

## The Relationship between Spiritual Health and Resilience in Hemodialysis Patients

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### ABSTRACT

**BACKGROUND AND OBJECTIVE:** Chronic kidney disease is one of the major health problems in today's world that creates a threatening situation for the health and socioeconomic status of the affected person, his/her family and the whole society. Due to the fact that in chronic diseases, a spiritual crisis appears in the individual, this study was therefore conducted to investigate the effect of spiritual health on resilience in patients undergoing hemodialysis.

**METHODS:** This cross-sectional study was performed on 130 patients undergoing hemodialysis in Shahid Beheshti Hospital in Babol in 2017-2018. Data were collected and analyzed using Spiritual Well Being Scale (SWBS) (Paloutzian & Ellison) with a score of 20-125 at three levels of low, medium and high, as well as Connor-Davidson Resilience scale (CD-RISC) with a score of 20-125 at three levels of low, medium and high.

**FINDINGS:** In this study, 5 (3.8%) patients had low, 81 (62.3%) had medium and 44 (33.8%) had high spiritual health. The mean score of spiritual health was  $87.80 \pm 21.12$  and was at a medium level. Furthermore, 6 patients (4.6%) had low resilience, 95 patients (73.1%) had medium and 29 patients (22.3%) had high resilience. The mean total resilience score was  $86.63 \pm 19.48$  and was at a medium level. The relationship between spiritual health and resilience was direct and significant ( $p < 0.001$ ,  $r = 0.62$ ).

**CONCLUSION:** The present study showed that spiritual health has a significant and positive relationship with resilience of patients undergoing hemodialysis treatment.

**KEY WORDS:** Spirituality, Health, Hemodialysis, Patients.

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## Introduction

Chronic kidney disease is one of the health problems in today's world that creates a threatening situation for the health and socioeconomic status of the patient, his/her family and the society. Hemodialysis is currently the most common kidney replacement treatment in Iran (1). In chronic diseases, the patient's self-confidence and religious faith are compromised, the person's adaptation mechanisms and communication are disrupted due to uncertainty about the future, and a spiritual crisis appears in the person (2).

Spiritual health, as the newest dimension of health, is placed next to other dimensions of health (physical, mental and social) and is necessary for the integration of other dimensions. On the other hand, it includes two existential and religious dimensions (3). Paying attention to adaptation and coping with the disease and the problems caused by it through recognizing and strengthening the spiritual dimension of patients' health is of special importance (4). Spiritual health is the only force that coordinates the physical, mental and social dimensions and is necessary to adapt to illness (5). The results of researchers have shown that strengthening the spiritual dimension on the one hand reduces the symptoms of the disease and on the other hand increases the ability to adapt (6).

Chronic kidney failure is one of the diseases that affect a person's quality of life (7). There are more than 13,000 dialysis patients in Iran and 150,000 dialysis sessions are performed every month (8). Although blood dialysis saves patients' lives and prolongs their life expectancy, it cannot fully perform the functions of kidney (9). Hemodialysis is the most common method of dialysis (10); That is, the disease in advanced stages causes disorders in the functional status of the individual and leads to changes in their quality of life (11).

Many patients recognize spiritual health as a factor that creates meaning and purpose in life and promotes quality of life (12). Therefore, it can be useful for improving quality of life, reducing and controlling mental health disorders, interpersonal support, reducing the severity of symptoms and positive medical outcomes (13). Today, chronic diseases account for 47% of the total disease burden in the Middle East and account for 80% of deaths in low- and middle-income countries (14). When one's spiritual health is seriously endangered, one may experience disorders such as loneliness, depression, and a sense of meaninglessness in life (15). Researchers emphasize that increasing the level of meaning and spirituality of life not only helps a

person to overcome inconsistencies but also increases life satisfaction (16). Failure to pay attention to quality of life can lead to frustration, lack of motivation, and reduced economic, social and health activities (17). Many patients with chronic renal failure have decreased attention, depressed mood, decreased concentration, and altered states of consciousness (18). Psychiatric disorders have been reported in up to 55% of patients under hemodialysis (19).

One of the ways to promote mental health and quality of life is to pay attention to spiritual health. Spiritual health is one of the important dimensions of human health that coordinates and integrates the relationship between internal forces and is characterized by characteristics such as stability of life, peace, fit and harmony, emotions, relationship and closeness with God (20). Due to the relationship between spiritual health and diseases, this study was performed to investigate the relationship between spiritual health and resilience in hemodialysis patients.

## Methods

This cross-sectional study was approved by the ethics committee of Babol University of Medical Sciences with the code of ethics IR.MUBABOL.HRI.REC.1397.178 and was conducted among 150 patients under treatment in Shahid Beheshti Hospital in Babol in 2017-2018. To determine the sample size according to the default correlation of 25% between the two variables at 95% confidence level and 80% power, 123 samples were determined and according to the default drop of 15 to 20%, 150 questionnaires were to be completed.

The data required for this study were collected via the Personal/Social Information Form, the 20-item Spiritual Well Being Scale (SWBS) (Paloutzian & Ellison) (10 of which are related to religious health and the other 10 questions are related to existential health) (21), and the Connor-Davidson Resilience scale (CD-RISC) (22) was used to evaluate resilience. The questionnaire was distributed by the researcher among patients undergoing hemodialysis.

Patients admitted to the dialysis center of Shahid Beheshti Hospital in Babol, under treatment with hemodialysis, with mental health and no insanity and mental retardation to answer the questionnaire, having the minimum required literacy were included in the study. Patients were excluded from the study if they lost any of the above conditions for any reason during the study or were not willing to cooperate.

First, demographic characteristics of the subjects including age, education and gender, marital status and duration of illness were measured based on a demographic questionnaire. The spiritual health variable was measured using the Spiritual Well Being Scale (SWBS) designed by Paloutzian & Ellison in 1982 (21). The scale includes 20 questions, 10 of which measure existential health and 10 questions measure religious health. Finally, the total score of spiritual health was obtained from all of them. The answers to the questions were in the form of 6-point Likert scale, including “strongly disagree” to “strongly agree”.

In the questions with positive nature, the answer “strongly disagree” was given a score of one and “strongly agree” was given a score of six. In negative questions, scoring was done in reverse. Therefore, spiritual health scores are assessed in the range of 20 and 120 and spiritual health scores in the religious and existential dimension are assessed in the range of 10 and 60. Spiritual health is also classified into three levels: low (scores between 20 and 40), medium (scores between 41 and 99) and high (scores between 100 and 120). In a study by Rezaei et al., the validity of the questionnaire was confirmed after translation into Persian through content validity and the reliability of the questionnaire showed a Cronbach's alpha of 0.82 (23).

The data regarding the variable of resilience were collected based on the Connor-Davidson Resilience scale (CD-RISC) (22). This questionnaire consists of 25 items that are scored on a Likert scale between zero (completely incorrect) and five (always correct). Scores range from zero to 125. Resilience is also classified into three levels: low (scores between 20 and 50), medium (scores between 51 and 99) and high (scores between 100 and 125). This scale has been standardized by Mohammadi in Iran (24). He used Cronbach's alpha method to determine the reliability of Connor-Davidson resilience scale and reported a reliability coefficient of 0.89. The data obtained from the questionnaires were analyzed using SPSS software version 22 using Pearson correlation coefficient and Chi-square test and  $p < 0.05$  was considered significant.

## Results

Of the 130 studied patients, 39 were female and 91 were male. 85 were married and 45 were single. 60 were aged 18 to 35 and 70 were over 35 years old. Furthermore, out of the 130 patients, 44 did not have

high school diploma, 37 had high school diploma and associate degree, and 49 had B.A. and higher. Furthermore, 34 of these patients underwent hemodialysis for less than two years, 54 for two to five years and 42 patients underwent hemodialysis for more than five years. The mean total score of spiritual health among patients was  $87.80 \pm 21.12$ . The patients' total spiritual health score was at a medium level. 5 patients (3.8%) had low spiritual health, 81 patients (62.3%) had medium and 44 patients (33.8%) had high spiritual health. In addition, the mean total resilience score among patients was  $86.63 \pm 19.48$ . Patients' total resilience score was medium. Furthermore, 6 patients (4.6%) had low resilience, 95 patients (73.1%) had medium, and 29 patients (22.3%) had high resilience (Table 1).

**Table 1. Evaluation of descriptive features of spiritual health and resilience variables**

Variable	Number(%)	Total score Mean $\pm$ SD
<b>Spiritual health</b>		
Low level (20-40)	5(3.8)	87.80 $\pm$ 21.12
Medium level (41-99)	81(62.3)	
High level (100-120)	44(33.8)	
<b>Resilience</b>		
Low level (20-50)	6(4.6)	86.63 $\pm$ 19.48
Medium level (51-99)	95(73.1)	
High level (100-125)	29(22.3)	

In examining the relationship between spiritual health and resilience in hemodialysis patients, Pearson correlation coefficient was calculated ( $p=0.62$ ), which demonstrated a direct and acceptable linear relationship and showed that resilience increases with the increase in spiritual health ( $p < 0.001$ ). In examining the relationship between demographic characteristics and resilience, it was found that there is a significant relationship between marital status and resilience. In married people, 3.5% had low resilience, 63.5% had medium resilience and 32.9% had high resilience, while this amount was 6.7%, 91.1% and 2.2% for single people, respectively, which showed a statistically significant difference ( $p < 0.001$ ). However, other demographic variables including age, gender, education and duration of disease did not show a significant relationship with resilience ( $p > 0.05$ ) (Table 2). In examining the relationship between demographic characteristics and spiritual health, it was found that there is a significant relationship between gender and spiritual health. In

men, 4.4% had low resilience, 53.8% had medium resilience and 41.8% had high resilience, while this value for women was 2.6%, 82.1% and 15.4%, respectively, which showed a significant difference

( $p=0.09$ ). However, other demographic variables including age, marital status, education and duration of illness did not show a significant relationship with resilience (Table 3).

**Table 2. Evaluating the relationship between resilience and demographic characteristics of the study population**

Demographic information	Resilience			P-value
	Low Number(%)	Medium Number(%)	High Number(%)	
<b>Age</b>				
18 to 35 years	3(5)	44(73.3)	13(21.7)	0.97
35 years and older	3(4.3)	51(72.9)	16(22.9)	
<b>Gender</b>				
Male	4(4.4)	62(68.1)	25(27.5)	0.09
Female	2(5.1)	33(84.6)	4(10.3)	
<b>Marital status</b>				
Married	3(3.5)	54(63.5)	28(32.9)	<0.001
Single	3(6.7)	41(91.1)	1(2.2)	
<b>Education</b>				
Lower than high school diploma	2(4.5)	30(68.2)	12(27.3)	0.83
Diploma and Associate Degree	2(5.4)	29(78.4)	6(16.2)	
Bachelor's degree and higher	2(4.1)	36(73.5)	11(22.4)	
<b>Duration of illness</b>				
Under 2 years	1(2.9)	24(70.6)	9(26.5)	0.75
2 to 5 years	2(3.7)	39(72.2)	13(24.1)	
Over 5 years	2(7.1)	32(76.2)	7(16.7)	

**Table 3. Evaluating the relationship between spiritual health and demographic characteristics of the study population**

Demographic information	Spiritual health			P-value
	Low Number(%)	Medium Number(%)	High Number(%)	
<b>Age</b>				
18 to 35 years	3(5)	33(55)	24(40)	0.27
35 years and older	2(2.9)	48(68.6)	20(28.6)	
<b>Gender</b>				
Male	4(4.4)	49(53.8)	38(41.8)	0.009
Female	1(2.6)	32(82.1)	6(15.4)	
<b>Marital status</b>				
Married	3(3.5)	54(63.5)	28(32.9)	0.91
Single	2(4.4)	27(60)	16(35.6)	
<b>Education</b>				
Lower than high school diploma	1(2.3)	27(61.4)	16(36.4)	0.95
Diploma and Associate Degree	2(5.4)	23(62.2)	12(32.4)	
Bachelor's degree and higher	2(4.1)	31(63.3)	16(32.7)	
<b>Duration of illness</b>				
Under 2 years	1(2.9)	23(67.6)	10(29.4)	0.92
2 to 5 years	2(3.7)	34(63)	18(33.3)	
Over 5 years	2(4.7)	24(57.1)	16(38.1)	

**Discussion**

The present study showed that there is a significant relationship between spiritual health and resilience in hemodialysis patients and has a high correlation. In the study of Khademvatan et al., 52.2% of patients had

medium spiritual health and 48.8% of patients had high spiritual health (20), indicating a similar result. In the study of Arbabi et al., the total spiritual health score was  $91.69 \pm 10.26$ , which indicates the optimal state of

spiritual health of these diabetic patients (25). Shahgholian et al. achieved a medium level in their research (19) and the spiritual health score of the patients in the study of Dehbashi et al. was also medium (13), which is consistent with the findings of the present study, indicating the level of spiritual health of chronic patients in the society.

Arbabi et al. found that there was a statistically significant relationship between spiritual health and quality of life in diabetic patients. There is also a stronger relationship in the age range of 18 to 35 years compared to the age group over 35 years. There is also a stronger correlation in single people compared to married people. In men, there is a stronger correlation than women, and there is a stronger relationship between spiritual health and resilience in patients who have been treated with hemodialysis for longer periods compared to patients with shorter periods. Furthermore, there is a stronger relationship between patients with higher education level compared to those with lower education. Overall, there is a statistically significant relationship between spiritual health and resilience of hemodialysis patients (25), which confirms the findings of this study.

Therefore, considering the importance of improving the quality of life, evaluation of quality of life in dialysis patients, including the concept of spirituality and spiritual health as an aspect that is less considered, can provide valuable information for care planning in this group of patients (26). The relationship between spiritual health and marital status and patient gender was significant. Moreover, the study of Hassanzade et al. showed that spiritual intelligence has a significant effect on positive thinking (27).

The study of Yadollahpour et al. showed that spiritual teachings have reduced the level of depression and increased the quality of life in married women (28). It also showed that there is no statistically significant relationship between demographic characteristics and patient resilience. Rahimi et al. also showed that the level of religious beliefs can be a factor in improving the attitude towards abortion, so that by increasing the level of religious belief in each class without the involvement of other factors, a more favorable attitude towards abortion is achieved (29). In the study conducted by Zeighami Mohammadi et al., the relationship between spiritual health and quality of life and mental health of young people with thalassemia

major was significant, but contrary to the findings of this study, no significant relationship was found between patients' age and their spiritual health (4). Dehbashi et al. achieved a similar result and there was no significant relationship between the number of years of hemodialysis and patients' spiritual health (13). Furthermore, the research by Aghajanzadeh et al. showed that life satisfaction in the elderly with heart disease can be predicted through spiritual and religious health (30).

In the study of Khademvatan et al., the relationship between marital status and education and spiritual health was not significant, but the relationship between gender and spiritual health was significant (20), which confirms the findings of this study regarding marital status and gender. In a study conducted by Ashrafi et al., similar to this study, no significant relationship was found between marital status and spiritual health (3).

Based on the results of this study, the relationship between spiritual health and resilience of hemodialysis patients has been significant, so it is suggested that while considering spiritual health as one of the important health factors in hemodialysis patients, one must increase the resilience of patients to accelerate their recovery. Given the importance of spiritual care, it is better for nurses, in addition to considering the physical and mental aspects of the patient, to respect the patients' beliefs and values.

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**Ethical considerations:** The authors state that in this study, all relevant ethical principles have been observed, including the confidentiality of the questionnaires, the informed consent of the participants in the research, and the freedom to withdraw from the research.

**Conflict of interest:** The authors state that there is no conflict of interest in this study.

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