ORIGINAL PAPER



The Effect of Religious Psychotherapy Emphasizing the Importance of Prayers on Mental Health and Pain in Cancer Patients

Owrang Eilami¹ · Moslem Moslemirad² · Ebrahim Naimi³ · Amin Babuei⁴ · Karim Rezaei⁵

Published online: 17 September 2018 © Springer Science+Business Media, LLC, part of Springer Nature 2018

Abstract

The religious aspect is the most important aspect of the human nature that helps the human achieve the meaning and purpose of life as well as playing a very important role in the health of patients. This study aimed to determine the effect of religious psychotherapy emphasizing the importance of prayers on mental health and pain in cancer patients. This study is a clinical trial that was conducted in 2017 in Yasuj, Iran. According to the purpose of the study, the patients were randomly assigned into two experimental and control groups. Prayers 15 and 23 of the SahifehSajjadiyeh book were read at the beginning of the treatment sessions, and the patients were asked to pay attention to the meaning of prayer. The data were analyzed using SPSS 16 software. Before implementing the intervention, the mean and standard deviation of mental health score of the patients in the experimental and control groups were equal to 16.40 (2.21) and 16.56 (1.56). But after implementing the intervention, the mean and standard deviation of mental health score were equal to 11.24 (2.93) and 16.82 (1.83) which illustrates a significant statistical increase. Implementing the supportive spiritual intervention has been tested to enhance the mental health and reduce the pain of patients in the experimental group. Regarding this improvement, it is suggested a religious intervention be implemented to increase these patients' health in a participatory way.

Keywords Religious · Mental health · Pain · Cancer

Amin Babuei aminbauie@yahoo.com

Owrang Eilami Owrangeilami@yahoo.com

Moslem Moslemirad Moslemi.moslem2016@gmail.com

Ebrahim Naimi Ebnaimi2002@yahoo.com

Karim Rezaei rezaiekarim63@iran.ir

Extended author information available on the last page of the article

Deringer

Being informed about cancer is worrying for anyone and causes changes in the person affected (Baljani et al. 2011; Khoshnood et al. 2018). Cancer is one of the chronic diseases that is growing and is considered as one of the most important chronic diseases in Iran in recent years (Borji et al. 2017; Khoshnood et al. 2018) that causes side effects for patients (Borji 2017). Annually, more than 7 million people in the world die from cancer, and in 2010 (Ayatollahi et al. 2013) it was predicted that the number of new cases would increase from 10 million persons to 15 million persons. Currently, cancer is one of the main health issues in Iran and around the world the third leading cause of death and the second largest group of chronic and non-contagious diseases (Asadi et al. 2018; Safaeian et al. 2017).

Problems and complications of cancer patients are changes in health (Hughes et al. 2018; Motaghi et al. 2017), life expectancy, mental (Lloyd et al. 2018) and spiritual health (Chaar et al. 2018) so that cancer patients have lower quality of life (Hughes et al. 2018) and more problems like stress, anxiety and depression (Bronner et al. 2018). Other problems related to these patients can be their spiritual health so that the disease can reduce the spiritual health of these patients (Ahmadi et al. 2018). Disease by causing problems for a person will change their life expectancy and affect their mental health (Hoseini et al. 2017).

Mental health plays an important role in the health of the patients (Borji et al. 2018a). One of the relevant variables that affects mental health, in cancer patients, is life expectancy (Steffen et al. 2018). Mental health plays an important role in improving the lives of cancer patients. Factors such as stress, anxiety and depression affect mental health and reduce the quality of life of these patients (Pouy et al. 2018). Pain is another important issue in these patients. For this reason it is necessary for interventions to reduce it be done (Borji and Safari 2018).

Today, psychiatrists are looking to discover alternative treatments for the improvement of mental diseases, and they have been creative and innovative in the field of psychological health and well-being. So for improving mental diseases in addition to medicine therapy and other common modern medical and therapeutic facilities, praying, spirituality, spiritual medicine and spiritual therapy are used to improve mental diseases (Iranmehr and Kadkani 2017). Spiritual health is a significant factor in life and helps persons to adapt to cancer, reduce mental suffering and increase the mental health of patients. On the one hand, the feeling of comfort and power from religious beliefs can have a beneficial role in health and feeling good (Agli et al. 2018; Lai et al. 2018). In fact, the spiritual aspect is the most important aspect of the human nature that helps the human achieve the meaning and purpose of life, as well as playing a very important role in the health of patients (Ross et al. 2018). If spiritual health is compromised, the patient is at risk of mental disorders such as loneliness, depression and loss of meaning in life (Yazdi et al. 2005).

Among other problems in these patients, pain can be mentioned. Pain is one of the problems of patients that affects their quality of life and reduces their quality of life (Khezri Moghadam et al. 2018). There are many ways to reduce the pain of cancer patients. These include the use of drug and non-drug interventions. Drug interventions are both costly and cost-effective. For this reason, the use of non-pharmacological interventions is more important. Religious intervention is one of the non-pharmacological interventions that helps patients' health (Hoseini et al. 2017).

Religious intervention is one of the health promotion interventions in patients and has had a positive effect on patients in several studies (Bagheri et al. 2018a, b). Considering the

<u>\$</u>	Table 1 Cont	Table 1 Content of training sessions (Sharifi Rigi et al. 2018)
Springer	First session	 Group rules such as confidentiality of information and group purposes were taught to the patients At this stage, a teaching booklet was given to the patients in the Arabic and Persian languages with the purpose of the benefits of prayer The prayers given included health-related prayers in the SahifehSajjadiyeh The verses of the Quran, mentioning patience and passing hardships, were given to the patients For patients in the test group, group meetings were held and verses and prayers were recited
	Second session	 The patients were taught that unpleasant events such as illness could enhance knowledge of wisdom and goodwill. Verse أَن تَحْدُ وَحَدَّ اللَّذِي اللَّهُ وَاللَّهُ اللَّهُ للللَّهُ للللَّهُ للللَّهُ للللَّهُ اللَّهُ مَاللَّهُ اللَّهُ عَلَيْلَةُ اللَّهُ اللَّالَةُ اللَّهُ اللَّالَ اللَّهُ اللَّالَةُ اللَّهُ الْحُلْلَةُ اللَّهُ الللَّهُ الللَّهُ الللَّهُ اللَّهُ اللَّالَةُ اللَّالَةُ اللَّهُ اللَّهُ اللَّهُ اللَّهُ اللَّهُ اللَّالَةُ اللَّالَةُ اللَّالَالَاللَّالَالَا اللَّالَالَالَالَاللَّالَالَاللَّالَاللَّال
		3. The meaning of suffering and illness was described in the view of Imam Sajjad. For example, the patients were told that the common reactions in cancer patients are the need to be forgiven, spiritual growth and divine testing 4. As these patients suffer from pain and mental health problems, training on religious coping strategies was explained. For example, the patients were told to pray (Allah Akbar, Glory of God, Oh God, bless Muhammad and Ali Muhammad) (مناطب المناطبة الم
	Third session	 The concept of patience was used in prayer to control pain. For example, efforts were made to use methods such as intellectual challenge, group discussion, and pattern and head of religious patterns. In doing so, the patients were told to use prayer repeatedly during the pain Reviewing the previous meeting, question and answer
		 The development of adaptive methods, such as positive and hopeful thinking about the disease, by reinforcing a proper understanding of illness and God's beneficence, with an emphasis on divine power The development of spiritual skills such as relying on and trust in God and the role of trust in preventing negative self-esteem In order to reduce idleness and passivity, which lead to helplessness of patients, a meeting of prayer, congregation, and praying was held for them
	Fourth session	 Reviewing the previous meeting, questions and answers and evaluating the assignments given Once again, the mentioned words and prayers were reviewed. The concept of gratefulness was explained to patients, and they were all asked to continually read the prayer (hardship is easy) (مَنْ خَذْ أَنْحُنْ إِخْتُرْ جُنْرُ (hardship is easy) (مَنْ خُنْ أَنْ حَرْ أَنْحُنْ جُنْرُ (hardship is easy) (مَنْ جُنْرُ الله مَنْ الله مَن الله من الله منه الم الله منه الله من اله من الله من الله من الله من الله من الله منه من الله من
	Three patients	Three patients in the experimental group and two in the control group were excluded. The data were analyzed using SPSS 16 software

Demographic variables	Subsets	(Percentage) number		Р
		Experimental	Control	
Sex	Male	13 (35.1)	18 (46.2)	0.24
	Female	24 (64.9)	21 (53.8)	
Marital status	Widowers	18 (48.6)	11 (28.2)	0.37
	Married	19 (51.4)	28 (71)	
Education	Illiterate	5 (13.9)	2 (5.1)	0.18
	Primary	9 (24.3)	13 (33.3)	
	Middle school	12 (32.4)	15 (38.5)	
	High school	9 (24.3)	8 (20.5)	
	University	2 (5.4)	1 (2.6)	
Monthly income (RIAL)	Less than 500	9 (24.3)	7 (17.9)	0.55
	Between 500 and 1000	20 (54.1)	23 (59)	
	More than 1000	8 (21.6)	9 (23.1)	
Social support	Low	7 (18.9)	12 (30.8)	0.67
	Medium	26 (70.3)	19 (48.7)	
	High	4 (10.8)	8 (20.5)	

 Table 2
 Demographic characteristics of patients in the experimental and control group

necessity of the subject, this study was conducted to determine the effect of the effect of religious psychotherapy emphasizing the importance of prayers on mental health and pain in Cancer patients.

Materials and Methods

This study is a semi-experimental study that was conducted in 2017 in Iran. According to the purpose of the study, the patients were randomly assigned into two experimental and control groups.

The research team provided a list of patients with cancer. The number of eligible patients to participate in the study was 76 patients, according to studies in this field. According to the list, we started from the first one and interviewed the patients. Before beginning the interviews, we talked to the patients and if they were willing to participate in the study, we took their consent to take part in the study. Then, the patients were randomly divided into experimental and control groups. So we started from the beginning of the list; if the first patient had signed the informed consent to participate in the study, he was placed in the experimental group and the next patient was placed in the control group, and if he did not sign the consent to participate in the study, he was excluded from the study.

One of the questionnaires used in this study was a demographic questionnaire, which included questions about age, gender, grade of education, economic status and field of study. The second tool was GHQ-28 General Health Questionnaire which had 28 questions in 4 dimensions of physical symptoms (seven items), anxiety symptoms (seven items), social function (seven items) and symptoms of depression (seven items). In total, students earned a score between zero and 84, and the higher they scored, the worse the health of the individual. In this questionnaire, earning a score of zero to 27 meant desirable general

Variable	Before intervention		After intervention		P value
	E	С	E	С	
Physical symptoms	16.40 (2.21) 0.71	16.56 (1.56)	9.91 (3.90) 0.000	16.82 (1.83)	0.000
Anxiety	14.29 (1.63) 0.15	15.20 (2.09)	11.24 (2.93) 0.000	15.12 (2.41)	0.000
Disorder in the social function	14.75 (1.60) 0.50	15.74 (1.77)	10.62 (3.78) 0.000	15.51 (2.12)	0.000
Basic depression	15.05 (1.43) 0.73	14.41 (1.61)	9.94 (2.78) 0.000	14.41 (1.61)	0.000
Total score of general health	60.51 (3.48) 0.50	61.92 (3.94)	41.72 (10.17) 0.000	61.87 (4.11)	0.000
Pain	8.21 (1.08) 0.22	7.92 (0.92)	5.61 (1.91) 0.000	7.27 (1.53)	0.000

 Table 3
 Comparison of mean and standard deviation of mental health and pain dimensions in patients in the experimental and control groups before and after the intervention

health, a score of 28–55 meant good general health, and a score of 56–84 meant undesirable general health (Goldberg and Hillier 1979; Lobo et al. 1986). The pain questionnaire was used to assess and measure the amount of pain. To measure pain, pain assessment tools numbered from 1 to 10 were used (Borji et al. 2018b).

The general outline of the meetings: while presenting a proper conception of the effects of religious attitudes to the patients, the researcher helped the patients to strengthen their religious beliefs and to pay more attention to and focus on the order of the world, the wisdom and beneficence of God, as well as the gratitude in hardship and hope for divine mercy. Then, prayers 15 and 23 of the SahifehSajjadiyeh book were read at the beginning of the treatment sessions and the patients were asked to pay attention to the meaning of prayer. In addition, the patients were asked to adopt appropriate religious strategies to increase mental health and control pain based on the Quranic teachings related to the contents of prayers 15 and 23 of the SahifehSajjadiyeh and the psychological mechanisms existing in these prayers. It should be noted that some of the religious principles of Richards and Bergin were implemented for the patients with an emphasis on Islamic teachings including prayer, reading sacred books, going to religious places and forgiving the patients (Sharifi et al. 2018) (Table 1).

Result

The findings of Table 2 show the demographic characteristics of the patients under study. According to the findings, there was no significant difference between the demographic characteristics of the patients in the experimental group and the patients in the control group.

The findings of Table 3 show the difference in mean and standard deviation between the dimensions of mental health and pain in patients in the test and control group. According to the findings, after the intervention, the mental health of the patients in the experimental group was increased and the level of perceived pain was statistically significant.

Discussion

Religion is one of the most important variables in health (Dehghan et al. 2017). The results of the present study showed that the implementation of a spiritual intervention has increased the life expectancy of cancer patients. In the study by Ashvandi et al. that was conducted to determine the effect of spiritual counseling on the death anxiety in patients with renal failure, the results showed that the implementation of a spiritual intervention, which included supportive presence, support for religious services and use of supportive systems, reduced the anxiety level of death in hemodialysis patients with chronic renal failure at the end stage, which is consistent with the results of this study (Oshvandi et al. 2018).

According to the results of the present study, the implementation of a spiritual intervention has led to an increase in life expectancy in patients with cancer, which was compared with the study results of Salimi et al. about the effect of spiritual self-care program on patients' life expectancy with coronary artery in a group. The results showed that the implementation of three sessions of one and a half hours of spirituality workshop as one other day and weekly increased the patients' life expectancy (Salimi et al. 2016), which is consistent with the results of the present study. Also, in the study by Morasai et al. that was conducted to determine the effect of a spiritual counseling program on hope in patients with chronic renal failure, eight spiritual counseling sessions were held for the patients. The results showed that although no significant difference was found between the life expectancy scores of the patients in the experimental and control groups before implementing the intervention, the patients' life expectancy in the experimental group was significantly increased after implementing the intervention (Morasei and Aghajani 2014), which was consistent with the results of the present study. It should be noted that the type of spiritual intervention of the present study was similar to that study but its implementation method was different.

Conclusion

According to the results of this study, the implementation of supportive spiritual intervention has led to an increase in the patients' life expectancy in the experimental group. Regarding this improvement, it is suggested to implement a spiritual intervention in order to improve the health of these patients in a participatory way aimed to increase the patients' life expectancy. It is also recommended that nurses train their patients in the implementation of such interventions in their nursing care and provide them with the necessary background for their recovery.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

Human and Animal Rights This research has been approved by the Ethics Council in the study of the University of study.

Informed Consent Informed consent was taken from the participants. The patients were randomly assigned in the spiritual intervention group and control group. Patients received no payment and could leave the study at any time during the study period.

References

- Agli, O., Bailly, N., Ferrand, C., & Martinent, G. (2018). Spirituality, quality of life, and depression in older people with dementia. *Journal of Religion, Spirituality and Aging*, 30(3), 268–278.https://doi.org/10. 1080/15528030.2018.1452832.
- Ahmadi, F., Erbil, P., Ahmadi, N., & Cetrez, Ö. A. (2018). Religion, culture and meaning-making coping: A study among cancer patients in Turkey. *Journal of Religion and Health*, 11(2), 141–149. https://doi. org/10.1007/s10943-018-0646-7.
- Asadi, P., Fereidooni-Moghadam, M., Dashtbozorgi, B., & Masoodi, R. (2018). Relationship between care burden and religious beliefs among family caregivers of mentally ill patients. *Journal of Religion and Health*, 25(2), 111–118. https://doi.org/10.1007/s10943-018-0660-9.
- Ayatollahi, H., MohaddeSi, H., & Hassanzadeh, G. (2013). Quality of life in breast cancer patients: Study in the Omid cancer research center–Urmia. *Iranian Journal of Breast Disease*, 5(4), 35–43.
- Bagheri, S. H. S., Dehghan, M., Alavi, S. H., Iranmanesh, S., & Khoshab, H. (2018a). Correction to: Burst out of the dead land by the help of spirituality: A case study of living with blindness and cancer. *Journal of Religion and Health*, 57(3), 1198.
- Bagheri, S. H. S, Rayyani, M., Iranmanesh, S., Dehghan, M., Tirgari, B., & Hosseini, S. H. (2018b). Growth: A journey from experience to higher perception among Iranian muslim CPR survivors. *Journal of Religion and Health*, 20(2), 32–65. https://doi.org/10.1007/s10943-018-0614-2.
- Baljani, E., Khashabi, J., Amanpour, E., & Azimi, N. (2011). Relationship between spiritual well-being, religion, and hope among patients with cancer. *Journal of Hayat*, 17(3), 27–37.
- Borji, M. (2017). Investigating the effect of home care on death anxiety in patients with gastrointestinal cancer. *Govaresh.*, 22(2), 131–132.
- Borji, M., Nourmohammadi, H., Otaghi, M., Salimi, A. H., & Tarjoman, A. (2017). Positive effects of cognitive behavioral therapy on depression, anxiety and stress of family caregivers of patients with prostate cancer: A randomized clinical trial. *Asian Pacific journal of cancer prevention: APJCP.*, 18(12), 3207.
- Borji, M., & Safari, S. (2018). Patients' attitudes toward the cancer pain relief. Asian Pacific Journal of Cancer Prevention, 18(2), 321–324.
- Borji, M., Shahbazi, F., Nariman, S., Otaghi, M., & Safari, S. (2018a). Investigating the relationship between mother–child bonding and maternal mental health. *Journal of Comprehensive Pediatrics*, 9(1), e14014. https://doi.org/10.5812/compreped.14014.
- Borji, M., Taghinejad, H., & Sedmohamadi, R. (2018b). Comparison of the effects of drawing pictures and inflating balloons on anxiety and pain caused by diphtheria–pertussis–tetanus immunization in schoolaged children. Archives of Pediatric Infectious Diseases. https://doi.org/10.5812/pedinfect.
- Bronner, M. B., Nguyen, M. H., Smets, E. M., van de Ven, A. W., & van Weert, J. C. (2018). Anxiety during cancer diagnosis: Examining the influence of monitoring coping style and treatment plan. *Psycho-Oncology*, 27(2), 661–667.
- Chaar, E. A, Hallit, S., Hajj, A., Aaraj, R., Kattan, J., Jabbour, H., et al. (2018). Evaluating the impact of spirituality on the quality of life, anxiety, and depression among patients with cancer: An observational transversal study. *Supportive Care in Cancer*, 26(8), 2581–2590.
- Dehghan, M., Alavi, S. H., Iranmanesh, S., & Khoshab, H. (2017). Burst out of the dead land by the help of spirituality: A case study of living with blindness and cancer. *Journal of Religion and Health*, 56(3), 896–906.
- Goldberg, D. P., & Hillier, V. F. (1979). A scaled version of the General Health Questionnaire. Psychological Medicine, 9(1), 139–145.
- Hoseini, S., Nasrolahi, B., & Aghili, M. (2017). Prediction of hope of life based on spiritual well-being and psychological hardiness in women with breast cancer. Archives of Breast Cancer, 4(4), 136–140.
- Hughes, J., Cummings, M., Filshie, J., Kassab, S., Leng, G., Mackereth, P., et al. (2018). Ensuring model validity in a feasibility study of acupuncture to improve quality of life in cancer patients undergoing radiotherapy treatment. *European Journal of Integrative Medicine*, 21, 50–52.
- Iranmehr, A., & Kadkani, H. (2017). The effectiveness of religious-cognitive training based on quran verses on reducing pensionersâ anxiety and hopelessness. *Journal of Religion and Health*, 5(1), 32–39.
- Khezri Moghadam, N., Vahidi, S., & Ashormahani, M. (2018). Efficiency of cognitive-existential group therapy on life expectancy and depression of elderly residing in nursing home. *Iranian Journal of Ageing*, 13(1), 62–73.
- Khoshnood, Z., Iranmanesh, S., Rayyani, M., & Dehghan, M. (2018a). Body-mind healing strategies in patients with cancer: A qualitative content analysis. *Asian Pacific Journal of Cancer Prevention*, 19(6), 1691–1696.

- Khoshnood, Z., Iranmanesh, S., Rayyani, M., & Dehghan, M. (2018b). Getting out or remaining in the cage of inauthentic self: The meaning of existential challenges in patients' with cancer. *Indian Journal of Palliative Care*, 24(2), 131.
- Lai, L. C., Cummins, R. A., & Lau, A. L. (2018). Development of Personal Wellbeing Index—The validation of spirituality-religion satisfaction as a life domain. *International Journal of Happiness and Development*, 4(2), 93–112.
- Lloyd, S., Baraghoshi, D., Tao, R., Garrido-Laguna, I., Gilcrease, G. W., Whisenant, J., et al. (2018). (OA44) Mental health disorders are more common in colorectal cancer survivors and associated with decreased overall survival. *International Journal of Radiation Oncology*Biology*Physics*, 101(2), E19.
- Lobo, A., Pérez-Echeverría, M. J., & Artal, J. (1986). Validity of the scaled version of the General Health Questionnaire (GHQ-28) in a Spanish population. *Psychological Medicine*, 16(1), 135–140.
- Morasei, F., & Aghajani, M. (2014). The effect of counseling with spirituality approach on hope in patients with chronic renal failure. *Complementary Medicine Journal of faculty of Nursing and Midwifery*, 4(2), 776–786.
- Motaghi, M., Darbandi, B., & Baghersalimi, A. (2017). Comparative effect of chamomile mouthwash and topical mouth rinse in prevention of chemotherapy-induced oral mucositis in Iranian pediatric patients with acute lymphoblastic leukemia. *Iranian Journal of Blood and Cancer*, 9(3), 84–88.
- Oshvandi, K., Amini, S., Moghimbeigi, A., & Sadeghian, E. (2018). The effect of spiritual care on death anxiety in hemodialysis patients with end-stage of renal disease: A randomized clinical trial. *Journal of Hayat*, 23(4), 332–344.
- Pouy, S., Peikani, F. A., Nourmohammadi, H., Sanei, P., Tarjoman, A., & Borji, M. (2018). Investigating the effect of mindfulness-based training on psychological status and quality of life in patients with breast cancer. *Asian Pacific Journal of Cancer Prevention*, 19(7), 1993–1998. https://doi.org/10.22034/apjcp. 2018.19.7.1993.
- Ross, L., McSherry, W., Giske, T., van Leeuwen, R., Schep-Akkerman, A., Koslander, T., et al. (2018). Nursing and midwifery students' perceptions of spirituality, spiritual care, and spiritual care competency: A prospective, longitudinal, correlational European study. *Nurse Education Today*, 67, 64–71.
- Safaeian, Z., Hejazi, S. S., Delavar, E., Hoseini Azizi, T., & Haresabadi, M. (2017). The relationship between caregiver burden, and depression, anxiety and stress in family caregivers of cancer patients referred to Imam Reza Hospital in Bojnurd City. *Iranian Journal of Psychiatric Nursing*, 5(3), 7–14.
- Salimi, T., Tavangar, H., Shokripour, S., & Ashrafi, H. (2017). The effect of spiritual self-care group therapy on life expectancy in patients with coronary artery disease: An educational trial. *Journal of Rafsanjan University of Medical Sciences*, 15(10), 917–928.
- Sharifi Rigi, A., Marashi, S. A., & Hamid, N. (2018). The efficacy of spiritual/religious psychotherapy emphasizing the importance of 15th and 23th prayers of SahifehSajjadiyeh—On mental health and attitude toward disease in cancer patients. *Journal of Nursing and Midwifery Urmia University of Medical Sciences*, 16(2), 81–91.
- Steffen, L. E., Vowles, K. E., Smith, B. W., Gan, G. N., & Edelman, M. J. (2018). Daily diary study of hope, stigma, and functioning in lung cancer patients. *Health Psychology*, 37(3), 218.
- Yazdi, M. H., Estaji, Z., & Heydari, A. (2009). Study of the quality of life of nurses in Sabzevar hospitals in 2005–2006. Sabzevar Journal, 16(1), 50–60.

Affiliations

Owrang Eilami¹ • Moslem Moslemirad² • Ebrahim Naimi³ • Amin Babuei⁴ • Karim Rezaei⁵

- ¹ School of Medicine Social, Determinants of Health Research Center, Yasuj University of Medical Sciences, Yasuj, Iran
- ² Yasuj University of Medical Sciences, Yasuj, Iran
- ³ Department of Public Health, Faulty of Health, Yasuj University of Medical Science, Yasuj, Iran
- ⁴ Deputy of Development of Managment, Yasuj University of Medical Science, Yasuj, Iran
- ⁵ Determinants of Health Research Center, Yasuj University of Medical Sciences, Yasuj, Iran