



## The Relationship Between Spiritual Health and Job Stress of Nurses in Selected Teaching Hospitals in Yazd in 2020

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### ABSTRACT

**Background:** Job stress greatly affects the physical and mental health of nurses. Therefore, this study was conducted to investigate the relationship between spiritual health and job stress among nurses working in selected hospitals of Yazd University of Medical Sciences and Health Services in 2020.

**Methods:** This was a cross-sectional and correlational study conducted in 2020 in Rahmoun and Shahid Sadoughi hospitals in Yazd. The sample size was 203 nurses selected through random cluster sampling. Data were collected using the Pulotzin Wallison Spiritual Health questionnaire and the Tuft and Anderson Job Stress Questionnaire. Data analysis was performed using descriptive statistics, Spearman, Mann-Whitney, and Kruskal-Wallis correlation coefficient by SPSS<sup>24</sup>.

**Results:** The mean of nurses' job stress was  $(109.17 \pm 28.66)$  and the mean of spiritual health was  $(92.58 \pm 14.80)$ . The relationship between job stress and spiritual health was statistically significant and negative ( $P$ -value  $< 0.001$ ). There was a statistically significant relationship between spiritual health and marital status ( $P$ -value = 0.0002), age groups ( $P$ -value = 0.013), work group ( $P$ -value = 0.003)s and employment status ( $P$ -value  $< 0.001$ ); and between job stress and gender ( $P$ -value  $< 0.001$ ), marital status ( $P$ -value  $< 0.001$ ), age groups ( $P$ -value  $< 0.001$ ), work experience ( $P$ -value  $< 0.001$ ) and employment status ( $P$ -value  $< 0.001$ ).

**Conclusion:** In order to improve spiritual health, experts advise managers and supervisors to hold classes and seminars related to the positive effects of spiritual health regarding physical and mental health. Consequently, their job performance will improve.

**Key words:** Spiritual health, Job stress, Nurses, Yazd.

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## Introduction

Stress is a common disease in the 21st century affecting humans in different situations. It is responsible for 30 % of disabilities, illnesses and absenteeism in healthcare centers, which costs \$ 400-300 million annually. This only expresses the material dimension of the issue. It has a great impact on various aspects of people's lives as well (1, 2). Stress is a condition caused by an environmental change seen as an injury, challenge, or threat to a person's dynamic balance. It emerges when a real or imagined imbalance occurs between the person's ability to meet the needs and demand of a new situation. One of the most important sources of stress in any person is job (1). Job stress is a harmful physical and psychological reaction which occurs as a result of interaction between an individual and the environment. It arises from lack of coordination between work needs and the person's abilities and desires (3, 4).

Spiritual health plays a vital role in coping with stress, has a positive effect on promoting mental health, and reduces mental disorders. This is because spiritual and religious beliefs are significantly related to mental health symptoms such as anxiety and depression, and increase self-confidence and self-control. In general, spirituality has a great role on mental and physical health of people. It is considered a common way to deal with problems (5).

Spiritual health is one of the four dimensions of health, besides physical, mental and social dimensions and promotes general health. It coordinates other dimensions of health by increasing the ability to adapt and do mental function (6). It brings about acceptance, positive emotions, and morality. It also causes a sense of positive interaction with a superior power, others, and oneself that achieved through a dynamic and harmonious process of cognition, emotion, action, and consequence (7, 5). Research has shown that spiritual health is positively related to physical and mental health. Problems in spiritual health causes disruption in other aspects of health, and individuals cannot function properly or reach the highest level of life quality (8).

Numerous studies conducted on different groups

in Iran and other countries of the world indicate a significant relationship between spiritual health, stress, anxiety and depression. It has been concluded that religious beliefs and spirituality can be one of the ways to deal with stressors and the resulting mental disorders (9). The research by Azimi et al. (10) showed that religious beliefs have an important role in preventing and reducing emotional and psychological problems. Moreover, Ganji et al. (10) found that religious beliefs are associated with anxiety and its reduction. (10).

Employees are the most valuable asset of any organization, and their performance affects the performance of the entire organization. In order to improve the performance of the whole organization, it is necessary to pay deeper attention to the employees and the factors affecting their performance (11). Although all jobs come with stress, in jobs dealing with human health, it is more prominent (1, 4). This is because the staff of health centers plays an important role in the quality of services provided to patients. Among them, nurses as one of the key components in healthcare systems maintaining and improving the quality of clinical care and patients' health (1). This is due to job stress and its significant effects on the physical and mental health of people. The aim of this study is to investigate the relationship between spiritual health and job stress among nurses working in Shahid Rahnemoun and Shahid Sadoughi in 2020.

## Materials and Methods

This was a correlational and cross-sectional study conducted in 2020. The population included nurses working in Shahid Rahnemoun and Shahid Sadoughi Hospitals. 203 nurses were selected through random cluster sampling from selected teaching hospitals of Shahid Sadoughi University of Medical Sciences in Yazd using PASS Software 11. Inclusion criteria were having a nursing degree and at least one year of experience in the hospital. Exclusion criteria were unwillingness to participate in research and incomplete answers to questionnaires. Data were collected using Pulotzin Wallison spiritual health questionnaire and the Tuft



and Anderson job stress questionnaire.

The Pulotzin Wallison spiritual health questionnaire included a demographic information section (gender, age, and marital status, level of education, occupation and employment status of nurses). It had another section assessing nurses' spiritual health, which included 10 questions about spiritual health and 10 questions related to the existential health of the nurses. Spiritual health score is obtained from the sum of these two dimensions, which according to the number of questions in this questionnaire, its range is considered between 20 and 120. The questions were answered in a six-point Likert scale (from strongly disagree to strongly agree). According to the scores obtained, spiritual health is divided into three levels of low (20-40), medium (41-99) and high (120-100). The reliability of the questionnaire in the study by Dehshiri et al. (12) was reported by Cronbach's alpha coefficient for the whole scale the components of religious and existential health 0.90, 0.82, 0.87 and by retest method 0.85, 0.87 and 0.81, respectively.

Tuft and Anderson job stress questionnaire includes seven dimensions of death anxiety, conflict with medical team, conflict with other nursing staff, insufficient readiness to perform tasks, lack of organizational support, heavy workload and doubts about treatment and care interventions on a five-point Likert scale. According to the number of questions in this questionnaire, the highest score is 285 and the lowest is 57. The validity of this questionnaire was confirmed by ten professors in Salimi et al. (13)'s study. For reliability, Cronbach's alpha coefficient was reported to be 0.95.

After obtaining the necessary permits, data were collected. This study was performed by observing ethical standards and obtaining informed consent from all the nurses involved. Mean, standard deviation, frequency and frequency percentage indices were used to describe the data. Spearman correlation coefficient, Mann-Whitney test and Kruskal-Wallis test were used for analysis. Error normality was also evaluated in quantitative variables through Kolmogorov-Smirnov test using SPSS<sub>24</sub>.

The present paper has been approved with the

ethics code of IR.SSU.SPH.REC.1400.090.

## Results

Demographic data of 203 nurses participating in the study showed that the mean age of nurses was  $31.02 \pm 6.13$ . The minimum age of nurses was 22 and the maximum was 55. Half of the nurses had less than 5 years of work experience and half had more than 5 years of work experience. The minimum work experience was 1 year and the maximum was 32 years, and the average work experience of nurses was  $6.82 \pm 5.76$ . Most of the participants were married (62 %), undergraduate (87 %), female (60 %), in the age group of 22 to 30 (59 %), with official employment (47 %), and 1 to 10 years of work experience (80 %).

The mean score of the participants' job stress was  $109.17 \pm 28.66$ . The mean score of spiritual health was  $92.58 \pm 14.80$ . Among the participants, 125 people (62 %) received moderate spiritual health scores, and 78 people (38 %) received high spiritual health scores.

Since job stress and spiritual health scores did not have a normal distribution, authors used Spearman correlation coefficient to examine their relationship. The relationship between job stress score and total spiritual health score was statistically significant and negative ( $P$ -value  $< 0.001$ ). The relationship between job stress score and dimensions of spiritual health (religious and existential) was negative and statistically significant ( $P$ -value  $< 0.001$ ) (Table1).

There was a statistically significant difference regarding the score of spiritual health for single and married people ( $P$ -value  $< 0.05$ ). The score of nurses' spiritual health in different age groups, working groups, and according to the employment status, was different and statistically significant ( $P$ -value  $< 0.05$ ) (Table 2).

Using Mann-Whitney test, job stress scores were different and statistically significant in males and females as well as married and single individuals. Moreover, using Kruskal-Wallis test, job stress score was different and statistically significant regarding different age groups, work experiences and employment status ( $P$ -value  $< 0.05$ ) (Table 3).



**Table 1.** Correlation coefficient of spiritual health score regarding nurses' job stress score

Variable	Job stress score		
	Partial	R	P*
Spiritual health	- 0.194	- 0.312	0.000006
Religious health	- 0.156	- 0.256	0.000228
Existential health	- 0.207	- 0.340	0.000068

\* P-value  $\leq$  0.001 is completely significant.

**Table 2.** The average score of nurses' spiritual health in terms of demographic variables

Variable		Mean	Standard deviation	Minimum	Maxim	Test statistics	P**
Gender	Male	92.37	13.64	62	113	- 0.16 <sup>1</sup>	1.8600
	Female	92.72	15.58	53	142		
Level of education	Master's degree	92.50	14.94	53	142	- 0.19 <sup>1</sup>	0.8460
	Masters	93.11	14.06	67	113		
Marital status	Single	87.77	14.77	56	112	3.73 <sup>1</sup>	0.0002**
	Married	95.52	14.08	53	142		
Age group	30-22	90.37	15.46	53	142	4.42 <sup>2</sup>	0.0130***
	31-40	94.52	13.88	62	111		
	41-55	100.41	9.41	78	113		
Employment status	Official	98.74	9.88	65	113	12.41 <sup>2</sup>	<. 0.0010**
	Contraction to permanent	88.87	15.58	65	115		
	Commitment	85.82	17.79	53	142		
Work experience group	Temporary	86.91	14.63	56	107	6.10 <sup>2</sup>	0.0030***
	10-1	90.83	15.38	53	142		
	11-20	99.53	9.96	76	112		
	More than 21 years	100.50	9.19	93	113		

\*\* P-value  $\leq$  0.001 is completely significant.

\*\*\* P-value  $\leq$  0.05 is significant.

**Table 3.** Mean score of nurses' job stress in terms of demographic variables

Variable		Mean	Standard deviation	Minimum	Maxim	Test statistics	P****
Gender	Male	99.19	26.80	57	161	-3.95 <sup>1</sup>	<. 0.0010
	Female	115.92	27.99	57	183		
Level of education	Masters'	110.46	28.35	57	183	-1.56 <sup>1</sup>	0.1190
	Masters	100.30	29.67	57	175		
Marital status	Single	118.40	23.31	69	183	-3.79 <sup>1</sup>	0.0001
	Married	103.52	30.20	57	175		
Age group	22-30	118.13	26.21	57	183	31.29 <sup>2</sup>	<. 0.0010
	31-40	99.28	27.32	59	156		
	41-55	85.35	24.74	57	141		
Employment status	Official	94.44	25.68	57	161	48.46 <sup>2</sup>	<. 0.0010
	Contraction to temporary	122.28	20.76	85	169		
	contractual	120.06	27.01	61	175		
	Temporary	125.70	26.49	84	183		



Variable		Mean	Standard deviation	Minimum	Maxim	Test statistics	P****
Work experience group	1-10	114.09	27.27	57	183	29.48 <sup>2</sup>	<.00010*
	11-20	93.81	25.93	59	143		
	More than 21 years	70.12	10.76	57	91		

\*\*\*\* P-value  $\leq 0.001$  is completely significant.

## Discussion

The results of this study demonstrated that the spiritual health of nurses is at a moderate level. Accordingly, the study by Masoumi et al. (14) showed that the average spiritual health of nurses was moderate. In Rafiei et al. (11)'s study, moderate spiritual health has been reported as well. Safaei Rad et al. (15) revealed that the mean score of students' spiritual health, as in this study, was in the average range. In the study of Assar Rudi et al. (6), the level of spiritual health of nurses was moderate as in this study. Similarly, the spiritual health status of nurses in the study of Rahimi et al. (10) was assessed as moderate. This was also confirmed by other studies (16-18).

The mean score of nurses' job stress indicated a normal level of stress among the studied nurses. The research by Khaghani et al. (19) showed that job stress was normal among the majority of nurses. Abdi et al. (20) conducted on nurses working in the intensive care unit of Yazd hospitals. They reported that nurses' level of job stress was normal. Moreover, in the study by Abedini et al. (21), researchers found that 83.30 of the participants experienced moderate job stress, 15.60 % faced high stress, and 1% experienced low job stress. Lee and Wong (22) also showed that most nurses had normal job stress, which is consistent with the results of this study.

The results of this study suggested that there is a negative and significant relationship between job stress and spiritual health (P-value < 0.001). With increasing job stress, spiritual health decreases and with increasing spiritual health, nurses' job stress decreases. It should be noted that very limited studies were found on the relationship between the two variables of spiritual health and job stress in nurses. The results of Masoumi et al. (14) 's study, however, showed that increasing spiritual health

reduces job stress in nurses significantly. Asaroudi et al. (6) concluded that increasing the spiritual health of nurses reduces job stress in them to a great extent. The study of Alizadeh et al. (23) also confirmed the significant relationship between spirituality and job stress in nurses. Moritza et al. (24) suggested that spiritual training programs improve mental state of individuals, which was one of the symptoms of this improvement regarding reducing stress. In addition to the negative and significant relationship between job stress and total spiritual health score in nurses, researchers observed a negative and significant relationship between job stress score and spiritual health dimensions (religious health dimension and existential health dimension) (P-value < 0.001).

There was a statistically significant relationship between spiritual health and marital status, different age groups, different work groups and the employment status. Aslani et al. (25) found that there was a statistically significant relationship between spiritual health, marital status and age group. The study of Rahimi et al. (10) also demonstrated that there is a significant difference in the mean scores of spiritual health in terms of age, gender and marital status.

There was a statistically significant relationship between job stress and gender, marital status, age groups, work experience and employment status. Hejazi et al. (26) found that there was a significant relationship between job stress, employment status, work experience and gender of nurses. The results of Khaghani et al. (19)'s study also showed that there is a significant relationship between gender and job stress, all of which are consistent with the results of this study.

New studies suggest that spirituality and religious beliefs have a great role and effect on the mental and physical health of individuals. They are





considered as common solution to deal with problems (27). The results of a study by Hill et al. (28) also showed that spiritual workplace programs can lead to beneficial outcomes such as increased enjoyment, relaxation, job satisfaction, commitment, and improved productivity. Spiritual interventions also reduce stress and burnout of healthcare workers (28).

### Study strengths and limitation

They include accuracy in data collection and compliance with all ethical standards.

In this study, only nurses of two educational and therapeutic centers in Yazd city have been included, which reduces the likelihood of generalization. It is suggested that authors conduct similar studies with a larger sample size and even at other types of hospitals such as private and social security health centers. Lack of similar studies and non-response of some nurses were other weaknesses of this project.

In questionnaire-based research, it is likely that people will try to show themselves as they should, not as they really are. This affects the results of research.

Considering the importance of job stress and its effect on the quality and quantity of services provided, it is suggested that the relationship between these two factors (job stress and the quality of services provided to patients) in other hospitals be examined. It is also recommended to conduct other studies with larger sample size and more comprehensive measurement tools considering the broader dimensions of job stress, and spiritual health.

### Conclusion

Job stress in nursing affects the quantity and quality of health services. By identifying the job stress of nurses, authorities can help reduce its complications and improve the quality of services provided to patients. According to the results of this study, increasing spiritual health reduces nurses' job stress. In order to promote the spiritual health of nurses, managers and head nurses can hold classes and seminars related to the positive effects of spiritual health regarding physical and

mental health. Consequently, job performance would improve. It is also suggested that the people in charge include topics and principles related to strengthening and promoting spiritual health in nursing training programs, especially in students' curricula. Proper attention to the spiritual health of nurses leads to the necessary preparation for controlling the job stress of nurses. It, then, leads to better performance of work tasks and increases the quality of service.

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### Conflict of interests

The authors declared no conflict of interests.

### Authors' contributions

Mohsen Pakdaman designed research; Narges Malekpour conducted research; Farimah Shamsi analyzed data; and Narges Malekpour wrote manuscript. All authors read and approved the final manuscript.

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