

Investigating the Relationship between Spiritual Health and Anxiety and Occupational Stress of Nurses Working in Hospitals Affiliated to Jahrom University of Medical Sciences

Fatemeh Forouzan Jahromi¹, Bahareh Mahdood², Maryam Bastami³, Sakineh Ramezanli⁴, Ali Derakhshi^{5*}

¹MSc of Critical Care Nursing, Department of Critical Care, faculty member of paramedical school, Jahrom university of medical science, Jahrom, Iran.
ORCID: 0000- 0003- 2261- 361X
fatiforouzan50@gmail.com

² MSc of surgical technology, Department of operating room, faculty member of paramedical school, Jahrom university of medical science, Jahrom, Iran.
ORCID: 0000- 0002- 7774- 2294
Baharehmahdood68@gmail.com

³Instructor of Operating Room, Department of Operating Room, School of Allied Medical Sciences, Ilam university of Medical Sciences, Ilam, Iran.
ORCID: 0000- 0001- 5163- 217X
Bastamimaryam93@gmail.com

⁴ MSc of Medical Surgical Nursing, Department of Medical Surgical, faculty member of Nursing school, Jahrom university of medical science, Jahrom, Iran.
ORCID:0000-0003-0435-3914
ramezanli1392@gmail.com

⁵ General Practitioner, graduated from Qeshm Branch, Islamic Azad University, Qeshm, Iran.
ORCID:0000-0002-0518-7703
Derakhshiehshan20@gmail.com.

Received: 12 March 2022

Accepted: 15 April 2022

Published: 20 July 2022

Abstract

Since spiritual health can affect physical and mental health of people, the present study was conducted for investigating the relationship between spiritual health and anxiety and occupational stress of nurses. The present study was a descriptive-analytical cross-sectional study in 2018. Its statistical population included all nurses working in hospitals affiliated to Jahrom University of Medical Sciences. A number of 141 working nurses were selected as sample by stratified-random sampling method. Data collection instruments included demographic information questionnaire, Paloutzian-Ellison spiritual health questionnaire, HSE occupational stress questionnaire and Beck anxiety questionnaire. After collecting the data, the data was analyzed using SPSS software version 21 and using descriptive statistics and Pearson's correlation coefficient tests. The results of this study showed that the mean spiritual health score of nurses is 68.59 ± 5.12 , which indicates an average level of spiritual health. The mean anxiety score was 14.14 ± 8.87 and anxiety level was the lowest in 25.7% of nurses, low in 33.5% of nurses, moderate in 25.1% and high in 15.7% of nurses. The mean occupational stress score of nurses was 111.76 ± 10.68 . The results of Pearson's correlation test showed that there was a direct and significant relationship between spiritual health and occupational stress ($r=0.237$; $p\text{-value}<0.05$) and a significant inverse relationship between spiritual health and anxiety ($r=-0.105$; $p\text{-value}<0.05$). There was no statistically significant relationship between demographic variables and spiritual health, anxiety and occupational stress of nurses ($p\text{-value}>0.05$). The results of the present study showed that increasing spiritual health decreases anxiety and occupational stress of nurses. As a result, management can use

* Corresponding Author Email: Derakhshiehshan20@gmail.com

solutions to increase spiritual health of nursing staff and improve the quality of their working life by reducing the anxiety and occupational stress of this group.

Keywords: mental health, spiritual health, anxiety, occupational stress.

1. Introduction

The importance of clinical environments as the first place that can be effective in choosing or rejecting nursing as a profession is so great that policy makers should highlight these environments in their agenda [1]. Clinical environment is affected by various factors, such as anxiety and occupational stress [2]. One of the stressful situations for most people is the conditions in their workplace, which are called occupational stressors. In fact, occupational stress is any physical event or mental distress that can lead to physical damage or mental distress and cause negative outcomes in the performance of people and ultimately the organization in long term [2]. Nursing is considered as a stressful job by combination of personal factors and workplace-related factors and has a negative effect on their physical and mental health [3]. Workplace and activities related to nursing job are threatening factors and cause anxiety. A nurse who is exposed to constant anxiety and worry will lose confidence in performing assigned tasks and will suffer from depression, which in turn will fuel the vicious cycle of occupational stress and efficiency [4]. These phenomena can have harmful physiological and psychological effects on nurses and have adverse effects on their health and lead to an increase in work accidents, delays and absenteeism, as well as a decrease in productivity and organizational commitment and a decrease in the quality of patient care [5,33]. Some methods used to reduce anxiety and occupational stress can reduce their harmful effects to some extent. One of these factors is spirituality, which has received the interest of psychologists in recent years, arguing that development of spirituality can be effective in reducing anxiety and stress [6]. Spiritual health is considered as a common solution to deal with problems [7] and it is defined as connection with oneself, others and God, which causes excellence and gives strength to the individual [8]. Spiritual health is one of the four dimensions of health in humans, which is associated with physical, mental and social dimensions and promotes general health and other dimensions of health and increases adaptability and psychological functioning [9] and is characterized with characteristics such as stability in life, peace, feeling of close connection with oneself, God, society and environment, proportion and harmony of meaning and purpose

in life [10]. Spiritual health plays a vital role in coping with anxiety and stress and has a positive effect on improving mental health and reducing mental disorders; because spiritual and religious beliefs have a significant relationship with mental health symptoms such as reducing anxiety and depression and increasing self-confidence and self-control. In general, spirituality has a great role on mental and physical health of people and is considered as a common solution to deal with problems [11]. If spiritual health is removed from nursing, what remains will be a soulless, dehumanizing and exhausting job [1].

Nurses are the largest group of service providers in the healthcare system and have a significant impact on quality of healthcare [5]. Therefore, the presence of physical and spiritual health in them as effective factors on quality of medical care is highly important. The lack of studies related to spiritual health of nurses as a new category led us to examine the relationship between spiritual health and anxiety and occupational stress of nurses, so that, if such a relationship is confirmed, organizations use solutions to increase spiritual health in order to reduce anxiety and occupational stress of nursing staff.

2. Materials and Methods

This study was descriptive-analytical and cross-sectional and it was conducted in 2018. Its statistical population included all nurses working in hospitals affiliated to Jahrom University of Medical Sciences who were selected by stratified sampling method (N=193). The inclusion criteria included informed consent to participate in the study, the absence of any known mental illness, and at least 6 months of experience working in a hospital. Exclusion criteria included chronic physical and mental illnesses and severe stress during the last six months, such as the death of a relative or divorce. In order to collect data, a questionnaire was used, which has 4 sections: A) Demographic information questionnaire which included 8 questions (age, gender, marital status, educational status, work experience in the hospital, work shift, type of employment and department). B) Spiritual well-being scale (SWBS) developed by Paloutzian and Ellison (1982). This scale has 20 items in two subscales. Its ten items with even numbers measure existential health and ten items with odd numbers measure religious health.

Religious health includes how people perceive health in their spiritual life when they are connected to a higher power; and existential health is about how people adapt to themselves, society or environment. The sub-groups of religious and existential health are not graded and judging is done based on the obtained score. The higher the score, the sign of religious and existential health is also higher. The spiritual health score is the sum of these two subgroups, ranging from 20 to 120. The questions are scored on a 6-point Likert scale, from completely disagree to completely agree, which are assigned a score of 1 to 6 respectively. The sum of scores obtained can be categorized as follows: low spiritual health (20-40), moderate spiritual health (41-99), high spiritual health (100-120) [12]. Paloutzian and Ellison reported Cronbach's alpha coefficient of religious health and existential health and total score (0.91, 0.91, 0.93, respectively). In their study on students, Dehshiri et al. (2015) reported the reliability coefficients of spiritual health scale with Cronbach's alpha 0.85, 0.78, and 0.80 [13]. C) Occupational stress survey (HSE) is related to the HSE Institute of England in the 1990s, which includes 35 questions with 7 subscales: job demand or requirement, job control, supervisor support, peer support, peer relationships, role or responsibility, and changes in organization and human resources. This survey includes a 5-point Likert scale (never, rarely, sometimes, often, always). Each scale is scored from 1 to 5. A high score in this survey indicates low and acceptable job stress and pressure, and a low score is a sign of high stress level [14]. In order to achieve an optimal response rate, it is important to ensure that the obtained results are representative of the working conditions of the organization. As a rule of thumb, for examining these conditions, a response rate of more than 50% can be considered adequate, more than 60% as optimal, more than 70% as good, and more than 80% as very good [15]. Validity of this survey was investigated by Azad and Gholami Ward and it was determined using internal consistency evaluation. Cronbach's alpha coefficient was equal to 0.87, which indicates good validity of this survey. Using half-splitting and Spearman-Brown formula, a correlation coefficient of 0.65 was obtained for the entire questionnaire [14]. D) Beck anxiety inventory was designed by Aaron Beck et al. (1990). It is a self-report questionnaire that specifically measures the severity of clinical anxiety symptoms of people. This inventory is a 21-item scale in which the subject chooses one of the four options that indicate the severity of anxiety in each item. The four options of each question are scored in a four-point scale from 0 to 3. The total score of this inventory ranges from 0 to 63. Score of 0-7

indicates no or lowest anxiety; 8-15 mild anxiety; 16-25 moderate anxiety and 26-63 severe anxiety [16]. This inventory has high validity and reliability. Cronbach's alpha coefficient was reported as 0.92 by Barry et al. (2002). Its reliability was reported as 0.75 with retest method after one week. Five types of content, concurrent, construct, diagnostic and factor validity were measured for this test, all of which indicate the high efficiency of this inventory in measuring anxiety severity [17].

Once approval of the ethics committee of Jahrom University of Medical Sciences was obtained and the ethics criteria, including confidentiality of participant data and the informed consent of participants, were controlled, all participants were included in the study. For this purpose, the researcher visited the hospitals affiliated to Jahrom University of Medical Sciences (Peimanieh Hospital and Ostad Motahari Hospital); after obtaining permission from the hospital officials, the researcher visited different wards of the hospital on different days and shifts of the week and studied the qualified nurses. The researcher explained sufficient information about objectives of the study and its importance to the participants; after obtaining written consent, the researcher gave the data collection instruments, which included 4 questionnaires, to the participants. The questionnaires were completed by the participants, and the researcher was available to answer the possible questions of the participants.

The collected data was analyzed using SPSS version 21 software and descriptive statistics tests, Pearson and Spearman correlation coefficient.

3. Results

Of 191 participants, 50.3% were women and the rest were men. The majority of them were younger than 40 years and more than half of them were married (55%). Most of them had a bachelor's degree (95.8%) and employment type of most of them was contract and official (77.5%). They worked in the general ward (26.7%), surgery ward (28.8%), intensive care unit (25.1%) and trauma ward (19.4%), and majority of them were in rotating shifts (98.9%) (Table 1).

Table 1. Description of demographic variables of nurses

		N	%
Gender	Male	95	49.7
	Female	96	50.3
Age	<30	82	42.9
	31-40	81	42.4
	>40	28	14.7
Marital status	Single	84	44.0
	Married	105	55.0
	Widowed-divorced	2	1.0
Education	Bachelor's degree	183	95.8

	Master's degree	8	4.2
Work experience	<5	67	35.1
	6-10	65	34.0
	>10	59	30.9
Work shift	Fixed	2	1.1
	Rotating	188	98.9
Employment	Trainee	30	15.7
	Corporate	13	6.8
	Contract	67	35.1
	Official	81	42.4
Ward	General	51	26.7
	Surgery	55	28.8
	Intensive	48	25.1
	Trauma	37	19.4

The findings showed that the mean score of spiritual health was 68.59 ± 5.12 ; higher scores indicate higher religious and existential health. The level of spiritual health of all nurses (100%) participating in the study was at an average level. The mean anxiety score was 14.14 ± 8.87 and the level of anxiety was the lowest in 25.7% of nurses, low in 33.5% of nurses, moderate in 25.1% and high in 15.7% of nurses. The mean score of occupational stress of nurses was 111.76 ± 10.68 . A high score indicates low and acceptable occupational stress and pressure, and a low score indicates a high level of occupational stress (Table 2).

Table 2. Descriptive parameters of spiritual health, anxiety and occupational stress of nurses

	Standard deviation	Mean
Spiritual health	5.12	68.59
Anxiety	8.87	14.14
Occupational stress	10.68	111.76

The results of Pearson's correlation coefficient showed that there is a significant direct relationship between spiritual health and occupational stress ($r=0.237$; $p\text{-value}<0.05$). Thus, as spiritual health of nurses increases, their occupational stress decreases. Moreover, the Pearson test results showed that there was a significant inverse relationship between spiritual health and anxiety ($r=0.105$; $p\text{-value}<0.05$). This result showed that improvement of spiritual health of nurses decreased their anxiety (Table 3). There was no statistically significant relationship between demographic variables and spiritual health, anxiety and occupational stress of nurses ($p\text{-value}<0.05$) (Table 4).

Table 3. Relationship between spiritual health and anxiety and occupational stress of nurses

	Anxiety		Occupational stress	
Spiritual health	r	p	r	P
	-0.105	0.001	0.237	0.001
*p-value<0.05				

Table 4. The relationship between demographic variables and spiritual health, anxiety and occupational stress of nurses

		Spiritual health			Anxiety			Occupational stress		
		Mean	SD	p	Mean	SD	p	Mean	SD	p
Gender	Male	4.53	68.60	0.97	9.07	13.31	0.08	111.52	9.62	0.75
	Female	5.66	68.57		8.58	15.55		112.00	11.69	
Age	<30	4.83	68.44	0.87	8.49	13.62	0.53	110.79	8.46	0.55
	31-40	5.11	68.58		9.06	15.17		112.36	12.12	
	>40	6.05	69.04		9.54	14.74		112.86	12.17	
Marital status	Single	4.30	69.08	0.16	9.23	14.63	0.68	110.42	9.76	0.23
	Married	5.64	68.10		8.67	14.39		112.70	11.37	
	Widow	6.36	73.50		0	9.00		118.50	0.71	
Education	Bachelor's	5.16	68.52	0.38	8.85	14.44	0.98	11.90	10.76	0.4
	Master's	3.98	70.13		10.01	14.50		108.63	8.58	
Work experience	<5	4.79	68.31	0.57	8.79	13.24	0.38	111.15	8.40	0.48
	6-10	4.34	69.14		8.80	15.15		111.11	10.42	
	>10	6.20	68.29		9.06	15.03		113.17	13.07	
Work shift	Fixed	7.78	62.50	0.09	6.36	11.50	0.63	114.50	10.61	0.70
	Rotating	5.08	68.63		8.92	14.49		111.63	10.65	
Employment	Trainee	3.52	69.50	0.09	10.18	14.14	0.79	110.10	8.10	0.35
	Corporate	5.13	69.23		6.42	15.46		110.92	9.94	
	Contract	6.09	67.31		8.60	15.15		110.72	11.36	
	Official	4.59	69.20		9.01	13.80		113.37	11.02	
Ward	General	5.76	69.41	0.47	9.08	15.08	0.39	111.76	10.25	0.25
	Surgery	5.21	68.09		9.33	15.67		109.71	10.08	
	Intensive	4.98	68.79		8.31	12.90		113.96	11.87	
	Trauma	4.15	67.92		8.58	13.76		111.95	10.35	

4. Discussion

Since nurses are among the people who are exposed to high anxiety and experience a lot of

occupational stress in the workplace, this study examined the relationship between spiritual health and anxiety and occupational stress of nurses.

In the present study, spiritual health of nurses was average. In this regard, Rafiei et al. (2019) reported the spiritual health status of nurses as average [18]. This was similarly confirmed by the study conducted by Atashzadeh et al. [19]. Zare et al. (2014) reported spiritual health at an average level in 59.2% of the nurses participating in the study [20]. Relatively good level of spiritual health in the studied nurses was attributed to religiousness of the Iranian society and the dominant culture of the country [21,32,36,37].

Spiritual health leads to job satisfaction for nurses and is one of the most important value and belief systems of nurses that will have a significant impact on their professional commitment [22]. According to Dan, spiritual health of nurses has a direct effect on quality of their care; thus, a nurse who does not have spiritual health cannot take good care of the patient [23].

Because nurses are one of the groups that work in a high-stress workplace, the level of occupational stress in them is also higher. Occupational stress can lead to leaving the profession and dissatisfaction [24]. Studies have shown that occupational stress can have destructive physiological effects and negative psychological and physical effects on nurses [25, 26]. This requires the adoption of methods to reduce occupational stress of nurses. Examining factors related to occupational stress can be effective in providing appropriate strategies to reduce it. In the following study, it was observed that spiritual health has a significant relationship with occupational stress of nurses. In this way, the increase in the level of spiritual health reduces occupational stress of nurses. In their study, Masoumy et al. (2016) investigated the relationship between spiritual health and occupational stress of nurses. The results of their study are consistent with the current study [12,38-40]. Spiritual health helps nurses to maintain their internal peace and mental stability and reduce their occupational stress [22]. Rafiei et al. also confirmed the existence of a significant relationship between spiritual health and occupational stress of nurses [18]. The findings of Shaw et al. (2010) also showed that spiritual health had a significant negative relationship with clinical stress [27], thus nurses with a higher level of spiritual health suffer from less occupational stress. People with higher spiritual health experience less occupational stress. Alizadeh also confirmed the significant correlation between occupational stress and spirituality [28]. Research shows that improving the level of spiritual health leads to a reduction in occupational stress of nurses. In this regard, the results of Assarroudi showed that increasing the level of

spiritual health of nurses significantly reduces their occupational stress [29].

The findings have confirmed the effectiveness of spiritual interventions based on the remembrance of God on health care workers, especially nurses who work in high-pressure hospital environments. The results of studies also showed that spiritual programs in the workplace can lead to helpful results such as increasing pleasure, relaxation, job satisfaction and commitment, as well as improving job productivity and reducing work efficiency. Spiritual interventions also reduce stress and burnout of health care workers [28,34,35].

Occupational stress is one of the important factors in causing physical and mental complications of employees and reducing the productivity of organizations. An effective way to reduce nursing stress is to provide training and promote spiritual coping strategies [30]. Spiritual health provides appropriate strategies to deal with stressful conditions and reduces depression and anxiety, less stress, feeling of health and inner control [31].

Considering the role of spiritual health in controlling anxiety and reducing occupational stress, it seems that awareness of nurses of potential positive effects on their body and soul and conditions provided to strengthen spiritual health can improve job performance of nurses.

Conflict of interest

No conflict of interest was declared by the authors.

Acknowledgements

This study was registered in the form of a research project in the Ethics Committee of Jahrom University of Medical Sciences. The authors would like to thank the Vice-Chancellor of Research for financial support. The authors hereby express their gratitude to the officials of the Faculty of Nursing, Jahrom University of Medical Sciences, as well as the nurses who participated in this study.

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