680$. Similarly, religious needs were not able to predict pain intensity, $F(1, 199) = 1.504$, $p = .221$, $R^2 = .008$.

On the contrary, existential needs were able to predict depressive symptoms and pain intensity. In a first step, educational level and civil status were entered in the prediction of depressive symptoms, $R^2 = .105$, $F = 4.572$, $p = .001$. In a second step, existential needs were entered and this did add to the prediction of depressive symptoms, $R^2 = .126$, $\Delta R^2 = .021$, $\Delta F = 4.582$, $p = .034$. Similarly, existential needs were able to predict pain intensity, $F(1, 199) = 6.636$, $p = .011$, $R^2 = .032$. The coefficients are shown in Table 3 and in Table 4. No multicollinearity was detected according to the tolerance level and Variance Inflation Factor.

[Table 3 and 4 here]

Discussion

The first aim of this study was to examine the prevalence of religious, existential, inner peace, and giving/generativity needs. Secondly, this study investigated the group differences in religious and existential needs according to religious and spiritual identifiers. Finally, this study researched how religious and existential needs were related to depressive symptoms and pain intensity.

In regard to the first research question, our findings revealed that some items of the subscales of inner peace needs, giving/generativity needs, and religious needs scored high in this convenience sample of geriatric patients. Existential needs scored lowest. These findings confirm partially our hypothesis that inner peace needs and giving/generativity are more intensified compared to religious and existential needs. Participants reported more religious needs than we expected.

Firstly, although the giving/generativity need "to be assured that life was meaningful and of value" was scored sometimes high and at other times low in earlier studies, it appeared to be of high relevance in this sample (Büssing et al., 2015; Man-Ging et al., 2015; Offenbaecher et al., 2013). Büssing et al. (2010) described the giving/generativity needs as active and self-actualizing needs. In this sample, the high scores on the item "to be assured that life was meaningful and of value" indicate the importance of the more passive component of giving/generativity needs. Participants expressed the need to be confirmed regarding the meaning of their lives and their active giving roles of the past. This reflection on past life can be linked to the process of finding ego-integrity in late life as described by Erik Erikson (1982). According to Erikson, late life is characterized by the main concern that people had a meaningful life. This concern can be accompanied by a positive reflective life process on the one hand (integrity) and feelings of dissatisfaction with past life on the other hand (despair). Both feelings of integrity and despair can occur in older adults while reflecting on past life and

considering the meaning of life. In line with Erikson's final stage of life of reflecting on past life, it is not surprisingly that the need "to be assured that life was meaningful and of value" scores high in this older sample. Nevertheless, it is remarkable that this need is not classified as an existential need as it is closely related to the existential field of seeking meaning in life as described by Yalom (1980) for example. Büssing (2018) reported that this need was added to the subscale of giving/generativity needs to strengthen the original 3-item giving/generativity scale.

The second group of high scoring items were the inner peace needs "to plunge into beauty of nature", "find inner peace", and "dwell at a place of quietness and peace". The two latter needs are common in a hospital setting and mentioned by various groups of patients (Grant et al., 2004; Ramezani et al., 2019). It shows that during hospitalization, rest and inner reflection are strongly valued by geriatric patients. On the contrary, the need "to plunge into the beauty of nature" is rarely included in research with older adults. Nevertheless, older adults describe nature as an important resource for experiences of peace, as part of their spirituality, and link it with their personal well-being (Finlay et al., 2015; Thauvoye et al., 2018).

Thirdly and varying from other samples, were the frequently reported needs "to pray for yourself" and "to turn to a higher presence (i.e. God, Allah…)". However, this is not surprising given the high frequency of daily praying in this sample (42.3%) and the high percentage of participants feeling affiliated to a religious tradition (79.1%). The important role of religion in late life is formulated in previous research as well. For example, religion is regularly described as a coping mechanism in times of distress (Pargament et al., 2011; Peteet et al., 2019). Also, the connection with a higher presence is mentioned as an important need in previous studies with older adults (Man-Ging et al., 2015). Nevertheless, it is usually assumed in healthcare and in society that religious needs are decreasing. Our findings proved that the connection with the transcendent and the internalization of religion through individual prayer is still present in late

life. Participants reported that they pray to God in the evening to ask for good health, support, protection and a peaceful night's sleep.

Lastly, although existential needs items scored low in this study, that does not mean that they were not prevalent at all. Particularly, the need “to find meaning in illness and/or suffering” was somewhat present in this sample and is in line with previous studies (Gautam, Neville, and Montayre 2019; MacKinlay and Trevitt 2007).

Compared to other studies, items of existential, inner peace and giving/generativity needs were reported to a lesser extent (Büssing et al., 2013; Erichsen & Büssing, 2013; Hocker et al., 2014). This was not the case for religious needs, scoring relatively high in contrast to previous studies (Büssing et al., 2013; Erichsen & Büssing, 2013; Hocker et al., 2014). The reason for these lower scores is hard to find. One of the explanations might be that some patients repressed their needs towards the researcher. For example, it seemed that if geriatric patients were unable to fulfill needs due to physical inability or if they experienced that there was limited interest in their needs by others, the needs were scaled as not present. In other words, some people neglected their needs because they already presupposed that their needs could never be fulfilled and not worth mentioning. This was also the case in Erichsen and Büssing’s study (2013) with nursing home residents. They reported that they are not used to reflect on these needs. Also, residents mentioned that the term ‘needs’ was formulated too strong and changed the word into ‘wish’ (Erichsen & Büssing, 2013). It could be possible that geriatric patients in this study perceived the term ‘need’ as too strong as well. Another reason for the low scores on existential, inner peace and giving/generativity needs could be that geriatric patients are more familiar with religious needs and to a lesser extend with needs about their inner feelings.

The second part of the study pointed out that religious needs occurred mostly in patients feeling connected with a religious tradition, in patients valuing the role of religion and spirituality in life, and in patients involved in praying and religious activities. These insights

are in line with previous research mentioning higher degrees of religious needs in people identifying themselves as religious/spiritual than participants not identifying themselves as religious/spiritual (Höcker et al., 2014; Offenbaecher et al., 2013; Riklikienė et al., 2020). Unlike religious needs, the level of existential needs was less affected by religious and spiritual identifiers. Only people who mentioned religion/spirituality as not important or identified themselves as nonbelievers, significantly reported fewer existential needs than people who reported religion/spirituality very important in life or feeling religious affiliated. In contrary to religious needs, existential needs were equally present in participants believing with or without religious affiliation. This was revealed in Offenbaecher and colleagues' (2013) study as well where people identifying themselves as spiritual, but not religious scored as high as participants reporting being religious and spiritual. Only participants mentioning being nonreligious and nonspiritual, clearly scored lower on existential needs.

Moreover, more religious needs were reported by women compared to men. This is a recurring finding across various studies (Erichsen & Büssing, 2013; Hocker et al., 2014). Also, studies proved that women scored significantly higher on existential needs, but that was not the case in this study (Höcker et al., 2014; Riklikienė et al., 2020).

Finally, we assumed that religious and existential needs were predictors of depressive symptoms and pain intensity. This was only true for the relationship between existential needs and depressive symptoms and pain intensity. The more existential needs occurred, the more depressive symptoms were present in geriatric patients. The same conclusion can be made for pain intensity. Although existential needs were related to depressive symptoms and pain intensity, the association was still smaller compared to earlier findings (Offenbaecher et al., 2013; Riklikienė et al., 2020). No linear relationship was found between religious needs and depressive symptoms and pain intensity.

Limitations and Further Research

The findings obtained in this study have to be considered with five limitations.

The first concern of this study is the interview design. It is possible that socially desirable answers were given due to the face-to-face interview. Besides this, a lot of patients had a roommate. Although the interviewer guaranteed as much privacy as possible during the interview, the roommate was usually in the room when questions were asked. This could have caused some people to hesitate to answer completely honestly.

Secondly, the Spiritual Needs Questionnaire suffers from the limitation that inner peace and giving/generativity needs show unacceptable internal consistency in this study. Therefore, the scales were not included in the analysis of the last two research questions. An explanation for the low internal consistencies of both scales in this study is not found yet.

In the third place, the high rate of religiousness and Christian or Catholic denomination in this sample could have influenced the results. Compared to the general Belgian population, the religious and spiritual background seems more prevalent in this generation (Pew Research Center, 2018).

Fourthly, the approach in this study to use a questionnaire that is not too long and not too intensive for older adults, suffers from the limitation that some covariates may be missing. For example, we did not investigate the role of perceived severity of illness, the role of loss experiences or the influence of social networks. Future research could include these variables to do justice to the complexity of geriatric patients' life. For example, the study of Palmer and colleagues (2018) showed associations between met spiritual needs and having friends for daily support.

Finally, the cross-sectional design precludes causal interpretations and the generalizability of our findings is limited.

In future research, it would be interesting to test the influence of met spiritual needs on geriatric patients' ill-being. To date, it is still unclear if addressed religious, existential, inner

peace and giving/generativity needs in spiritual care would lead to reduced depressive symptoms and pain intensity. Outcome research is recommended to test if spiritual care interventions focusing on spiritual needs affect depressive symptoms and pain intensity. However, this study did not found associations between religious needs and depressive symptoms and pain intensity. It is unsure whether spiritual care that focuses on religious needs will have an effect on these outcomes.

In addition, a quantitative measurement especially for geriatric spiritual needs would benefit future research. Although several questionnaires are developed to measure patients' spiritual needs, instruments to capture specific geriatric spiritual needs in a quantitative way are lacking (Seddigh et al., 2016).

Overall, we suspect that the results in this study were not strongly affected by the corona pandemic and the lack of hospital visits. However, further research is needed in a later stage in order to check whether the pandemic was of influence or not.

Practical Implications

This research shows that religious, existential, inner peace and giving/generativity needs are prevalent in geriatric patients. Person-centered care should include these patient-reported needs during hospital admission. This can be done by providing generalist and specialist spiritual care. Hvidt and colleagues (2020, p. 2) indicated that spiritual care is understood as the care that addresses "existential and religious and/or spiritual needs and challenges in connection with illness and crisis". Spiritual care can be offered by the whole healthcare team together with the chaplain who is the professional spiritual caregiver (Handzo & Koenig, 2004). Australian patients reported that chaplains are most helpful in providing spiritual care, but also nursing and other hospital staff were mentioned as being helpful in spiritual care (Tan et al., 2020). Although Belgian hospitals include spiritual care as part of person-centered care, it is often limited to the responsibility of the chaplain. It is recommended for all healthcare professionals

worldwide to be aware of patients' spiritual needs, to recognize and detect them during the care process, and if needed to refer to the chaplain for spiritual support.

It is especially important that religious and existential needs are considered in healthcare. Religious needs should be addressed in order to respect and acknowledge the religious identity of most geriatric patients. Existential needs should be met as these are associated with depressive symptoms and pain intensity. In practice, this implies that patients' existential needs are related to patients' functioning. Therefore, an interdisciplinary team in order to address patients' existential needs is recommended.

Last, results reveal that existential needs are present in patients with various religious/spiritual backgrounds. This implies that spiritual care, which addresses these needs, is not exclusively limited to religious patients. Spiritual care can be of benefit for all kinds of patients struggling with these needs, regardless of their religious or spiritual backgrounds (Handzo et al., 2008).

Conclusion

Our findings strengthen the idea that religious, existential, inner peace and giving/generativity are prevalent in geriatric patients. Religious needs in particular are more prevalent in geriatric patients compared to other populations. In contrast to religious needs which are mostly reported by religious patients, existential needs are reported by patients with various religious/spiritual backgrounds. Existential needs are associated with depressive symptoms and pain intensity. To date, this study is one of the few studies that researches geriatric patients' spiritual needs and how these are related to aspects of ill-being.

Notes

[1] For this study, a preregistration can be found: https://osf.io/wdnq6/

Declarations

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Conflict of interest All authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the Ethics Committee Research UZ/KU Leuven and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed consent Verbal informed consent was obtained prior to the interview.

Availability of data and material Access to data can be obtained via the first author.

Code availability Access can be obtained via the first author.

Preregistration of the study https://osf.io/wdnq6/

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Tables

Table 1. Descriptive Statistics of the Intensity and Amount of SpNQ Items

Spiritual Needs Questionnaire	*M* (0-3)	*SD*	% (yes)	Scale
Be assured that your life was meaningful and of value	1.57	0.90	83.6	GN
Plunge into beauty of nature	1.25	1.03	66.7	IPN
Pray for yourself	1.21	1.13	60.7	RN
Find inner peace	1.03	1.04	57.7	IPN
Dwell at a place of quietness and peace	0.93	0.98	54.2	IPN
Turn to a higher presence (i.e., God, Allah, …)	0.91	1.04	50.2	RN
Give solace to someone	0.86	0.90	55.2	GN
Find meaning in illness and/or suffering	0.71	0.81	49.8	EN
Someone prays for you	0.64	0.84	42.8	RN
Pass own life experiences to others	0.62	0.84	41.8	GN
Talk with others about fear and worries	0.56	0.84	36.3	IPN
Participate at a religious ceremony	0.54	0.88	31.3	RN
Talk with someone about the question of meaning in life	0.50	0.77	34.8	EN
Give away something from yourself	0.41	0.71	29.4	GN
Pray with someone	0.40	0.76	26.4	RN
Be forgiven	0.32	0.68	21.9	EN
Dissolve open aspects of your life	0.32	0.69	20.9	EN
Forgive someone from a distinct period of your life	0.31	0.69	19.4	EN
Talk with someone about the possibility of life after death	0.19	0.53	13.9	EN

Note. RN = religious needs, EN = existential needs, IPN = inner peace needs, GN = giving/generativity needs.

Table 2. Means and Standard Deviations for Religious and Existential Needs for each Religious/Spiritual Identifier

	Religious needs		Existential needs	
Religious/spiritual importance [b]	$F(3, 99.56)$ [a] = 81.97***		$F(3, 197)$ = 4.97**	
	M	*SD*	*M*	*SD*
Not important (NI)	0.10	0.23	0.22	0.35
Somewhat important (SI)	0.38	0.43	0.35	0.43
Important (I)	0.75	0.48	0.42	0.38
Very important (VI)	1.45	0.69	0.52	0.47
Religious affiliation [c]	$F(2, 65.81)$ [a] = 74,29***		$F(2, 198)$ = 3.41*	
	M	*SD*	*M*	*SD*
Nonbeliever (NB)	0.07	0.22	0.21	0.31
Believer without religious affiliation (WRA)	0.38	0.43	0.43	0.46
Believer with religious affiliation (RA)	0.95	0.72	0.42	0.43
Religious identification [d]	$F(2, 8.68)$ [a] = 55,41***		$F(2, 198)$ = 2.24	
	M	*SD*	*M*	*SD*
Not applicable (NA)	0.13	0.27	0.27	0.37
Others (O)	0.15	0.30	0.25	0.32
Catholic/Christian/Muslim (CCM)	0.90	0.72	0.42	0.43
Praying [e]	$F(4, 19.59)$ [a] = 74.65***		$F(4, 18.65)$ [a] = 7.55**	
	M	*SD*	*M*	*SD*
Never (N)	0.09	0.21	0.18	0.30

Seldom (S)	0.17	0.28	0.27	0.36
Occasionally (O)	0.68	0.49	0.48	0.40
Weekly (W)	1.20	0.23	0.77	0.67
Daily (D)	1.28	0.67	0.49	0.45
Religious activity [f]	$F(3, 87.97)$ [a] = 41.73***		$F(3, 197)$ = 4.34**	
	M	*SD*	*M*	*SD*
Never (N)	0.26	0.40	0.26	0.35
Seldom (S)	0.38	0.43	0.32	0.38
Occasionally (O)	0.76	0.53	0.46	0.47
Weekly/Daily (WD)	1.36	0.72	0.51	0.45

*p < .05. **p < .01. ***p < .001.

[a] Welch test

[b] Variables with a significant difference in religious needs: NI-SI**, NI-I***, NI-VI***, SI-I**, SI-VI***, I-VI***. Variables with a significant difference in existential needs: NI-VI***.

[c] Variables with a significant difference in religious needs: NB-WRA**, NB-RA***, WRA-RA***. Variables with a significant difference in existential needs: NB-RA*.

[d] Variables with a significant difference in religious needs: CCM-NA***, CCM-O*. Variables with a significant difference in existential needs: no significant differences.

[e] Variables with a significant difference in religious needs: N-O***, N-W**, N-D***, S-O***, S-W**, S-D***, O-W*, O-D***. Variables with a significant difference in existential needs: N-O**, N-W*, N-D***.

[f] Variables with a significant difference in religious needs: N-O***, N-WD***, S-O*, S-WD***, O-WD***. Variables with a significant difference in existential needs: N-WD**.

Table 3. Hierarchical Linear Regression Analysis and Simple Linear Regression Analysis with Religious Needs as Predictor and Depressive Symptoms and Pain as Outcomes

	β	*t*	*SE*	Tolerance	VIF
Depressive symptoms					
(constant)		6.50***	.48		
Education level	**-.18***	-2.53*	.17	.94	1.06
Widowed vs single	-.04	-.56	.61	.94	1.06
Widowed vs married	-.08	-1.17	.28	.91	1.10
Widowed vs divorced	**.23*****	3.26***	.67	.95	1.06
Widowed vs in a relationship	.13	1.82	.93	.96	1.04
Religious needs	.03	.41	.18	.95	1.05
Pain intensity					
(constant)		14.54***	.29		
Religious needs	.09	1.23	.28	1.00	1.00

*$p < .05$. **$p < .01$. ***$p \leq .001$.

Table 4. Hierarchical Linear Regression Analysis and Simple Linear Regression Analysis with Existential Needs as Predictor and Depressive Symptoms and Pain as Outcomes

	β	t	S.E.	Tolerance	VIF
Depressive symptoms					
(constant)		6.42***	.46		
Education level	**-.18****	-2.56**	.17	.95	1.05
Widowed vs single	-.04	-.52	.60	.95	1.06
Widowed vs married	-.08	-1.18	.28	.92	1.09
Widowed vs divorced	**.22****	3.16**	.66	.96	1.05
Widowed vs in a relationship	.11	1.63	.92	.96	1.05
Existential needs	**.15***	2.14*	.30	.99	1.01
Pain intensity					
(constant)		14.64***	.28		
Existential needs	**.18***	2.58*	.48	1.00	1.00

*$p < .05$. **$p < .01$. ***$p < .001$.