Original Article

An Investigation of Intensive Care Unit and High Dependency Unit Patients' Spiritual Needs

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Abstract

Background: The importance of addressing patients spiritual and religious needs and offering spiritual support to those who are in a critical situation is recognized by all medical regulatory authorities, as indicated by medical practice guidelines
Aim: The purpose of this study was to identify the spiritual needs of patients hospitalized in Intensive Care Units (ICU) and High Dependency Unit (HDU), as well as to highlight ways in which these needs are met by health professionals.
Study design: A cross-sectional quantitative survey was conducted using the "Spiritual Needs Questionnaire" (SpNQ). The sample consisted of 50 patients hospitalized in the ICU and HDU of a General Hospital.
Results: The research showed that patients demonstrated a strong spiritual need, with the most important regarding their *need for Inner Peace*, *Giving/Generativity Needs*, as well as their *overall assessment of needs* (SpNQ overalla). No correlation was found between the patients' age and their spiritual needs. However, there was a significant correlation between patient's spiritual needs and gender, with women exhibiting a higher level of spiritual needs.
Conclusions: based on the results of this study increased spiritual needs were identified among patients hospitalized in ICU. Further studies on the spiritual needs of ICU patients are required, so that they can be met by health professionals.
Relevance to clinical practice
This research suggests that caring for the spiritual needs of patients and their loved ones has a positive effect on patient health outcomes. As our findings show that patients in ICU and HDU demonstrate a strong spiritual need it is important for clinical practice and education to focus on spiritual needs assessment tools based on patients' individual needs.

Keywords: Intensive Care Units, Spiritual needs, Spiritual care, Spirituality, Religiosity, nurses

Introduction

Although most critically ill patients in the Intensive Care Unit (ICU) are unable to express their needs due to their health condition, many have spiritual needs that require attention. However, spiritual needs are often not taken into account or ignored, as traditionally ICU health professionals focus on treating their patients' physical symptoms (Ku 2016).

The importance of addressing patients spiritual and religious needs and offering spiritual support to those who are in a critical situation is recognized by all medical regulatory authorities, as indicated by medical practice guidelines (Hawryluck et al. 2002; Davidson et al. 2007). The Joint Commission on the Accreditation of Healthcare Organizations emphasizes the importance of respecting the *"cultural, psychosocial and spiritual values"* of patients by assessing their spirituality especially for the those near the end of life (Wilson-Stronks et al. 2010).

The ICU is a lonely, machine orientated clinical setting which at times makes patients and their families feel that this environment is cruel and inhumane. Many patients and their families experience emotions of intense fear and anxiety when they or their loved one needs to be admitted to the ICU, as they are very often faced with the possibility of death (Timmins et al. 2015; Rnanicmt 2014; Hupcey 2000; Angus et al. 2004). As expected, these negative feelings are also accompanied by an intense emotional discomfort.[3] Traditional medical practice, focused on treating the underlying disease, is insufficient in dealing with this discomfort. In such cases, patients and their relatives often seek support through their spirituality or religion (el Nawawi et al. 2012).

A growing body of research suggests that caring for the spiritual needs of patients and their loved ones has a positive effect on patient health outcomes, including their quality of life. Critically ill patients who are concerned about the possibility of death, have the need to express their spiritual and religious beliefs (MacLean et al. 2003), since they very often influence their end-of life decisions (Bussing et al. 2013; Romain and Sprung 2014; Bülow et al. 2012).

Background

Despite the fact that many guidelines emphasize the importance of spiritual care for critically ill patients in the ICU as part of a holistic health care approach, in reality, it is often overlooked.(Puchalski 2004; Davidson et al. 2007; Ho et al. 2018a) Many surveys illustrate that although both patients as well as medical and nursing staff are aware of the value of spiritual care, this need is met by doctors and nurses at a rate of only 6% and 13% respectively(Balboni et al. 2013). In addition, a survey conducted by Ho et al. (2018) (Ho et al. 2011), including 188 ICU physicians and 289 ICU nurses highlighted that physicians do not feel adequately trained in providing spiritual care to their patients.

The lack of provision of spiritual care in the ICU can be attributed to several factors. One of the most important factor cited in the literature, is that very often, ICU physicians do not take advantage of the opportunities that are offered to deal with patients and relatives spiritual concerns (Ernecoff et al. 2015). Many researchers attribute these findings to the lack of time in a busy ICU and the lack of adequate training in order to develop the skills needed to detect patients' spiritual needs (Balboni et al. 2013; Murray et al. 2004).

According to Timmins and Kelly (Timmins and Kelly 2008) (2008), ICU nurses should choose spiritual needs assessment tools based on their patients' individual needs. However, it appears that nurses' assessment of patients(Ku 2016) spiritual needs also depends on the patients' level of consciousness. As highlighted by Ku (Ku 2016) other important factors influencing the assessment of patients' spiritual needs include the nurses' clinical observation and judgment as well as the family's involvement.

The key to improving the provision of spiritual care offered to patients, is based on the education provided to health professionals during their training. As mentioned in the literature, the most common barriers met by ICU health professionals in providing spiritual care apart from the lack of time, are limited knowledge, training and expertise on the subject as well as lack of self-confidence in addressing such issues (Davidson et al. 2007; Ronaldson et al. 2012; Garssen et al. 2017; Ford et al. 2014; Fitchett 2017). Health professionals need the necessary training for the development of their own spiritual background as to be able to offer spiritual care services (Ho et al. 2018b; Kisorio and Langley 2016).

Aim and objectives: The purpose of this study was to investigate the spiritual needs of patients hospitalized in Intensive Care Units (ICU) and High Dependency Unit (HDU), as well as to

highlight ways in which these needs are met by health professionals. The study aims to answer the following research questions:

1. What are the main spiritual needs of patients hospitalized in (anonymous country) Intensive Care Units?

2. To what extent are the spiritual needs of ICU and HDU patients affected by their demographic characteristics?

Design and methods: A cross-sectional quantitative survey was conducted using the **"Spiritual Needs Questionnaire" (SpNQ)** between December 1st 2021 and February 1st 2022.

The sample consisted of 50 patients hospitalized in the ICU and HDU of a General Hospital.

Patient inclusion criteria were as follows:

• Adult male and female patients over the age of 18.

• Patients with medical conditions.

• Glasgow Scale >12.

• Patients who spoke (anonymous country) .

• Patients of all religious denominations.

Patients admitted to the ICU and HDU who had undergone surgical procedures (i.e. traffic accidents, postoperative patients), with a Glasgow scale <12 and who did not speak (anonymous country) were excluded from the study.

Approval was granted from the Hospital's Scientific Committee and the data collection process began. Patients were informed of the purpose of the study and issues regarding confidentiality were discussed. The researchers acquired patients written consent prior to questionnaire completion.

Data collection

The "Spiritual Needs Questionnaire" (SpNQ)(Bussing et al. 2018; Bussing et al. 2010; Bussing 2021) was used once author permission was granted.

The SpNQ includes 27 self-assessment questions addressing 4 basic patient needs:

• *Religious needs* (alpha = .87 to .92), such as individual or group prayer, participation in religious ceremonies, reading various spiritual/religious books, turning to a higher presence (i.e., God, angels, etc.)

- The *need for Inner Peace* (alpha =.73 to .82), such as the desire to live in a quiet and peaceful place, to immerse oneself in the beauty of nature, to seek inner peace, to talk with others about fears and concerns.

- *Existential needs* (Reflection / Meaning) (alpha= .74 to .82), such as resolving open aspects of life, talking to someone about the meaning of life/suffering, talking about the possibility of an afterlife, forgiving someone from a specific time during their life.

- *Giving/Generativity Needs* (alpha = .71 to .74), refer to the active and autonomous intention to comfort someone, to convey one's own life experiences to others, to give something of oneself, and to feel confident that life had meaning and value.

A 4-point Likert-type scale was used for patients to assess the importance of their spiritual needs ranging from agreement to disagreement (0 - not at all; 1 - somewhat; 2 - strong; 3 - very strong). The SpNQ demonstrated good content validity ranging from .74 to .92 (Cronbach's alpha = .79). One of the main advantages of this tool is that it does not use religious terminology making it suitable for use in both religious and non-religious groups.

Data analysis

Data processing at a primary stage required appropriate coding and transformation to be consistent with the IBMSPSSv.23 statistical analysis software program. Regarding the reliability of the data, the Cronbach's Alpha reliability coefficient was estimated both on each subsection of the final questionnaire and for the total number of questions. Tables of frequencies and relative frequencies as well as calculations of the main descriptive measures such as mean value and standard deviation for the questions were initially presented for all variables. These results are presented in corresponding frequency diagrams.

In order to examine how the results, differ for each dimension separately based on specific demographic characteristics, a representative variable was estimated taking into account the average score of the individual questions for each participant, thus creating a total score. These new variables were tested for normality using the Kolmogorov-Smirnov and Shapiro-Wilk normality tests with a significance level of α=0.05.

These tests showed both acceptance and rejection of normality, and thus to further examine differences according to demographic characteristics, independent samples parametric tests (Independentsamplest-test) and ANOVA, as well as non-parametric Mann-WhitneyU-test and Kruskal-Wallis tests were conducted with a significance level α=0.05.

Factor analysis and reliability

Starting with the reliability of the data, the coefficient of internal homogeneity Cronbach's Alpha was estimated for the entire questionnaire and for each section, with an excellent overall reliability (Alpha=0.928). Regarding the sub-sections of the questionnaire, the reliability was satisfactory for almost all dimensions, with the sole exceptions of the need for Inner Peace" (Alpha=0.682) where the reliability was marginally acceptable **(Table1).**

Results

Demographic characteristics

Regarding patients' demographics, 56% were male and 44% female. Furthermore, their mean age was M.V.=63.18, S.D.=17.5 years while 34% and 28% of the participants were within the "46-65" and "66-80" age groups respectively, according to following table of frequencies and descriptive measures **(Table 2).**

SpNQ Questionnaire

A high percentage of participants negative responses to questions of the SpNQ were related to the need "for someone from their religious community (e.g. priest) to care about them or came to visit them", "to talk to someone about the possibility of life after death", "to pray with someone", "to participate in a religious ceremony (eg Sunday service)?" and to "read religious / spiritual books", with a percentages of 60%, 24%, 26%, 24% and 26% respectively. However, in all other dimensions, patients evaluated their need with a score of more than 74%.

Based on the finding's participants demonstrated a strong Religious need. The highest level of needs were observed related to the need " to ask for help from God or a saint" (M.V.=2.19, S.D.=0.89), to "pray for themselves" (M.V.=2.11, S.D.=0.82), for "someone to pray for them" (M.V.=1.91, S.D.=0.79), with a percentages of 58%, 66% and 58% respectively. A strong need was also identified regarding the need to "pray with someone" (M.V.=1.76, S.D.=0.76), to "participate in a religious ceremony" (M.V.=1.74, S.D.=0.72) and the need to "read religious / spiritual books" (M.V.=1.70, S.D.=0.70), with a percentages of 42%, 44% and 42% respectively. However, only 24% of the participants emphasised the need for "someone from their religious community (eg a priest) to care about them or came to visit them" (M.V.=1.75, S.D.=0.72).

Regarding participants needs for Inner peace, high percentages were observed for the need to "feel inner peace" (M.V.=2.42, S.D.=0.66), to "go to a place of peace and quiet" (M.V.=2.34, S.D.=0.76), "to find themselves in the beauty of nature" (M.V.=2.33, S.D.=0.79), and to "ask someone for forgiveness" (M.V.=1.83, S.D.=0.73), with a percentages of 82%, 78%, 68%, 78% and 60% respectively. However, only 42% of the participants claimed the need to 'talk to someone about their fears and worries' (M.V.=1.73, S.D.=0.81).

Likewise, a very strong need was observed for participants Existential needs. Specifically, needs such as "finding meaning in the illness and/or pain experienced" (M.V.=1.93, S.D.=0.81), "reflecting on life" (M.V.=1.91, S.D.=0.83), "talking to someone about the meaning of life" (M.V.=1.84, S.D.=0.81) and "clarifying open aspects of life" (M.V.=1.81, S.D.=0.67), with a percentages of 58%, 58%, 52% and 56% respectively, were identified. Only 46% of the participants claimed the need to "talk to someone about the possibility of life after death" (M.V.=1.82, S.D.=0.77).

A strong need was also identified for participants *Giving/Generativity Needs*. Specifically responses regarding the need to "address someone with love" (M.V.=2.11, S.D.=0.80), "give something of oneself" (M.V.=2.09, S.D.=0.67), "communicate life experiences to others" (M.V.=2.04, S.D.=0.73), "make sure that life has meaning and value" (M.V.=2.02, S.D.=0.77), "forgive someone who hurt or upset them in the past" (M.V.=1.84, S.D.=0.75) and "comfort someone» (M.V.=1.75, S.D.=0.75), were reported with a percentages of 68%, 74%, 70%, 68%, 54% and 52% respectively. **(Table 3)**

Following the analysis, a representative score was calculated for each dimension taking into account the average score of the individual questions. A similar procedure was applied for the evaluation of participants overall needs (SpNQ overall), by calculating the average score of all questions

included in the questionnaire. The new variables were examined for their normality of distribution using the Kolmogorov-Smirnov and Shapiro-Wilk normality tests, which met the necessary requirements (Table 7). According to Table 4, the highest level of needs were identified regarding the need for Inner Peace (M.V.=2.12, S.D.=0.51) and Giving/Generativity Needs (M.V.=1.99, S.D.=0.53), while a "Strong" need was identified for participants overall SpNQ needs (M.V.=1.97, S.D.=0.41). **(Table 4)**

Initially investigating the results by gender, regarding the dimensions normality the Kolmogorov-Smirnov and Shapiro-Wilk normality tests were used. The Independentsamplest-test parametric tests was applied and for cases where normality was not met with the non-parametric test Mann-WhitneyU-test with a significance level of α=0.05. It should be emphasized that for the dimensions where normality is satisfied, before conducting the independent samples tests, the homogeneity of the variances of the individual samples was examined using Levene's tests of equality of variances (Appendix, Table 8), the results of which led to all the dimensions uniform dispersions for the samples of men and women (p>0.05), under significance level α=0.05.According to the following table of descriptive measures (Table 5), a statistically significant difference in the

Religious needs (p=0.000<0.05) was identified. Women who participated in this study (M.V.=2.15, S.D.=0.46) demonstrated a higher level of needs compared to men (M.V.=1.59, S.D.=0.43). Also, a statistically significant difference was found in the *Giving/Generativity Need* (p=0.005<0.05), where women (M.V.=2.20, S.D.=0.56) presented a higher level of needs compared to (M.V.=1.78, S.D.=0.44) men. A similar pattern was observed for the overall assessment of SpNQ needs (p=0.002<0.05), where female (M.V.=2.15, S.D.=) patients presented a higher level of needs in the overall assessment compared to men (M.V.=1.59, S.D.=). Finally, for the need for Inner Peace (p=0.076>0.05) and Existential needs (p=0.257>0.05), no statistically significant difference was observed regarding the participant's gender. **(Table 5)**

Analysing the differences of the questionnaire needs and participants age, for the dimensions for which normality was satisfied based on the Kolmogorov-Smirnov and Shapiro-Wilk normality tests, the statistical method of ANOVA tests was applied. According to the following table of descriptive measures (Table 6), age does not statistically affect any dimension (p>0.05) as well as the SpNQ overall assessment of needs (p=0.906>0.05).

Regarding participants age, according to the following table of descriptive measures and tests (Table 6), age does not statistically affect patients Religious needs, Needs for Inner Peace, Existential needs, Giving/Generativity Needs (p>0.05), while the same is the case for the overall assessment of SpNQ needs (p =0.906>0.05). **(Table 6)**

	Cronbach's Alpha	N of Items
SpNQ	0.928	28
Religious needs	0.719	7
Need for Inner Peace	0.682	6
Existential needs	0.727	5
Giving/Generativity Needs	0.773	6

Table 1. Cronbach's **ReliabilityStatistics** Alpha reliability coefficient.

		N	N%
Gender	Male	28	56.00%
	Female	22	44.00%
	Total	50	100.00%
Age Group	21-45	8	16.00%
	46-65	17	34.00%
	66-80	14	28.00%
	81+	11	22.00%
	Total	50	100.00%
Age	Mean Value (M.V.)	63.18	
	Standard Diviation (S.D.)	17.5	
	Minimum Value	21	
	Maximum Value	93	

Table 2. Frequencies and descriptive demographic characteristics.

	Not at all		Somewhat		Strong need		Very strong need		Total	
Religious needs	N	N%	N	N%	N	N%	N	N%	M.V.	S.D.
That someone of your religious community (i.e. pastor) cares for you or come to see you?	30	60.00%	8	16.00%	9	18.00%	3	6,00%	1.75	.72
To pray with someone?	13	26.00%	16	32.00%	14	28.00%	7	14.00%	1.76	.76
That someone prays for you?	5	10.00%	16	32.00%	17	34.00%	12	24.00%	1.91	.79
To pray for yourself?	4	8.00%	13	26.00%	15	30.00%	18	36.00%	2.11	.82
To participate at a religious ceremony (i.e. Sunday service)?	12	24.00%	16	32.00%	16	32.00%	6	12.00%	1.74	.72
To read religious / spiritual books?	13	26.00%	16	32.00%	16	32.00%	5	10.00%	1.70	.70

To turn to a higher presence (i.e., God, Allah, Angels, Saints)?	8	16.00%	13	26.00%	8	16.00%	21	42.00%	2.19	.89
Need for Inner Peace	N	N%	N	N%	N	N%	N	N%	M.T.	T.A.
To talk with others about your fears and worries?	9	18.00%	20	40.00%	12	24.00%	9	18.00%	1.73	.81
To plunge into beauty of nature?	8	16.00%	8	16.00%	12	24.00%	22	44.00%	2.33	.79
To dwell at a place of quietness and peace?	3	6.00%	8	16.00%	15	30.00%	24	48.00%	2.34	.76
To find inner peace?	5	10.00%	4	8.00%	18	36.00%	23	46.00%	2.42	.66
To be forgiven?	3	6.00%	17	34.00%	21	42.00%	9	18.00%	1.83	.73
Existential needs	N	N%	N	N%	N	N%	N	N%	M.T.	T.A.
To reflect back on your life?	3	6.00%	18	36.00%	15	30.00%	14	28.00%	1.91	.83
To dissolve / clarify open aspects of your life?	8	16.00%	14	28.00%	22	44.00%	6	12.00%	1.81	.67
To find meaning in illness and/or suffering?	5	10.00%	16	32.00%	16	32.00%	13	26.00%	1.93	.81
To talk with someone about the question of meaning in life?	6	12.00%	18	36.00%	15	30.00%	11	22.00%	1.84	.81
To talk with someone about the possibility of life after death?	12	24.00%	15	30.00%	15	30.00%	8	16.00%	1.82	.77
Giving/Generativity Needs	N	N%	N	N%	N	N%	N	N%	M.T.	T.A.
To turn to someone in a loving attitude?	4	8.00%	12	24.00%	17	34.00%	17	34.00%	2.11	.80
To give away something from yourself?	5	10.00%	8	16.00%	25	50.00%	12	24.00%	2.09	.67
To give solace to someone?	6	12.00%	18	36.00%	19	38.00%	7	14.00%	1.75	.72

To forgive someone from a distinct period of your life?	7	14.00%	16	32.00%	18	36.00%	9	18.00%	1.84	.75
To pass own life experiences to others?	4	8.00%	11	22.00%	22	44.00%	13	26.00%	2.04	.73
To be assured that your life was meaningful and of value?	3	6.00%	13	26.00%	20	40.00%	14	28.00%	2.02	.77

Table 3. Table of frequencies and descriptive measures of mean value (M.T.) and standard deviation (SD) – SpNQ

Descriptives	Mean Value	Median	Standard Deviation
Religious needs	1,8347	1,8571	,51863
Need for Inner Peace	2,1202	2,1667	,51054
Existential needs	1,8206	1,8000	,56771
Giving/Generativity Needs	1,9894	2,0000	,52566
SpNQ overall	1,9694	1,9815	,40680

Table 4. Table of Descriptive Measures - SpNQ Needs.

	Gender				Equality of distributions tests
	Male		Female		
	M.V.	S.D.	M.V.	S.D.	p
Religious needs	1,59	,43	2,15	,46	**,000***
Need for Inner Peace	1,98	,53	2,24	,47	,076*
Existential needs	1,74	,53	1,92	,60	,257*
Giving/Generativity Needs	1,78	,44	2,20	,56	**,005***
SpNQ	1,82	,35	2,16	,40	**,002***

Table 5. Table of descriptive measures and tests of equality of distribution – Independentsamplest-test (*), Mann-WhitneyU-test (**) – SpNQ – Gender.

	Age group								Equality of distributions tests
	21-45		46-65		66-80		81+		
	M.V.	S.D..	M.V.	S.D.	M.V.	S.D.	M.V.	S.D.	p
Religious needs	1.66	.51	1.86	.47	1.74	.50	2.07	.60	.333*
Need for Inner Peace	2.00	.62	2.13	.44	2.11	.55	2.09	.58	.957*
Existential needs	1.83	.64	1.85	.54	1.79	.60	1.78	.59	.986*
Giving/Generativity Needs	2.00	.81	1.95	.40	1.87	.52	2.10	.57	.781*
SpNQ overall	1.93	.50	1.95	.37	1.94	.40	2.07	.45	.906*

Table 6. Table of descriptive measures and tests of equality of distribution – Independentsamplest-test (*), Mann-WhitneyU-test (**) – SpNQ – Age.

Discussion

In relation to the first research question, the main spiritual needs of (anonymous country) patients in the ICU, spiritual needs were identified, with the highest scores for the N*eed for Inner Peace*, and Giving/Generativity Needs. Additionally, the overall assessment level of needs equally indicated an increased overall level of spiritual needs.

Specifically, in relation to Religious needs, patients highly rated the need to ask for help from God or saints (58), to pray for themselves (66), to know that someone is praying for them (58 %), to pray with someone (42%), to participate in a religious ceremony (44%) and to read religious books (42%). However, the majority of patients (60%) that participated in this study claimed that they were not significantly affected by the need to have visitors from their religious community.

Also, regarding participants needs for Inner Peace, patients highly rated finding inner peace (82%), being in a quiet and peaceful place (78%) as well as being in the beauty of nature (68%), and asking for forgiveness (60%), while the need to talk to someone about their fears and concerns (42%) was rated low.

Patients highly rated Existential needs and specifically their need to find meaning in their illness (58%), to reflect on their life (58%), to talk to someone about the meaning of life (52%) and to clarify open aspects of life (56%), while the need to talk to someone about the possibility of life after death (46%) was rated low.

Regarding the need for Giving/Generativity, patients demonstrated a high level of need to address someone with love (68%), to give something of themselves (74%) to share their own experiences (70%), to make sure their life has meaning and value (68%) to forgive someone who has hurt or caused them suffering in the past (54%) as well as comfort someone (52%).

The results of this research study confirm the findings of other similar studies on the spiritual needs of patients with various diseases. According to Bussing's review in 2021 (Bussing 2021) regarding the use of the SpNQ questionnaire for different diseases and populations, the need of Inner Peace and the Giving/Generativity scored higher for most patients, while the scores for the Religious and Existential needs were lower. Accordingly, in an earlier study by Bussing et al. in 2010 (Bussing et al. 2010) including 210 patients with chronic diseases and cancer, Inner peace and Giving/Generativity needs were the most important needs mentioned, especially by cancer patients, while Existential and Religious needs were of low importance for patients with chronic pain, but of some importance for cancer patients.

In a study conducted by Pratiwi et al. in 2018 (Pratiwi et al. 2018), including 83 hospitalized stroke patients, their spiritual needs ranged in the following order of importance: Religious needs, need for Inner peace, Existential needs, Giving/Generativity needs. Patients reported Religious needs as most important, with emphasis on the need to pray with others, turn to a higher presence, and participate in religious ceremonies. In relation to their Inner peace, respondents expressed the need to be loved more by others, and regarding Existential needs, the need to forgive someone from the past, was identified as most important. Giving/Generativity needs among stroke patients were also identified with the need to comfort someone, characterised as most important.

This study identified that age does not affect any SpNQ needs of ICU patients. However, the results of similar studies indicate the existence of a correlation between age and patients' spiritual needs. A study by Fradelos et al. in 2021 (Fradelos et al. 2021), including 110 patients with lung cancer showed a statistically significant negative correlation between patients age and their Religious needs ($r = 0.196$, $p< 0.05$) as well as their needs for Inner Peace ($r = 0.192$, $p< 0.05$).

This study's finding indicate that there is no correlation between the ICU patients spiritual needs, based on the SpNQ, and their age. However, the results of similar studies indicate the existence of such a correlation between age and patients' spiritual needs. The research by Fradelos et al. in 2021 (Fradelos et al. 2021), on 110 patients with lung cancer showed a statistically significant negative correlation between patients age and their Religious needs ($r = 0.196$, $p< 0.05$) as well as their needs of Inner Peace ($r = 0.192$, $p< 0.05$).

In a similar study by Bussing in 2018 (Bussing et al. 2018) on patients with chronic diseases and the elderly, a statically significant difference was found between the patients age and their Religious needs ($F = 13.6$; $p< 0.0001$) and Giving/Generativity Needs ($F = 7.9$; $p < 0.0001$). Accordingly, in an earlier study by Bussing in 2010 (Bussing et al. 2010) including 210 patients with chronic diseases and cancer, a statistically significant difference was found between cancer patients age and their spiritual needs (Religious needs: $p = .008$, Inner peace needs: $p = .019$, Existential needs: $p< .0001$, and Giving/Generativity Needs: $p = .039$). Perhaps the absence of any significant correlation between the patients age and their spiritual needs in this present study is due to the small sample size.

According to the findings of this study, gender significantly affects the dimensions of patients' spiritual needs, with women presenting higher levels of needs compared to men in terms of their Religious needs ($p=0.000<0.05$), Giving/Generativity Needs" ($p=0.005<0.05$) as well as for their overall spiritual needs ($p=0.002<0.05$). However, the Need for Inner Peace and Existential needs between the two genders do not differ. These results are in agreement with the relevant literature, in which it is evident that female patients appear more sensitive to their spiritual needs compared to man.

In a recent survey conducted in 2019 including 457 hospitalized cancer patients (Zhao et al. 2019), the level of religious needs for female patients was higher than that of male patients, which is in agreement with the results of previous surveys (Höcker et al. 2014; Bussing et al. 2013). In a similar survey of patients with chronic diseases and the elderly (Bussing et al. 2018), a statistically significant difference was found between the patients gender and their Religious needs ($p< 0.0001$), their Existential needs ($p< 0.0001$) and their Inner Peace needs ($p< 0.0001$), with women demonstrating higher levels of spiritual needs. However, gender did not have a significant effect on patients Giving/Generativity Needs. In contrast to the above results, in an earlier study in 2010 (Bussing et al. 2010) including 210 patients with chronic diseases and cancer, no statistically significant effect between gender and spiritual needs was found.

As it appears, women are spiritually sensitive and have demonstrating certain advantages in their emotional responses. However, because of their physiology, women are more prone to somatization, interpersonal sensitivity, mental illness, and other issues (Wu et al. 2016). These characteristics motivate women to a greater degree to seek spiritual comfort compared to men.

Limitations

The main limitations of this study were related to the restrictive measures imposed by the Covid-19 pandemic. Due to these restrictive measures applied within the hospital setting, it was difficult to access other nursing institutions and especially ICU and HDUs. Therefore, as the research focused on a single nursing facility, comparisons

between ICUs was not possible. In addition, patients had to face an additional difficulty, which was related to the restrictions of relative's visitations due to the measures against Covid-19. As a result, the patients experienced a lack of contact with their loved ones, which may have affected the results of this study.

Recommendations for practice and further research

Every nurse's goal is to provide holistic care to their patient. In order to achieve this the nurse should consider every aspect of the person's life and its effect on their well-being. The provision of holistic nursing care to patients in the ICU requires a link between aspects such as physical, spiritual, psychosocial, social and cultural care. In order to improve the provision of spiritual care offered to patients by ICU nurses, additional training on spiritual care within nursing school curriculum is fundamental.

Conclusion: Overall, this research study highlighted the spiritual needs of ICU patients. Further research on the provision of spiritual care and its impact in the ICU is needed to address patients' spiritual needs. However, the small sample used in this study does not allow generalization of its finding. For this reason, it is necessary to carry out future studies on the spiritual needs of ICUs patients as well as the care offered by health professionals to meet these needs. For many people, religion and spirituality are fundamental concepts. These concepts should be considered by healthcare professionals when planning patient care as there is considerable evidence in the literature to support this.

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