

## Research Paper

# The Correlation Between Spiritual Health and Sleep Quality in the Geriatrics Referring to the Retirement Center of Jahrom City, Iran



Zahra Shadfard<sup>1</sup>, Shohreh Javadpour<sup>2\*</sup>, Mahboobeh Taghizadeganzadeh<sup>3</sup>, Mohammad Ali Montaseri<sup>2</sup>, Zahra Pishgar<sup>4</sup>, Faride Maarefi<sup>5</sup>

1. Department of Operating Room, Research Center for Social Determinants of Health, School of Nursing and Paramedical Sciences, Jahrom University of Medical Sciences, Jahrom, Iran.
2. Department of Nursing, School of Nursing and Paramedical Sciences, Jahrom University of Medical Sciences, Jahrom, Iran.
3. Department of Operating Room, School of Nursing and Paramedical Sciences, Jahrom University of Medical Sciences, Jahrom, Iran.
4. Department of Anesthesiology, School of Nursing and Paramedical Sciences, Jahrom University of Medical Sciences, Jahrom, Iran.
5. Department of Nursing, Jahrom Branch, Islamic Azad University, Jahrom, Iran.



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## ABSTRACT

**Background and Objectives:** Sleep disorders are prevalent in the geriatrics. Any disorder in its natural flow causes psychological problems and decreases the efficiency of a person. Paying attention to the spiritual forces in the elderly is a need that gives them peace and vitality; therefore, spiritual health can improve the quality of sleep in the geriatrics by promoting general health, which is a requirement for comfortable sleep. Therefore, we examined the correlation between spiritual health and sleep quality in geriatrics.

**Methods:** This research was a cross-sectional descriptive-analytical study conducted on 161 elderly in Jahrom City, Iran, in 2017. The standard spirituality wellbeing scale (SWBS) by Palutzian and the Pittsburgh sleep quality index (PSQI) were used. After collecting data, they were analyzed using descriptive statistics and the chi-square test by SPSS software, version 16.

**Results:** The results showed that 54% of the participants in the research were male and the average age of the participants was 62.96±2.5 years. The average scores of spiritual health and sleep quality in the participants were 79.62±5.1 and 6.53±3.5, respectively. Also, no significant relationship was observed between spiritual health score and sleep quality in the elderly (P=0.43).

**Conclusion:** Considering that the spiritual health of most elderly was at an average level and most of them had sleep disorders, it is recommended that the factors related to improving the spiritual health and quality of sleep in this segment of society be considered.

### \* Corresponding Author:

Shohreh Javadpour, MSc.

Address: Department of Nursing, School of Nursing and Paramedical Sciences, Jahrom University of Medical Sciences, Jahrom, Iran.

Phone: +98 (71) 54340405

E-mail: [javadpoursh@gmail.com](mailto:javadpoursh@gmail.com)



## Introduction

A
 ging begins at the age of 60 [1]. Population aging is a global phenomenon [2], and adapting to it requires changes in health policies to create a suitable context for the well-being of the elderly [3]. In 2019, the number of elderly older than 60 years was one billion, which by 2030, it will be increased to 1.4 billion and by 2050, to 2.1 billion [4]. In Iran, in 1956, only 4% of the population was 65 years old and older. However, it is predicted that one-fifth of the population will experience this age in 2051 [5, 6]. One of the issues affecting this vulnerable group is sleep problems [7] so that about 35% of the elderly do not have proper sleep [8], which leads to fatigue, psychological problems, reduced physical performance, delayed wound healing, pain relief, increased risk of falling, reduced daily performance and quality of life, illness, and death [9-11]. Poor quality sleep, after headaches and digestive disorders, is the third most common problem among the elderly and one of the reasons for visiting doctors [12]. Medicines reduce sleep disorders temporarily. Therefore, non-pharmacological interventions have been proposed as a better way to treat sleep disorders [13].

Identifying the effective factors on the sleep quality of the elderly will lead to the adoption of measures to reduce the effect of harmful factors and strengthen the effective factors [3]. Spirituality is one of the crucial social factors and many authors are interested in knowing its effects on health [14]. Spiritual needs are the needs of everyone, and their origin is in the inner of all human beings and give meaning to existence. Such needs exist in both religious and secular people. Providing spiritual needs can lead to life satisfaction [15]. According to McSherry, spiritual health has two vertical and horizontal dimensions, where the vertical dimension shows a person's sense of God (religious health) and the horizontal dimension shows his sense of the purpose of life and satisfaction with the current situation (existential health). Spiritual health is obtained from the coordinated functioning of these two dimensions. A person who has spiritual health has found the meaning of life and has a sense of integrity in both dimensions [16]. People with higher spiritual health have a healthier lifestyle and have better mental and physical stability and less need to use medical services [17, 18]. Among the coping methods in the elderly, spirituality is vital in giving meaning to life and creating peace and vitality [19, 20].

Several studies have been conducted on the state of sleep quality and spiritual health in different countries and in Iran in the elderly population [3]; however, few studies have been conducted on factors related to sleep quality in geriatrics. In 2016, Ezadi et al. investigated the factors related to sleep disorders in geriatrics and concluded that individual, psychological, environmental, physical, and social factors are effective in the occurrence of sleep disorders [21]. Kord et al. reported that improving quality of life leads to improved sleep quality in geriatrics [22]. A positive correlation exists between spiritual health and general health. Spirituality as a crucial source of support contributes to physical and mental health, and also, people who have a higher general health also have a higher quality of sleep. Therefore, spiritual health can improve the quality of sleep in the elderly by improving general health and achieving peace, which is necessary for comfortable sleep [22-24]. According to the phenomenon of population aging and the high prevalence of sleep disorders in the elderly, as well as limited studies on the correlation between spiritual health and sleep quality in the elderly, it is essential to identify the correlation between these two variables and should be considered by healthcare providers. On the other hand, considering the importance of the quality of life in the elderly and the factor of good sleep as one of the crucial factors in this field, related factors in special studies should be investigated and the results should be used to improve the current situation. Therefore, considering the importance of spiritual health and good sleep in the lives of elderly people, researchers decided to examine the correlation between spiritual health and the quality of sleep in retired elderly people.

## Methods

This research was a descriptive-analytical study that was conducted on the elderly who were referred to Retirement Center in Jahrom City. The inclusion criterion was a history of membership in the center for at least six months, and the exclusion criteria included a history of known physical and mental disorders disturbing sleep and unwillingness to cooperate. After approving the design and receiving the code of ethics from the Ethics Committee, a letter of introduction was received from [Jahrom University of Medical Sciences](#), and the researchers referred to the Retirement Center and prepared a list of its members. Based on the inclusion criteria, 180 elderly were selected according to the sample size formula by simple random sampling, and finally, 161 people completed the questionnaires. The research assistant visited the center within a month and after obtaining

informed consent and explaining the research objectives and paying attention to the comfort and well-being of the participants for cooperation, collected information by self-report method using standard questionnaires. In the end, the data were analyzed using descriptive statistics (Mean±SD, frequency, and percentage) and analytical statistics (chi-square test) by SPSS software, version 16.

The data collection tool included a demographic information form, Palutzin and Ellison's spirituality well-being scale (SWBS), and Pittsburgh sleep quality index (PSQI). In the demographic information form, information related to participants' age, gender, employment status, family income, and education level was recorded. The SWBS was designed by Palutzin and Ellison and contains 20 statements, and the answers are ranked according to a 6-point Likert scale (completely agree, somewhat agree, a little agree, somewhat disagree, and completely disagree). This scale is divided into two subgroups, religious health, and existential health, which each contains ten statements with a score of 10 to 60. The total score of spiritual health is the sum of the score of these two subgroups, which is between 20 and 120. The scores were classified as follows: Spiritual health at the low level: 20-40, spiritual health at the average level: 41-99, and spiritual health at the high level: 100-120. In the study by Seyedfatemi et al. the validity of this questionnaire was determined and confirmed via content va-

lidity, and its reliability was determined via Cronbach's  $\alpha$  reliability coefficient of 0.82 [25].

The PSQI is one of the best tools designed to measure sleep quality. The whole questionnaire has 18 items and seven subscales, including a general description of the person from sleep quality, delay in falling asleep, length of useful sleep, useful sleep, sleep disorders, amount of hypnotic drug, and daily functioning disorder, and is scored on a four-point Likert scale from zero to three. In this questionnaire, on each scale, the person's score will be between zero and three: No sleep problem: Zero, moderate sleep problem: One, serious sleep problem: Two, very serious sleep problem: Three, and getting a total score higher than five on the whole questionnaire means poor sleep quality [26, 27]. According to study of Mezerji, content validity index of PSQI was  $\geq 0.78$  and scale content validity index was  $\geq 0.90$  [28]. In the study conducted by Heidari et al. the reliability of the questionnaire was obtained at 0.46 by Cronbach's  $\alpha$  method and it was 0.52 by the method of halving [27].

## Results

The results showed that 46% of people were women and 54% were men. The age range of participants was between 60 and 75 (overall:  $62.96 \pm 2.5$ ) with an average age of 62.88 for men and 63.05 for women. Also, 59%

**Table 1.** Mean spiritual health and sleep quality scores in the samples according to demographic variables

Demographic Variables		Mean±SD	
		Spiritual Health	Sleep Quality
Gender	Male	98.83±21.97	6.7±3.53
	Female	74.50±22.85	6.34±3.53
Income level	Less than expenses	78.31±23.23	6.52±3.53
	Within the limits of expenses	88.33±17.85	6.62±3.50
Employment status	Housewife	77.44±23.14	6.33±3.32
	Employed	87.25±24.95	6.38±4.37
	Unemployed	80.28±22.50	6.67±3.59
Education level	Illiterate	99±12.47	7.80±3.11
	Diploma	78.02±22.64	6.32±3.51
	Associate degree	81.05±22.73	6.92±3.58
	Bachelor's degree	83.63±28.23	6.86±4.01

**Table 2.** Determining the average scores of sleep quality and its subscales in the elderly

Variables	Mean±SD
Subjective quality of sleep	1.43±1.1
Delay in falling asleep	1.1±0.8
Sleep duration	1.04±0.82
Sleep efficiency	0.25±0.65
Sleep disorders	1.22±0.49
Use of sleeping pills	0.77±0.99
Daily functional disorders	0.80±0.86
Sleep quality (total)	6.53±3.5

**Table 3.** Frequency of the levels of spiritual health and quality of sleep in the elderly

Groups	Variables	Elderly
		No. (%)
Spiritual health	Low	7(6.3)
	Medium	129(80.1)
	High	25(15.5)
Sleep quality	Weak	82(50.9)
	Enough	79(49.1)

**Table 4.** Correlation between spiritual health and sleep quality

Variables	P	df	$\chi^2$
Spiritual health and sleep quality	0.43	2	1.66



of the elderly had no job, 87% had less income than expenses, and 68.9% had a diploma.

Spiritual health was higher in men and uneducated people. Also, this variable obtained a higher score in employed cases whose income level was sufficient for living expenses (Table 1).

The average spiritual health score was 79.62±5.1 and both dimensions of existential health (39.36±10.90) and religious health (40.4±12.9) had almost the same scores. Also, the average score of total sleep quality was 6.53,

which showed that most elderly did not have good sleep quality, and the lowest score was related to the level of sleep efficiency in the elderly (0.25±0.65) (Table 2). The spiritual health of most elderly was at an average level (80.1%) and sleep quality was reported at a poor level in almost half of the people (50.9%) (Table 3). The Pearson correlation coefficient showed no significant relationship between the two variables ( $r=0.006$ ). On the other hand, the results of the chi-square test showed no significant correlation between spiritual health and sleep quality (Table 4).

## Discussion

This study was conducted to determine the correlation between spiritual health and sleep quality in the elderly referring to the Retirement Center of Jahrom City. The results showed no significant correlation between spiritual health and sleep quality in the elderly referring to the Jahrom Retirement Center. Regarding the two dimensions of the SWBS, the mean scores of the religious health dimension were slightly higher than existential health. Consistent with the present study, Mohaddes-Ardebili et al. showed that the score of the religious health dimension was higher than the existential health in people with heart failure [29].

In the study conducted by Momeni Qale Ghasemi et al. titled “survey of relationship between spiritual well-being with anxiety and some demographic variables in patients with coronary artery disease” [30] and also the study conducted by Khademvatani titled “study of relationship between spiritual health, anxiety, and depression in acute myocardial infarction patients hospitalized in Seyyedoshohada hospital in Urmia” [31], the level of the spiritual health of the participants was high. Considering the high scores of spiritual health, especially the higher score of religious health compared to existential health, we can point to the influence of people's religion and culture on the score of spiritual health, as well as seeking refuge and help from spiritual power during illness in the elderly. Therefore, spirituality can be mentioned as a valuable factor in facing stress and chaotic conditions. Zare and Jahandideh reported that nurses have spiritual health scores in Medium and high [32]. However, in the present study, all old participants were evaluated in terms of spiritual health, regardless of diseases, and the overall score of spiritual health indicated that most elderly are moving toward spirituality.

In this study, no significant correlation was observed between the two variables of spiritual health and sleep quality in the elderly referring to the Jahrom Retirement Center. No study titled correlation was found; therefore, the present study was compared with correlation studies. Consistent with the present study, in Yang et al.'s study, no significant relationship was observed between sleep quality and spiritual health in dialysis patients [33]. However, in Li et al.'s study, spiritual health had a significant negative relationship with sleep disorders, depression, and physical distress in people with chronic kidney failure [34]. Also, in another study conducted by Eslami et al. on dialysis patients, the Pearson correlation coefficient showed a strong relationship between spiritual health and sleep quality ( $P < 0.04$ ,  $r = 0.149$ ) [35].

In the study conducted by Ghadampour et al. group spiritual therapy improved the quality of sleep and mental strength in the elderly [36]. In a study conducted on patients with multiple sclerosis by Motavakel et al. spiritual care increased the quality of sleep in patients with multiple sclerosis [37]. It seems that because the present study was conducted only on the elderly who were referred to the Retirement Center, the results are related to the employees who have retired, and maybe their awareness to deal with insomnia problems is different from the rest of the elderly in the society. On the other hand, it seems that with increasing age and the appearance of diseases, the need of the elderly to face, cope with, and adapt to mental and physical problems increases, and spiritual health and spiritual therapy can have a significant effect on improving physical condition and sleep. Also, in Taghizadeganzadeh et al.'s study, a significant relationship was observed between age and spiritual health; therefore, as people age, they tend to spiritual health, which can be helpful [38].

The limitations of the current research were the consent of the elderly to participate in the study, and in some cases, not having glasses with them or being impatient to answer the questions of the two questionnaires, which were solved to some extent by conducting interviews and conversations and providing a quiet environment in the Retirement Center. This research is one of the first studies to examine the correlation between spiritual health and sleep quality in the elderly, which can be considered one of the strengths of the research. Therefore, it is suggested that the studies be conducted more widely and among the elderly of different regions to obtain more accurate results.

## Conclusion

Based on the results of this study and the low scores of sleep quality in the elderly, it is necessary to pay attention to the related factors affecting the quality of sleep in the elderly. Also, paying attention to the influencing factors on sleep quality sub-scales, such as daily functional disorders can prevent the injury of the elderly to some extent. On the other hand, considering that the correlation between spiritual health and sleep quality was not observed in the studied population, the need for more extensive studies is evident.

## Ethical Considerations

### Compliance with ethical guidelines

This article is approved by [Jahrom University of Medical Sciences](#) (Code: IR.JUMS.REC.1395.082).

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### Authors' contributions

Conceptualization and methodology: Zahra Shadfard, Shohre Javadpour and Mohammad Ali Montaseri; Investigation, resources and data collection: Mahboobeh Taghizadeganzade, Zahra Pishgar and Faride Maarefi; Writing—original draft, and writing—review, editing: Shohre Javadpour and Zahra Shadfard.

### Conflict of interest

The authors declared no conflicts of interests.

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