



# Effectiveness of Spiritual Therapy on Depression, Anxiety, and Stress in Hemodialysis Patients

Vihan Moodi <sup>1,\*</sup>, Anahita Arian <sup>2</sup>, Jalil Reza Moodi <sup>3</sup> and Reza Dastjerdi <sup>4</sup>

<sup>1</sup>School of Medicine, Birjand University of Medical Sciences, Birjand, Iran

<sup>2</sup>Assistant Professor of Internal Medicine, Birjand University of Medical Sciences, Birjand, Iran

<sup>3</sup>Psychiatrist, Imam Reza Hospital, Birjand University of Medical Sciences, Birjand, Iran

<sup>4</sup>Assistant Professor of Psychology, Birjand University of Medical Sciences, Birjand, Iran

\*Corresponding author: School of Medicine, Tehran University of Medical Sciences, Tehran, Iran. Email: dr.vihanmoodi@gmail.com

Received 2020 August 31; Revised 2020 November 07; Accepted 2020 November 10.

## Abstract

**Background:** The most important psychological problems of dialysis patients are anxiety, depression, and stress. These psychological problems cause different consequences for the patients. Therefore, it seems necessary to use strategies to reduce the psychological problems in hemodialysis patients.

**Objectives:** This study was conducted to evaluate the effectiveness of spiritual therapy on depression, anxiety, and stress in hemodialysis patients referred to the dialysis ward of special diseases center of Birjand in 2019 - 2020.

**Methods:** In this semi-experimental study, 70 patients with chronic kidney disease (CKD) under hemodialysis referred to the dialysis ward of special diseases center of Birjand in 2019 - 2020 were selected by available sampling method and randomized into two experimental groups (35 patients) and control (35 patients). The patients in the experimental group received eight sessions of 60-minute (one session per week) of spiritual intervention therapy, and the control group received no spiritual intervention. Data collection tools were a form of demographic profile and Lovibond SH and Lovibond PF (1995) questionnaire. Data were analyzed using SPSS 26 statistical software, and Fisher's exact test, chi-square test, independent t-test, repeated measures ANOVA, Bonferroni post hoc test at a significance level of  $P < 0.05$ .

**Results:** In this study, 68 patients were examined in two experimental (33 patients) and control (35 patients) groups. The mean score of depression, anxiety, and stress before the intervention in patients in the experimental and control groups was not significantly different ( $P = 0.61$ ), but immediately and three months after the intervention in patients in the experiment group was significantly lower than the control group ( $P < 0.001$ ).

**Conclusions:** Based on the results of the present study, it can be said that spiritual therapy is considered an effective solution for reducing depression, anxiety, and stress in hemodialysis patients.

**Keywords:** Spiritual Therapies, Depression, Anxiety, Stress, Psychological, Dialysis

## 1. Background

Chronic kidney disease (CKD) is a destructive and progressive disease that disrupts the water balance, electrolytes, and metabolism of the body (1, 2). End-stage renal disease (ESRD) is a severe type of CKD and is the final stage of an irreversible, progressive renal disorder (3). The global prevalence of all-stage CKD is 9.1% (4), and the overall prevalence of chronic kidney disease is 15.14% in Iranian people (3). The most important psychological problems of dialysis patients are anxiety, depression, stress, and in the severe stages of the disease, frustration, denial, and reluctance to continuing treatment (5, 6). Marvi et al. (7) stated that dialysis patients often face many psychological

problems due to lifestyle changes and treatment methods. Moreover, anxiety, depression, and stress are the most common of these problems, which lead to the patient's death in severe cases.

The results of the studies showed that there is a significant relationship between depression, anxiety, and stress and non-compliance of hemodialysis patients with the recommended diet and even necessary treatments, which can endanger the patient's health and accelerate their mortality (8-10). In addition, most dialysis patients have limitations in their physical role, emotional role, job status, job performance, and low quality of life (11, 12). In these patients, self-reliance and religious faith are compromised, the mechanisms of adaptation and communi-

cation are disrupted due to uncertainty about the future, and spiritual crisis emerges in the person (13). Spiritual therapy means considering the cultural-religious beliefs in the healing process and considering the transcendent dimension of the clients. This transcendent dimension leads them to God (14). In other words, spiritual therapy is a type of psychotherapy that uses special principles and uses spiritual-religious methods to help patients achieve a transcendental perception of themselves, the world, events, and gain health and growth through the connection with this transcendental world (15).

These psychological problems cause different consequences for the patient. Therefore, it seems necessary to use strategies to reduce the psychological problems of hemodialysis patients.

## 2. Objectives

This study was conducted to evaluate the effectiveness of spiritual therapy on depression, anxiety, and stress in hemodialysis patients referred to the dialysis ward of special diseases center of Birjand in 2019 - 2020.

## 3. Methods

In this semi-experimental study, among CKD patients under hemodialysis referred to dialysis ward of special diseases center of Birjand in 2019 - 2020, 70 patients were selected according to inclusion criteria by available sampling method who were randomly divided into the experimental (35 patients) and control (35 patients) groups. The sample size is based on the below formula and based on the study of Kiani et al. (16). According to the average dimension score in the two experimental and control groups ( $s_1 = 10.29$ ,  $s_2 = 13.64$ ,  $m_1 = 22.31$ ,  $m_2 = 34.96$ ), 19 patients were calculated to be assigned to this study, taking into account the percentage of attrition, 35 people were considered in each group.

$$n = (u + v)^2 (S_1^2 + S_2^2) / (m_1 - m_2)^2 \quad (1)$$

$$n = \frac{10.5 (10.29^2 + 13.64^2)}{(22.31 - 34.96)^2} \approx 19 \quad (2)$$

The inclusion criteria were ESRD and being under hemodialysis in dialysis centers, having a history of hemodialysis treatment for at least one year, the lack of other chronic diseases such as cardiovascular disease, musculoskeletal diseases, cancer types, the lack of known mental illness, at least 30 years of age, having a minimum of literacy (being able to read brief texts on familiar topics and

locate a single piece of specific information). The exclusion criteria were the use of sedatives, infectious diseases, absence of more than two sessions in training sessions, and unwillingness to continue the study.

A list of 70 patients was prepared, and between the first two people, a lottery was drawn using coins, and according to this, the people were divided into two groups, after explaining the objectives of the study and obtaining informed consent, the demographic profile form, and the Lovibond and Lovibond (17) depression, anxiety, and stress questionnaire (1995) were completed by individuals in both groups. Then, the patients in the experimental group received spiritual intervention in 8 sessions of 60 minutes (one session per week) and the control group did not receive any spiritual intervention. The training sessions were given by a psychologist with a master's degree who had passed spiritual therapy courses. This treatment program had five sections and eight group-therapy sessions, which began in December 2019 in Birjand special diseases center as shown in Table 1 (15, 18, 19).

The depression, anxiety, and stress questionnaire (DASS-21) was presented by Lovibond and Lovibond (17). It includes 21 questions, including 7 questions about stress, 7 questions about anxiety, and 7 questions related to depression. Questions are graded based on four-point Likert scale from none = 0 to fully = 3 scores. From the total score of the questions related to each scale, the score of that scale is obtained. The minimum score on each scale was zero, and the maximum was 21. Higher scores indicate more depression, anxiety, and stress. The questionnaire's retest reliability was obtained in the study of Najafi Kalyani et al. (20) by using Cronbach's alpha coefficient for stress scales of 0.85, anxiety 0.86, and depression 0.83. The questionnaire retest reliability in the present study was 0.67, 0.64, and 0.76 using Cronbach's alpha coefficient for depression, anxiety, and stress, respectively.

One week and three months after the spiritual therapy sessions, the depression, anxiety, and stress questionnaires were completed by patients in both groups. In order to observe the ethical considerations after the intervention, the training session content was provided to the control group patients. It should be noted that two patients in the experimental group were excluded from the study due to the absence in more than two sessions in the training classes and the final analysis in the experimental group was performed on 33 patients.

The research was registered with the IR.BUMS.REC.1399.027 ID in the Research Ethics Committee of Birjand University of Medical Sciences. Data were analyzed using SPSS 26 statistical software and Fisher's exact,

**Table 1.** Content of Therapeutic Sessions

Session	Session Title	Educational Content
1	Start	Introducing and familiarizing the members with each other, learning the reasons for group formation and familiarity with group rules such as remaining confidential, respecting each other's opinion and tolerating different views, number and time of meetings, and the need for continuous attendance until the end of the treatment.
2 and 3	Raise self-awareness	Teaching to focus on general and disease-related problems and mentioning superstitious spiritual beliefs about the disease, awareness of the implicit and personal meaning of spirituality, and its definition from the perspective of each member, examining the belief in superior and sacred power in the members.
4 and 5	Identify stressful situations	Learning the stages of recognizing negative emotional states and destroying cognition due to superstitious spiritual beliefs, teaching the stages of self-assessment and self-observation to examine the causes of negative thinking and inconsistent behavior, teaching meditation and expressing feelings about performing spiritual actions and teaching adaptive thinking methods
6 and 7	Compatibility development methods	Use a spiritual approach with a focus on God and prayer, repentance, atonement, the forgiveness of gratitude and patience, and generalization to anger controlling, presenting the concept of infinity, and connecting to the eternal divine power of God.
8	Conclusion	Learning to plan for the adaptability development and spiritual life health in the future, teaching mental review and presenting a checklist of automatic negative thoughts (ANT) and cognitive errors in order to self-assessment of thoughts and behavior and return to daily life

chi-square, independent *t*-test, repeated measures ANOVA, and Bonferroni post hoc at a significance level of  $P < 0.05$ .

#### 4. Results

In this study, 68 patients were examined in the two experimental groups (33 patients) and control (35 patients). The demographic characteristics, frequency, and distribution of patients in the two groups were studied as given in [Table 2](#). The frequency distribution of sex, age, and dialysis variables in patients in the two experimental and control groups did not differ significantly ( $P < 0.05$ ).

The mean score of depression, anxiety, and stress before the intervention in patients in the experimental and control groups was not significantly different, but immediately and three months after the intervention in patients in the experiment group was significantly lower than the control ( $P < 0.001$ ).

The repeated measures ANOVA test results showed that in the experimental group patients, the mean score of depression, anxiety, and stress before, immediately, and three months after the intervention was significantly different ( $P < 0.001$ ). Bonferroni correction showed that in the experiment group, the mean score of depression and anxiety decreased significantly immediately and three months after the intervention ( $P < 0.001$ ). But there was no significant difference three months later compared to before the intervention ( $P < 0.05$ ). In patients in the experiment group, the mean stress score significantly decreased immediately and three months after the intervention compared to before the intervention ( $P < 0.001$ ). But there was a significant increase compared to the immediately after the inter-

vention ( $P = 0.03$ ) three months after the intervention ([Table 3](#)).

#### 5. Discussion

This study was conducted to evaluate the effectiveness of spiritual therapy on depression, anxiety, and stress in hemodialysis patients referred to the dialysis ward of the special diseases center of Birjand in 2019 - 2020. The results of the present study showed that the mean score of depression was significantly lower immediately and three months after the intervention in the patients of the experimental group than in the control group. Accordingly, spiritual therapy is effective in reducing depression in hemodialysis patients. Loureiro et al. (21), in examining the effect of spirituality on the mental health of patients under hemodialysis, concluded that spirituality has a positive and significant effect on reducing depression in patients. The results of a study by Moritz et al. (22) suggest that spiritual content, including spiritual awareness of self-forgiveness, compassion, appreciation, and daily life Acceptance, reduces depression. In addition, the results of studies by Cha et al. (23), Rentala et al. (24), and Hourani et al. (25) also indicate the effect of spirituality on patient depression (23-25), which is consistent with the present study findings. Spirituality is one of the dimensions of human beings that shows the connection and integration of the individual with the universe. Communication and integration give people hope and meaning and bring them beyond the boundaries of time, place, and material interests and play an important role in improving depression (26). Spiritual interventions act by changing patients' attitudes toward life or illness. In other words, in

**Table 2.** Comparison of Demographic Characteristics in Patients of the Two Groups

Variable	Experimental Group, Number (%)	Control Group, Number (%)	P-Value Related to the Chi-Square or Fisher's Exact Test
<b>Sex</b>			0.62 <sup>a</sup>
Male	18 (54.5)	17 (48.6)	
Female	15 (45.5)	18 (51.4)	
<b>Age, y</b>			0.76 <sup>a</sup>
≤ 50	13 (39.4)	16 (45.7)	
51 - 60	11 (33.3)	12 (34.3)	
> 60	9 (27.3)	7 (20)	
<b>Dialysis history, y</b>			0.65 <sup>b</sup>
≤ 5	19 (57.6)	16 (45.7)	
6 - 10	12 (36.4)	16 (45.7)	
> 10	2 (6.1)	3 (8.6)	

<sup>a</sup>Chi-square (X<sup>2</sup>) test.  
<sup>b</sup>Fisher's exact test.

**Table 3.** Comparison of Mean Scores of Depression, Anxiety, and Stress in Predefined Checkpoints in Patients of the Two Groups and Separately in Each Group

Dimension	Before the Intervention, Mean ± SD	Immediately After the Intervention, Mean ± SD	Three Months After the Intervention, Mean ± SD	Repeated Measures ANOVA Test	The Result of the Bonferroni Post Hoc Test
<b>Depression</b>					
Experimental	12.27 ± 2.84	10.09 ± 2.45	10.30 ± 1.65	F = 22.96; P < 0.001	Immediately and three months later Vs before the intervention (P < 0.001)
Control	11.97 ± 1.93	12.34 ± 1.88	12.06 ± 1.81	F = 1.45; P = 0.24	
Independent t-test result	t = 0.51; P = 0.61	t = 4.26; P < 0.001	t = 4.17; P < 0.001		
<b>Anxiety</b>					
Experimental	10.27 ± 2.66	9.00 ± 2.30	9.30 ± 1.81	F = 7.03; P = 0.002	Immediately after Vs before the intervention (P < 0.001) and three months later Vs before the intervention (P = 0.04)
Control	9.94 ± 2.26	10.20 ± 1.89	10.49 ± 1.62	F = 3.91; P = 0.03	
Independent t-test result	t = 0.55; P = 0.58	t = 2.35; P = 0.02	t = 2.85; P = 0.006		Three months later and immediately after Vs before the intervention (P = 0.03)
<b>Stress</b>					
Experimental	15.48 ± 1.95	11.36 ± 2.92	11.73 ± 2.43	F = 0.108; P < 0.001	Immediately and three months later Vs before the intervention (P < 0.001) and three months later Vs immediately after (P = 0.03)
Control	14.77 ± 1.55	14.91 ± 1.56	15.11 ± 1.39	F = 1.83; P = 0.17	
Independent t-test result	t = 1.67; P = 0.10	t = 6.30; P < 0.001	t = 7.11; P < 0.001		

cognitive assessments of the patient under the influence of personal beliefs and values such as self-control and religious beliefs, stressful factors are determined and then appropriate treatment strategies are used. Spirituality and religious beliefs and practices are effective in adapting patients to existing conditions by finding life meaning (27).

Accordingly, spiritual therapy can fill a person's spiritual gaps and reduce depression (28, 29).

The results of the present study show that the mean score of anxiety immediately and three months after the intervention in patients in the experimental group is significantly lower than the control group. Accordingly, spir-

itual therapy is effective in reducing the hemodialysis patient's anxiety.

Kiani et al. (16) concluded that spiritual therapy reduces the average anxiety score of cancer patients. In this regard, the results of the study of Boscaglia et al. (30) suggest that spiritual therapy has a positive and significant effect on reducing anxiety in women with cancer. Despite the differences in the statistical community, these results are consistent with the present study findings. In addition, the results of studies by Chaar et al. (31) and Sankhe et al. (32) also indicate the spirituality effect on patients' anxiety, which is consistent with the present study findings. According to the present study results and the results of studies conducted in this field, it can be stated that spiritual therapy is one of the important methods in anxiety disorders treatment. Believe in God and trust in Him creates a security sense in the anxious person, which provides the ground for reducing the negative perception of the threat and assessing the danger, especially in situations that are uncontrollable or unpredictable. Because one considers world events to be in the possession of an active and wise leader. He believes that world events are based on wisdom and that all things happen by the will of God (33). So, this mentality can reduce the threat feeling in an anxious person.

The present study results showed that the mean stress score immediately and three months after the intervention in patients in the experimental group was significantly lower than the control group. Accordingly, spiritual therapy is effective in reducing hemodialysis patients' stress. Kiani et al. (16) concluded that spiritual therapy has an effect on the mental health of cancer patients and reduces the average stress score of patients. In addition, the studies of Kucuk Alemdar et al. (34), and Rowold (35) also demonstrate the spirituality effect on patient stress, which is consistent with the present study findings. People manage their stress based on available resources and through a variety of coping methods. According to this viewpoint, beliefs provide important cognitive assessments to the people, and therefore spirituality can help a person to evaluate negative events in a different way. Thus, spirituality creates a stronger control sense and help to psychological adjustment (15). In other words, for people who use spiritual mechanisms, their immune systems work better and cope with more effective coping strategies such as reassessment and problem-solving with greater psychological stress, and ultimately reduce their stress (36).

## 5.1. Conclusions

Patients on hemodialysis often use their spiritual and religious beliefs as a way to deal with illness. Based on the results of the present study, it can be said that spiritual therapy is considered an effective solution for reducing depression, anxiety, and stress in hemodialysis patients. Further research is necessary to elucidate the effects of spiritual therapy on other settings and populations.

## Acknowledgments

We thank and appreciate all the people who participated in this research project, especially hemodialysis patients. We are also very grateful to the esteemed officials of Birjand Special Diseases Center, and Birjand University of Medical Sciences.

## Footnotes

**Authors' Contribution:** All authors contributed equally.

**Conflict of Interests:** The authors declare they have no conflict of interests.

**Ethical Approval:** The research was registered with the IR.BUMS.REC.1399.027 ID in the Research Ethics Committee of Birjand University of Medical Sciences.

**Funding/Support:** The authors received no specific funding for this work.

**Informed Consent:** Informed consent was obtained from all participants involved in this study.

## References

- Ghods A, Savaj S. Iranian Model of Paid Regulated Living unrelated kidney donation. *Clin Assoc Nephrol*. 2006;1(6):1136-45. doi: [10.2215/CJN.00700206](https://doi.org/10.2215/CJN.00700206). [PubMed: [17699338](https://pubmed.ncbi.nlm.nih.gov/17699338/)].
- Smeltzer S, Bare B, Hinkle J, Cheever K, editors. *Brunner & Suddarth Textbook of Medical Surgical Nursing*. Philadelphia: Lippincott Williams & Wilkins; 2008.
- Bouya S, Balouchi A, Rafiemanesh H, Hesaraki M. Prevalence of Chronic Kidney Disease in Iranian General Population: A Meta-Analysis and Systematic Review. *Ther Apher Dial*. 2018;22(6):594-9. doi: [10.1111/1744-9987.12716](https://doi.org/10.1111/1744-9987.12716). [PubMed: [29974630](https://pubmed.ncbi.nlm.nih.gov/29974630/)].
- Bikbov B, Purcell CA, Levey AS, Smith M, Abdoli A, Abebe M, et al. Global, regional, and national burden of chronic kidney disease, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. *Lancet*. 2020;395(10225):709-33. doi: [10.1016/S0140-6736\(20\)30045-3](https://doi.org/10.1016/S0140-6736(20)30045-3).
- De Sousa A. Psychiatric issues in renal failure and dialysis. *Indian J Nephrol*. 2008;18(2):47-50. doi: [10.4103/0971-4065.42337](https://doi.org/10.4103/0971-4065.42337). [PubMed: [20142902](https://pubmed.ncbi.nlm.nih.gov/20142902/)]. [PubMed Central: [PMC2813124](https://pubmed.ncbi.nlm.nih.gov/PMC2813124/)].
- Gerogianni SK, Babatsikou FP. Psychological aspects in chronic renal failure. *Health Sci J*. 2014;8(2):205.



7. Marvi A, Bayazi MH, Rahmani M, Deloei AK. Studying The Effect of Cognitive Behavioral Group Training on Depression in Hemodialysis Patients. *Proced Soci Behav Sci*. 2011;**30**:1831-6. doi: [10.1016/j.sbspro.2011.10.353](https://doi.org/10.1016/j.sbspro.2011.10.353).
8. Garcia-Llana H, Remor E, Del Peso G, Selgas R. The role of depression, anxiety, stress and adherence to treatment in dialysis patients health-related quality of life: a systematic review of the literature. *Nefrologia*. 2014;**34**(5):637-57. doi: [10.3265/Nefrologia.pre2014.Jun.11959](https://doi.org/10.3265/Nefrologia.pre2014.Jun.11959). [PubMed: [25259819](https://pubmed.ncbi.nlm.nih.gov/25259819/)].
9. Cohen SD, Cukor D, Kimmel PL. Anxiety in Patients Treated with Hemodialysis. *Clin J Am Soc Nephrol*. 2016;**11**(12):2250-5. doi: [10.2215/CJN.02590316](https://doi.org/10.2215/CJN.02590316). [PubMed: [27660303](https://pubmed.ncbi.nlm.nih.gov/27660303/)]. [PubMed Central: [PMC5142059](https://pubmed.ncbi.nlm.nih.gov/PMC5142059/)].
10. Ibrahim S, Hossam M, Belal D. Study of non-compliance among chronic hemodialysis patients and its impact on patients' outcomes. *Saudi J Kidney Dis Transpl*. 2015;**26**(2):243-9. doi: [10.4103/1319-2442.152405](https://doi.org/10.4103/1319-2442.152405). [PubMed: [25758870](https://pubmed.ncbi.nlm.nih.gov/25758870/)].
11. Cohen DE, Lee A, Sibbel S, Benner D, Brunelli SM, Tentori F. Use of the KDQOL-36 for assessment of health-related quality of life among dialysis patients in the United States. *BMC Nephrol*. 2019;**20**(1):112. doi: [10.1186/s12882-019-1295-0](https://doi.org/10.1186/s12882-019-1295-0). [PubMed: [30935377](https://pubmed.ncbi.nlm.nih.gov/30935377/)]. [PubMed Central: [PMC6444438](https://pubmed.ncbi.nlm.nih.gov/PMC6444438/)].
12. Burlacu A, Artene B, Nistor I, Buju S, Jugrin D, Mavrichi I, et al. Religiosity, spirituality and quality of life of dialysis patients: a systematic review. *Int Urol Nephrol*. 2019;**51**(5):839-50. doi: [10.1007/s11255-019-02129-x](https://doi.org/10.1007/s11255-019-02129-x). [PubMed: [30919258](https://pubmed.ncbi.nlm.nih.gov/30919258/)].
13. Haider A, Shah NA, Shahid M. Analysis Of Quality Of Life Of Dialysis Patients (Male And Female) With Kidney Disease. *Pakistan J Gender Stud*. 2020;**20**(1):1-20. doi: [10.46568/pjgs.v20i1.417](https://doi.org/10.46568/pjgs.v20i1.417).
14. Milan M, Nasimi F, Hafizi I, Ghorbanzadeh M, Hosseini Y. Association of Spiritual Health and Quality of Life in the Hemodialysis Patients Admitted in Shahid Motahari Hospital in Jahrom, Iran (2016). *Iran J Nurs*. 2018;**31**(113):42-51. doi: [10.29252/ijn.31.113.42](https://doi.org/10.29252/ijn.31.113.42).
15. Bolhari J, Nazari G, Zamanian S. [Efficacy of approach of spiritual group therapy on decrease of amount of depression, anxiety and stress of in women with breast cancer]. *Woman Soc*. 2012;**3**(1):85-111. Persian.
16. Kiani J, Jahanpour F, Abbasi F, Darvishi S, Gholizadeh B. [The effectiveness of spiritual therapy in mental health of cancer patients]. *Nurs J Vulnerable*. 2016;**2**(5):40-51. Persian.
17. Lovibond SH, Lovibond PF. *Manual for the Depression Anxiety & Stress Scales*. 2nd ed. Sydney: Psychology Foundation; 2011. doi: [10.1037/t01004-000](https://doi.org/10.1037/t01004-000).
18. Dodd DW. Exploring spirituality/religion related interventions used by mental health workers in psychotherapy and counseling. *Smith Schilar Work*. 2007.
19. Breitbart W, Rosenfeld B, Gibson C, Pessin H, Poppito S, Nelson C, et al. Meaning-centered group psychotherapy for patients with advanced cancer: a pilot randomized controlled trial. *Psychooncology*. 2010;**19**(1):21-8. doi: [10.1002/pon.1556](https://doi.org/10.1002/pon.1556). [PubMed: [19274623](https://pubmed.ncbi.nlm.nih.gov/19274623/)]. [PubMed Central: [PMC3648880](https://pubmed.ncbi.nlm.nih.gov/PMC3648880/)].
20. Najafi Kalyani M, Pourjam E, Jamshidi N, Karimi S, NajafiKalyani V. [Survey of stress, anxiety, depression and self-concept of students of Fasa University of medical sciences, 2010]. *J Fasa Univ Med Sci*. 2013;**3**(3):235-40. Persian.
21. Loureiro ACT, de Rezende Coelho MC, Coutinho FB, Borges LH, Lucchetti G. The influence of spirituality and religiousness on suicide risk and mental health of patients undergoing hemodialysis. *Compr Psychiatry*. 2018;**80**:39-45. doi: [10.1016/j.comppsy.2017.08.004](https://doi.org/10.1016/j.comppsy.2017.08.004). [PubMed: [28972917](https://pubmed.ncbi.nlm.nih.gov/28972917/)].
22. Moritz S, Kelly MT, Xu TJ, Toews J, Rickhi B. A spirituality teaching program for depression: qualitative findings on cognitive and emotional change. *Complement Ther Med*. 2011;**19**(4):201-7. doi: [10.1016/j.ctim.2011.05.006](https://doi.org/10.1016/j.ctim.2011.05.006). [PubMed: [21827934](https://pubmed.ncbi.nlm.nih.gov/21827934/)].
23. Cha KM, Kang SY, Hyun SY, Noh JS, Shin YM, Kim NH. Mediating effect of interpersonal coping on meaning in spirituality and quality of life and the influences of depression and anxiety thereon in cancer patients. *Palliat Support Care*. 2019;**17**(4):388-95. doi: [10.1017/S1478951518000731](https://doi.org/10.1017/S1478951518000731). [PubMed: [30394253](https://pubmed.ncbi.nlm.nih.gov/30394253/)].
24. Rentala S, Lau BHP, Chan CL. Association Between Spirituality and Depression Among Depressive Disorder Patients in India. *J Spirituality Ment Health*. 2017;**19**(4):318-30. doi: [10.1080/19349637.2017.1286962](https://doi.org/10.1080/19349637.2017.1286962).
25. Hourani LL, Williams J, Forman-Hoffman V, Lane ME, Weimer B, Bray RM. Influence of spirituality on depression, posttraumatic stress disorder, and suicidality in active duty military personnel. *Depress Res Treat*. 2012;**20**12:425463. doi: [10.1155/2012/425463](https://doi.org/10.1155/2012/425463). [PubMed: [22778931](https://pubmed.ncbi.nlm.nih.gov/22778931/)]. [PubMed Central: [PMC3388321](https://pubmed.ncbi.nlm.nih.gov/PMC3388321/)].
26. Rickhi B, Moritz S, Reesal R, Xu TJ, Paccagnan P, Urbanska B, et al. A spirituality teaching program for depression: a randomized controlled trial. *Int J Psychiatry Med*. 2011;**42**(3):315-29. doi: [10.2190/PM.42.3.f](https://doi.org/10.2190/PM.42.3.f). [PubMed: [22439299](https://pubmed.ncbi.nlm.nih.gov/22439299/)].
27. Shariatnia K. [Effectiveness of spiritual therapy on the life quality of the women with breast cancer in Tehran]. *J Urmia Nurs Midwifery Fac*. 2017;**15**(2):107-18. Persian.
28. Hook JN, Worthington EJ, Davis DE, Jennings D2, Gartner AL, Hook JP. Empirically supported religious and spiritual therapies. *J Clin Psychol*. 2010;**66**(1):46-72. doi: [10.1002/jclp.20626](https://doi.org/10.1002/jclp.20626). [PubMed: [19904806](https://pubmed.ncbi.nlm.nih.gov/19904806/)].
29. Blazer D. Religion/spirituality and depression: what can we learn from empirical studies? *Am J Psychiatry*. 2012;**169**(1):10-2. doi: [10.1176/appi.ajp.2011.11091407](https://doi.org/10.1176/appi.ajp.2011.11091407). [PubMed: [22223008](https://pubmed.ncbi.nlm.nih.gov/22223008/)].
30. Boscaglia N, Clarke DM, Jobling TW, Quinn MA. The contribution of spirituality and spiritual coping to anxiety and depression in women with a recent diagnosis of gynecological cancer. *Int J Gynecol Cancer*. 2005;**15**(5):755-61. doi: [10.1111/j.1525-1438.2005.00248.x](https://doi.org/10.1111/j.1525-1438.2005.00248.x). [PubMed: [16174220](https://pubmed.ncbi.nlm.nih.gov/16174220/)].
31. Chaar EA, Hallit S, Hajj A, Aaraj R, Kattan J, Jabbour H, et al. Evaluating the impact of spirituality on the quality of life, anxiety, and depression among patients with cancer: an observational transversal study. *Support Care Cancer*. 2018;**26**(8):2581-90. doi: [10.1007/s00520-018-4089-1](https://doi.org/10.1007/s00520-018-4089-1). [PubMed: [29453604](https://pubmed.ncbi.nlm.nih.gov/29453604/)].
32. Sankhe A, Dalal K, Save D, Sarve P. Evaluation of the effect of Spiritual care on patients with generalized anxiety and depression: a randomized controlled study. *Psychol Health Med*. 2017;**22**(10):1186-91. doi: [10.1080/13548506.2017.1290260](https://doi.org/10.1080/13548506.2017.1290260). [PubMed: [28276950](https://pubmed.ncbi.nlm.nih.gov/28276950/)].
33. Kajbaf MB, Hoseini F, Ghamarani A, Razazian N. [Comparison of effectiveness of quality of life therapy and treatment based on Islamic spirituality on distress tolerance, stress, anxiety, and depression in women with tension headaches]. *J Cli Psychol*. 2017;**1**(33):21-38. Persian.
34. Kucuk Alemdar D, Kardas Ozdemir F, Guducu Tufekci F. The Effect of Spiritual Care on Stress Levels of Mothers in NICU. *West J Nurs Res*. 2018;**40**(7):997-1011. doi: [10.1177/0193945916686775](https://doi.org/10.1177/0193945916686775). [PubMed: [28322651](https://pubmed.ncbi.nlm.nih.gov/28322651/)].
35. Rowold J. Effects of spiritual well-being on subsequent happiness, psychological well-being, and stress. *J Relig Health*. 2011;**50**(4):950-63. doi: [10.1007/s10943-009-9316-0](https://doi.org/10.1007/s10943-009-9316-0). [PubMed: [20052545](https://pubmed.ncbi.nlm.nih.gov/20052545/)].
36. Lee KH, Besthorn FH, Bolin BL, Jun JS. Stress, Spiritual, and Support Coping, and Psychological Well-Being Among Older Adults in Assisted Living. *J Religion Spirituality Soc Work*. 2012;**31**(4):328-47. doi: [10.1080/15426432.2012.716287](https://doi.org/10.1080/15426432.2012.716287).