

The Effect of Spiritual Therapy on Hope and Self-efficacy of Hemodialysis Patients

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Abstract

Background: The problems such as depression, anxiety, hopelessness, stress and suicide in hemodialysis patients shows the need to support these patients to increase adaptation to the disease. Spiritual therapy introduces the person to the search for meaning, purpose, meaning in life, and the important beliefs and values.

Aim: The present study was conducted with aim to determine the effect of spiritual therapy on hope and self-efficacy of hemodialysis patients.

Method: This quasi-experimental study was performed in 2020 on 100 patients undergoing hemodialysis in Amol, Iran. The subjects were randomly divided into case (n=50) and control (n=50) groups. The intervention was performed in case group as 9 training sessions during 5 weeks based on spiritual therapy. Snyder's Hope and Scherer general self-efficacy standard questionnaires were used to collect data. Data were analyzed by SPSS (version 18) and paired t-test, analysis of covariance and independent t-test. $p < 0.05$ was considered statistically significant.

Results: The mean scores of self-efficacy and hope showed a statistically significant difference before and after spiritual therapy in the case group ($p=0.011$, $p=0.006$, respectively). Also, the difference between the mean score of patients' hope in the case and control groups was statistically significant after the intervention ($p=0.006$). Also, there was a significant difference between the case and control groups regarding self-efficacy after the intervention ($p=0.011$).

Implications for Practice: Spiritual intervention can be done as an effective and cost-effective method in hemodialysis patients to increase the hope and self-efficacy of these patients.

Keywords: Hope, Renal Dialysis, Self-efficacy, Spirituality, Spiritual Therapies

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Introduction

Chronic diseases have emerged as a major health problem (1). Chronic kidney failure causes a continuous pain and suffer in patients (2,3). One of the most effective and common treatments for controlling the symptoms of end-stage renal disease is dialysis (4). On the one hand, disorders caused by the critical stage of kidney failure, and on the other hand, the complications of hemodialysis have made difficult living conditions for these patients. Problems such as depression, anxiety, frustration, stress and suicide in these patients necessitate the support of these patients to increase adaptation to the disease (5).

Hope as a complex and individual matter reflects the mental involvement of a person in daily life challenges, encourage him to maintain the life and establish social communication, endure emotional stress and economic-psychological burden and finally, helps him to gain control and dominate living conditions (6,7). Hope is an important adaptation mechanism and defined as a multi-dimensional factor in effective recovery. It plays a key role in the acceptance of chronic disease and helps the patients to choose the complex treatment regimens (8). In patients with renal failure undergoing hemodialysis, long-term dialysis and fear of disability and death lead to lifestyle change, economic pressure, disability, frequent hospitalization, need to follow complex treatment regimens, restrictions on fluids and food consumption, skin and mucosal manifestations. These issues lead to depression, anxiety, disappointment, and reduced quality of life (9).

The other factor which is overshadowed in patients undergoing hemodialysis is self-efficacy. Self-efficacy is closely related to self-care and refers to a person's belief in his or her potential to perform behaviors necessary to produce especial performance attainments. In fact, a person's understanding of his or her ability causes self-care behaviors in order to achieve desired results. Self-efficacy plays an important role in hemodialysis patients to modulate the relationship between knowledge and behavior and it is known as an effective factor on adaptive behavior and selection of appropriate environment and conditions. Basically, self-efficacy is defined by terms such as empowerment index and predisposing factor for the empowerment process (10). Therefore, patients who feel confident in their abilities to perform self-care are more likely to perform these tasks (11). There is evidence that increasing the self-efficacy of dialysis patients has been associated with improved weight control during dialysis sessions, reduced hospitalization, reduced amputation, and improved quality of life, especially in dialysis patients with diabetes. Also, increasing self-efficacy has led to behavior change, acceptance of treatment and consequently, promotion of physical and mental health (12,13).

Today, the importance of individual beliefs and spirituality has been noticed in order to strengthen various psychological aspects in patients with chronic disorders. In fact, one of the most important components of supportive and palliative care is spiritual health, which is considered as a potential source of mental health and one of the adopting mechanisms in coping with stress (14). Spiritual therapy is one of the interventions based on the spiritual health of individuals (15). Spiritual therapy is a counseling method which tries to treat a person's mental disorders through his belief and faith in a higher power to explore aspects of conflict in life. The general purpose of spiritual and religious interventions is to facilitate and develop clients' coping styles and spiritual well-being. Spiritual therapy has a great effect on reducing stress, enduring life problems, improving mood and reducing negative emotions. In spiritual therapy, the therapist encourages the person to reach to the meaning, purpose and concept of life. Also, the therapist concentrates on the beliefs and values which are important to the individuals, as well as, the concepts of hope, interest, and support in wellbeing process. Spiritual therapy includes prayer, the use of ancient texts, meditation, spiritual imagery, forgiveness, worship and rituals, self-disclosure, writing diaries, concentration, and book therapy. Spiritual therapy is used when a person needs to give meaning and set a goal based on his/her spiritual beliefs and perceives the use of these resources useful or necessary to deal with problems. Spiritual therapy can also have its own techniques (16).

Mental health issues, including hope and self-efficacy has great importance in hemodialysis patients because these variables can overshadow their treatment and health. Moreover, nurses who have long contact with this group of patients should look for low-cost and useful methods to increase patients' hope and self-efficacy. Since there are limited studies in this field and the importance of the subject, the present study was performed with aim to determine the effect of spiritual therapy on hope and self-efficacy of patients undergoing hemodialysis.

Methods

This semi-experimental study was performed in 2020 in Imam Reza Hospital of Amol city (Northern Iran). The study population was all patients undergoing hemodialysis in the hemodialysis ward of the hospital. The samples were recruited based on the convenience sampling and according to the inclusion criteria. The sample size was calculated by using G* Power software based on the prior study (26). By considering the error probability ($\alpha < 0.05$) and effect size ($\beta = 0.65$), the sample size was calculated as 136 subjects, but 29 people were excluded from the study due to non-compliance with the entry criteria and 7 people due to unwillingness to participate in the study. Finally, 100 people were included in the study (Figure 1). The research units were randomly divided into two groups of case and control ($n = 50$ in each group). To determine the intervention and control groups based on coin toss, odd days were assigned to the control group and even days were assigned to the intervention group. Inclusion criteria were age ≥ 18 years, receiving at least 6 months hemodialysis service, receiving hemodialysis at least twice a week, a minimum literacy and not having a known mental illness. Exclusion criteria were the occurrence of a stressful event during the study, recurrence of disease and hospitalization, and death of the patient during the study.

Scherer Self-Efficacy Scale and Snyder's Hope Scale were used for data gathering. The Scherer self-efficacy scale has 17 items which is scored from 1 to 5 in a 5-point Likert scale, and the total score range is 17 to 85. A high score indicates a higher sense of self-efficacy. This questionnaire has been translated and validated by Poshtyafte and Pasha (18). Snyder's Hope Scale has 12 questions and is scored in a 8-points Likert scale from 1 (completely disagree) to 8 (completely agree). This scale has two subscales: the operative thinking subscale (meaning targeted energy) and the path subscale (planning to achieve goals). The total score is ranged from 8 to 64. Its reliability was reported 0.85 and 0.81 through a test-retest method (after three weeks) for the operative thinking subscale and 0.74 for strategic thinking; also reported the content validity of this scale as -0.44 (19).

The intervention was conducted by the researcher during nine training sessions for five weeks. The duration of each session was 45-60 minutes. A post-test was conducted one month after the implementation of the appreciation sessions of the participants in the two groups. Spiritual therapy was given to patients based on the guidebook of spiritual therapy written by Ahmadi et al. (2021). The training was conducted by face-to-face talking, giving homework and practicing individually.

After receiving the code of ethics from the Joint Organizational Ethics Committee of the Faculty of Nursing and Midwifery of Tehran University of Medical Sciences and receiving a letter of introduction from the vice president of research and presenting it to Imam Reza Hospital, the researcher explained the purpose and method of conducting the research to the relevant officials. In all stages of the research, ethical considerations such as obtaining informed consent, information confidentiality and the possibility of withdrawing from the study were taken into account at each stage.

Data were analyzed using SPSS software (version 18) and paired t, analysis of covariance and independent t test. Descriptive and inferential statistics were performed to analyze the data. ANCOVA test was used to control the carryover effect of the pre-test score by both groups. Data distribution and homogeneity of variances were investigated by Shapiro-Wilkes and Levin - Box tests, respectively. $P < 0.05$ was considered statistically significant.

Results

The mean age in the intervention and control groups was 51.10 ± 9.93 year and 52.03 ± 8.19 year, respectively ($p = 0.831$). In the intervention group 86% and in the control group 76% were married. Moreover, 92% of patients in the intervention group and 88% in the control group had high school education. No difference was observed between the two groups in terms of age ($p = 0.30$), marital status ($p = 0.15$), and education level ($p = 0.91$) (Table 1). Also, duration of dialysis in 56% of the participants in the intervention and 57% of control was 1 to 5 years, and the majority of the subjects in each group (98% of the intervention and 96% of the control groups) underwent hemodialysis 2 or 3 times a week. According to the results, there was no difference between the two groups regarding duration of dialysis ($p = 0.80$) (Table 1).

Table 1: The patients' demographic characteristics in the two groups

Variable	Frequency (%)		Test results*
	Intervention	Control	
Education level			
High school	46 (92)	44 (88)	$X^2 = 0.91$
Diploma	4 (8)	6 (12)	df = 4
Bachelor and above	0(0)	0(0)	$p= 0.150$
Marital status			
Married	43 (86)	38 (76)	$X^2 = 5.51$
Single	6 (12)	11 (22)	df = 4
Widow	1 (2)	1 (2)	$p=0.26$
Gender			
Female	26 (53)	27 (54)	$X^2 = 0.27$
Male	24 (47)	23 (46)	df = 1
			$p= 0.80$
Duration of dialysis			
Less than one year	11 (22%)	11 (22%)	$X^2 = 0.512$
1 to 5 years	28 (56%)	29 (57%)	df = 1
6 to 10 years	5 (10%)	4 (9%)	$p=0.32$
11 to 15 years	4 (8%)	3 (7%)	
More than 15 years	2 (4%)	3 (5%)	
Frequency of dialysis sessions per week			
2-3 times	49 (98%)	47 (96%)	$X^2 = 0.562$
More than 3 times	1 (2%)	3 (4%)	df = 4
			$p= 0.34$

*Chi-square test

The mean score of self-efficacy before the intervention was 49.88 ± 3.08 in the control group and was 50.76 ± 2.76 in the case group; the difference between the two groups was not significant ($p=0.135$). However, after the intervention, a statistically significant difference was found between the control (50.26 ± 3.47) and case groups (68.78 ± 3.33) ($p=0.011$). Comparison of mean scores before and after spiritual therapy showed a statistically significant difference in the case group ($p=0.0001$) and did not show a statistically significant difference in the control group ($p=0.15$) (Table 2). Also, the intervention was effective on self-efficacy based on the covariance test ($p=0.000$) and the pretest had no effect on the results ($p=0.178$). The coefficient effect also shows that 88% of the changes in the dependent variable were related to the intervention (Table 3).

Table 2: The mean self-efficacy and hope in hemodialysis patients before and after the intervention in the two groups

Variable	study stage	Mean \pm SD		Intergroup comparison*
		Intervention	Control	
Self-efficacy	Before intervention	50.85 \pm 2.76	49.88 \pm 3.08	0.135
	After intervention	68.78 \pm 3.33	50.26 \pm 3.47	0.011
	Intragroup comparison**	0.0001	0.150	-----
Hope	Before intervention	37.84 \pm 5.23	36.36 \pm 3.23	0.920
	After intervention	52.76 \pm 3.00	36.48 \pm 3.04	0.006
	Intragroup comparison**	0.0001	0.25	-----

* Independent t test results

** Paired t test results

The mean scores of hope before and after spiritual therapy in the intervention group showed a statistically significant difference ($p=0.0001$), but no significant difference was found in the control group ($p=0.25$). There was also a statistically significant difference in the mean scores of hope of patients in two groups after the intervention (Table 2). Based on the results of covariance test, the intervention was effective on hope ($p=0.000$) and the pre-test had no effect on the results ($p=0.189$). The coefficient effect also shows that 88% of the changes in the dependent variable were related to the intervention (Table 3).

Table 3: Results of analysis of effect covariance of spiritual therapy on self-efficacy and hope

Variable	Source	Total squares	df	Mean squares	F	P	Coefficient effect Eta
Self-efficacy	Pre-test	21.225	1	21.225	1.843	0.178	0.019
	Group	8507.81	1	8507.81	738.83	0.000	0.884
	Error	1116.97	97	11.51	-----	-----	-----
Hope	Pre-test	15.873	1	15.783	1.750	0.189	0.018
	Group	6544.616	1	6544.616	721.619	0.000	0.882
	Error	879.727	97	9.069	-----	-----	-----

Discussion

The present study was performed with aim to determine the effect of spiritual therapy on hope and self-efficacy of hemodialysis patients. Based on the results obtained in the present study, spiritual therapy intervention improved the self-efficacy of hemodialysis patients in the intervention group compared to the control. It seems that spiritual therapy increases patients' self-efficacy and makes them try harder to overcome problems. In spiritual therapy process, it is tried to use existential capacities, tendencies, divine motives and moral virtues. What is important in spiritual therapy is the semantic aspect which shapes the content of treatment and manifests itself in the form of worship in any religion. These spiritual therapy techniques with behavioral, cognitive, metacognitive, emotional and moral aspects are manifested in religious concepts and behaviors such as trust, patience, prayer, praise, meditation and so on. People, who have deeper self-awareness into the issues, believe more in their own efficiency and make more efforts to overcome the problems. This causes a person to face the events and incidents of life with patience, tolerance and deep insight and deal with high self-efficacy and find logical solutions. In line with the findings of the present study, Darvishi et al. (2020) found that spiritual therapy intervention increases self-efficacy of patients undergoing hemodialysis in the intervention group compared with the control group (20). Cassanto et al. (2020) investigated the effect of spiritual-based self-management on self-efficacy and self-care of patients with diabetes mellitus and concluded that spiritual-based intervention improved self-efficacy in patients with diabetes (21). These findings indicate that spiritual intervention affects the self-efficacy of patients with various diseases. The effect of spiritual therapy on self-efficacy of other groups in the society has been investigated. In a study by Salamizadeh et al. (2021) which investigated the effectiveness of spiritual care on self-efficacy of the family caregivers of elderly with alzheimer, the results showed that spiritual care has a positive and significant effect on their self-efficacy (22).

Following the results of the present study, spiritual therapy significantly increased the hope scores in the case group compared with the control group. Hope is important in the process of chronic diseases treatment and recovery. It seems that counseling with a spiritual therapy approach increases the hope of patients undergoing hemodialysis by reducing their physical and psychological problems. A prior study by Ashvandi et al. (2020) showed that spiritual therapy can increase the hope of patients undergoing hemodialysis (23). In a meta-analysis conducted by Natalie et al. (2018), 30 clinical trial studies were selected and analyzed. Their results showed that the spiritual therapy approach is effective on indicators such as hope, quality of life and spiritual well-being in cancer patients (24). A study by Khezri et al. (2022), showed that spiritual therapy can promote and increase hope in patients with breast cancer (25). Movahedi et al. (2021) conducted a study on the impact of spiritual care program on the quality of life of patients with heart failure, and the findings showed that the spiritual care program significantly increased the total score of quality of life (27). Ayyari and colleagues (2020) conducted a study on the effect of spiritual interventions on the level of happiness of elderly women living in nursing homes, and the findings showed that the spiritual care program significantly increases the level of happiness (28). These findings are consistent with the findings of the present study regarding the effectiveness of the spiritual care program. Aghajani et al. showed that spiritual counseling could decrease the anxiety and depression in dialysis patients; their findings are in line with the results of the present study and the studied population is also similar to the present study (29). Although the target group of the above studies is different from the present study, the similar results showed the positive effect of spiritual therapy in patients with chronic disorders.

One of the limitations of the present study is the self-reporting of the questionnaires completed by the

patients. Therefore, factors such as fatigue could have affected the results. During the study, the researcher tried to reduce the effect of this factor by giving appropriate explanations as well as being present while filling out the questionnaires. The strength of the present study is the change in the mood of patients with a spiritual approach, which led to the improvement of hope and self-efficacy. It is suggested that further studies should be conducted with a larger sample size for greater generalizability of the results.

Implications for practice

Spiritual therapy was effective in increasing the hope and self-efficacy of hemodialysis patients. This intervention can be used as a complementary treatment along with other care for patients. Also, strengthening spiritual beliefs in the field of health makes people's spiritual behaviors significantly stronger. It is suggested that future studies use this approach to increase the mental indices of patients undergoing hemodialysis. Also, future studies are suggested to be conducted to compare spiritual therapy with other interventions to improve hope and self-efficacy.

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Conflicts of interest

The authors declared no conflict of interest.

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