



A study on the effect of well- being on myocardial infarction patients' depression and anxiety in Iran

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Abstract

Background & Aims: As a major health problem in the world, coronary artery diseases include myocardial infarction (MI) that cause the patients experience mental and emotional problems like depression and anxiety at different periods of their hospitalization time that can affect other medical parameters and increase their needs. Spirituality wellbeing can play an important role in their adapting to some of their mental disorders resulted from illness such as depression and anxiety.

Materials and Methods: This descriptive correlational study tried to determine the efficacy of well- being on myocardial infarction patients' depression and anxiety in in Urmia, Iran. The patients were studied by a questionnaire, consisted of their demographic characteristics and a Palutzian & Ellison spiritual wellbeing scale. Mean scores of anxiety and depression was evaluated by using a HADS questionnaire. All data analyses with a 5% level of statistical significance were conducted through Software SPSS version 18 and descriptive and inferential statistical methods (Chi-square).

Results: (29.2%) 46 of patients were female and the rest were male. In addition, (37.7%) of them had other chronic disease and (23.9%) 16 of them had lower levels of depression or anxiety, (53.7%) had a higher level of depression or anxiety disorder (borderline) and finally, (22.4%) of them had a sever level of depression or anxiety problems.

(52.2%) of samples had an average spiritual wellbeing level and the rest had a high spiritual wellbeing level. There was a significant relationship between spiritual wellbeing and level of depression and anxiety with level of education, gender and and occupation. There was a reverse relationship between the effect of spiritual well- being depression and anxiety in myocardial infarction patients ($P = 0.05$).

Conclusion: Nursing plans based on spirituality wellbeing can be a good solution to decrease depression and anxiety in myocardial infarction patients.

Keywords: spiritual well- being, myocardial infarction, depression, anxiety

Received 05 Feb 2019; accepted for publication 23 May 2019

Introduction

As a major cause of death in worldwide, myocardial infarction can be a major catastrophic disease leading to a chronic deterioration or a sudden death (1).

Although its prevalence depends on method of assessment, depression and anxiety as psychosocial complications, are common in the patients recovering from disease that may decrease the patients' quality of life (2).

Because of the possibility of death, the patients may experience many concerns and fears at different periods of the hospitalization (3) that cause the symptoms of depression and anxiety (4).

As myocardial infarction increase the risk of cardiac mortality, it is obvious that depression and anxiety confirm the existence of psychological problems (8). Results of some research have showed that 15–20% of patients have a major depression, and a similar proportion have a minor depression after myocardial infarction (3).

The concept of human health is based on dimensions of physical, emotional, cultural, mental, social, spiritual and environmental.(5) Many studies describe concept of spiritual wellbeing has a positive impact on health and better relationship with others.(6)

Spiritual wellbeing is a special value and paying attention to it is very necessary because it is one of the most important aspect of human existence and is related to their health, recovery and feeling good, and believing in a transcendent power (7).

As a strong predictor of psychological health, spirituality wellbeing is a global phenomenon can be expressed as religious beliefs and practices (8). Human's spiritual wellbeing is obtained by finding a balance among goals, beliefs, values and relationships with self and others (9). Studies have showed that spiritual wellbeing can increase the patients' ability against mental health problems like depression and help to improve a range of their physical abilities to cope with chronic illness complications and death (10-11).

Many researches have confirmed that spiritual wellbeing needs of patients are given less attention(12). Therefore, providing spiritual needs of admitted patients

is very important in their recovery speed due to disease crisis leading to discouragement, isolation, increased vulnerability and alienation. Those admitted in these units may experiences decreased relationship with self, others and overwhelming sense of fear of death(13).

Based on clinical experiences, fear of sudden death among cardiovascular patients is a common problem and spiritual distress can aggravate their uncontrollable mental manifestation like depression or anxiety.(14) Therefore, it is necessary to recognize spiritual wellbeing as a base of nursing care to help cardiovascular patients with a holistic approach to their health mental, physical, and spiritual dimensions(15) and combining their spirituality with care plans.(12).

Objectives

This study aimed to determine the efficacy of well-being on Myocardial infarction patients' depression and anxiety in Iran in Iran, the importance of spiritual beliefs into Iranians' mind and the importance of spiritual wellbeing based care in controlling depression and anxiety as common disorders among MI patients, there was not a similar Iranian study in the available literature about these topics. Therefore, due to the mentioned reasons, this study in 2014 was carried out.

Materials and Methods

This study was a descriptive and cross-sectional and the samples were selected from patients with myocardial infarction hospitalized in cardiac care units in Urmia, Iran . All consecutive admissions in the wards were recruited over a period of four months. On an average, the assessments were done one week after the admission to the hospital. The sample included patients above 40-70 years of age, who were communicative and cooperative for answering to questions. Written informed consent was obtained. The inclusive criteria were diagnosed as myocardial infarction approved by a cardiologist, willingness to participate, being conscious and aware of his/her disease. Those who had alcohol or other substance abuse, no mental retardation, blindness and deafness and active mental disease, a major depressive disorder, or other neurological disorders were excluded. The study protocol was approved by the

Urmia University of Medical Sciences Ethics Committee.

A three-part questionnaire was used for data collection; the first part included demographic characteristics (e.g. age, history of cardiac disease, sex, education, marital status, and current disease), the second part included Palutzian and Ellison Spiritual Wellbeing Questionnaire It was designed in 1982 by Palutzian and Ellison to assess existence and religious dimensions of spiritual wellbeing using Likert scale (16). In this 20-item questionnaire for spiritual wellbeing, 10 questions related to existence health and 10 questions related to religious health. The range of scores for each of religious and existence health was 10-60. A range of 20–120 score was total of those two subgroups. Likert scale from was used. In Iran, cronbach's alpha coefficient of the questionnaire has been calculated 0.82 (18). The third part of questionnaire was the Hospital Anxiety and Depression Scale (HADS) to assess anxiety and depression without investigating somatic symptoms.

As a brief self-administered scale, Hospital Anxiety Depression Scale (HADS) is specifically designed for the patients with acute or chronic physical illness. It consists of 14 items, seven item study anxiety and seven item study depression. The depression subscale has been considered a symptom characteristic of the endogenous subtype of depression (17). Validation studies have established a reliable factor structure and a high internal consistency for this standardized questionnaire (18,19).

All data analyses with a 5% level of statistical significance were conducted through Software SPSS version 18 and descriptive and inferential statistical methods (Chi-square).

Results

67 patients with acute myocardial infarction who were hospitalized In CCU wards in Seyyed ol-Shohada heart center of Urmia University of Medical Sciences were selected by a convenience sampling for the study.

46(70.8%) were male and 19 were female. 9 patients (13.4%) were single and 54 (89.6 %) were married and 4 (6%), were widow and 12 (18.2%) were illiterate, and

29 patients (43.9%) with primary education and 12 (18.2%) with high school education, and 13 (19.7%) had a higher education. In terms of employment, 19 (28.8%) were housewives and 28 (42.2 %) were employed and 15 (22.7%), retired and 4(6.1%) were unemployed. In addition, 23 patients (37.7 %) had other chronic diseases. 56 of them live in the Urmia city and the rest of the samples were from rural areas.

The mean age of the study participants was 51.31 ± 1.69 years and the mean duration of illness of the participants in this study was 713.92 ± 250.1 days. In terms of spirituality, a total of 35 patients (52.2%) of the participants in this study had an average and 32 (48.8%) of the participants had a spiritual wellbeing level.

In terms of mental health, a total of 16 patients (23.9%) of the participants in this study had low levels of depression or anxiety and 36(53.7%) of the participants had a mean depressive or anxiety disorder and 15 (22.4%) of the participants had a higher level of depression or anxiety disorders.

However, according to the results of study, there was a significant association between spirituality wellbeing and depression or anxiety severity ($p = 0.003$) and there was not a significant association between spirituality wellbeing and marital ($p = 0.378$) and spirituality and education level were significantly associated ($p = 0.18$).

There was a significant association between, spiritual wellbeing and employment status of patients hospitalized in the cardiac unit ($p = 0.029$) and an association between hospitalization duration and there was no significant correlation with the level of anxiety.

There was an association between between gender, marital status and depression, respectively ($p = 0.056$) ($p = 0.045$).

But, here wasnot an association between level of education, employment status and depression, respectively ($p = 0.4$) ($p = 0.195$).

According to the results, no association between the hospitalization duration and the level of anxietywas determined.

Discussion

The present study examined the effect of well-being on myocardial infarction patients' depression and

anxiety in Iran. The findings of this study are useful, because of the fact that providing spiritual wellbeing for patients (or significant others) is an essential component of care plan for clinical staff and is a fundamental right for all of the myocardial infarction patients.

In our study, a total of 16 patients (23.9%) of the participants had mild levels of depression or anxiety and 36(53.7%) of them had a mean depressive or anxiety disorder and 15 (22.4%) of the participants had a higher level of depression or anxiety disorders. A study showed that negative emotions following myocardial infarction are more common and 66 % of patients had anxiety and 20% had depression (20).

On the other hands, mental relaxation efforts decrease 41% of mortality rate in patients with myocardial infarction and 48% of non-fatal myocardial infarction consequences (21).

Other study reported a significant association between depression, anxiety, and complications after MI that could seem to predict mortality in studies in which disease severity is significantly correlated with depression and anxiety (22).

In a study of 196 patients hospitalized in New York after infarction, on admission and 4 months after discharge were assessed for depression, anxiety and quality of life. It was also found that depression may be indicative of mortality up to 6 months after infarction (23).

In our study, there was a significant association between, spiritual wellbeing and employment status of patients hospitalized in the cardiac unit. A study in Canada found that anxiety and depression can increase mortality rate up to 6 months after myocardial infarction, regardless of its severity (24).

An association between previous illnesses, employment status with psychological complications after myocardial infarction was showed in another study (25).

Spirituality has a close association with a person's health, so that religion and spirituality are considered as an important resource for coping with stressful life events (26).

Research showed the relationship between spirituality positive impact on mental (27, 28).

On the contrary, another study reported that spirituality is correlated with cardiac complications or mortality following acute myocardial infarction in depressed patients with little support (29).

Other study in Jordan noted that one of the main obstacles to attributing a causal role to mood status in clinical prognosis after MI is the potential confounding of mood after MI with disease severity and most of the patients concerned about worsen the condition and future potential to undermine them after discharge(30).

The obtained results of our study showed that there was a significant association between spirituality wellbeing and depression or anxiety severity and there was not a significant association between spirituality wellbeing and marital and spirituality and education level were significantly.

A research studied the impact of religious involvement on time to remission of depression in patients with heart failure. Of 1000 depressed patients identified at baseline, follow-up data on depression were obtained on 87%. Patients involved in group-related religious activities experienced a shorter time to remission (31).

Our study showed a significant association between, spiritual wellbeing and employment status and duration of hospitalization of patients with myocardial infarction and other association between gender, marital status with anxiety and depression.

But, there was not an association between level of education, employment status and the level of depression and anxiety.

However, there was a reverse association between spirituality wellbeing and anxiety and depression severity and no significant association between spirituality wellbeing and marital and education level was discovered.

Other studied stated that there was no significant statistical relationship between the spiritual wellbeing of the patients and their demographic features of age, marital status, financial status and family relationships (35).

Based on findings of another study, it is possible to reduce patients' depression and anxiety by enhancing their spiritual wellbeing and implementing this spiritual care program by nurses can be effective for spiritual wellbeing of patients with cardiac ischemia and can be an appropriate method to improve their spiritual wellbeing (36).

Conclusion

The study findings showed the difficulties that patients experience after their disease. Immediately after hospitalization, health care system should consider patients' needs for spiritual wellbeing support. To provide effective interventions, a comprehensive assessment of anticipated difficulties and concerns that postpone their adaptation should be done. Identification of individuals' concerns like depression and anxiety is essential. On the other hands, it is clear that a positive spiritual wellbeing play an important role in the prevention or decrease of the patients' emotional and mental problems.

It can be concluded that application of interventional strategies are crucial and more attention should be done to the spiritual aspects of patients in hospitalization duration. It should be emphasized on the importance of nursing communication to change unpleasant moods. The significance of familial and social support for improving patients' spiritual wellbeing should be stressed and spirituality needs should be formally assessed and integrated in the management of patients undergoing care. Educative and counseling programs should be noticed based on the spiritual wellbeing needs of MI patients.

Acknowledgement

This research has been done by many contributors and comments from scientific boards in the Urmia University of Medical Sciences. We thank them.

Conflict of interest

The authors declare no conflict of interest in this study

References

1. French JK, White HD. Clinical implications of the new definition of myocardial infarction. *Heart* 2004; 90(1):99-106.
2. Mallinson T. Myocardial Infarction. *Focus First Aid* 2010; 15:15.
3. Hanssen TA, Nordrehaug JE, Eide GE, Bjelland I, Rokne B. Anxiety and depression after acute myocardial infarction: an 18-month follow-up study with repeated measures and comparison with a reference population. *European Journal of Cardiovascular Prevention & Rehabilitation*. 2009; 16(6):651-9.
4. Tully PJ, Baker RA. Depression, anxiety, and cardiac morbidity outcomes after coronary artery bypass surgery: a contemporary and practical review. *Journal of geriatric cardiology: JGC* 2012; 9(2):197.
5. Omidvari S. Spiritual Health; Concepts and Challenges. *Journal of interdisciplinary Quranic researches* 2008; 1(1):5-17. (Persian)
6. Potter PA, Perry AG. *Fundamentals of Nursing*. 7th ed. Philadelphia: Mosby Elsevier; 2009.
7. Mauk KL, Schmidt NA. *Spiritual Care in Nursing Practice*. Philadelphia: Lippincott Williams & Wilkins; 2003.
8. Warber SL, Ingerman S, Moura VL, Wunder J, Northrop A, Gillespie BW, et al. Healing the heart: a randomized pilot study of a spiritual retreat for depression in acute coronary syndrome patients. *Explore (NY)* 2011; 7(4):222-33.
9. Groleau D, Whitley R, Lespérance F, Kirmayer L. Spiritual reconfigurations of self after a myocardial infarction: Influence of culture and place. *Health Place* 2010; 16:853-60.
10. McSherry W, Cash K, Ross L. Meaning of spirituality: implications for nursing practice. *J Clin Nurs* 2004; 13(8):934-41.
11. Raholm MB. Weaving the fabric of spirituality as experienced by patients who have undergone a coronary bypass surgery. *J Holist Nurs* 2002; 20:31-47.
12. Hassankhani H, Taleghani F, Mills J, Birks M, Francis K, Ahmadi F. Being hopeful and continuing to move ahead: Religious coping in Iranian chemical warfare poisoned veterans, a qualitative study. *J Relig Health* 2010; 49:311-21. 37.

13. Delaney C, Barrere C. Blessings: the influence of a spirituality-based intervention on psychospiritual outcomes in a cardiac population. *Holist Nurs Pract* 2008; 22(4):210–9.
14. Timmins F, Kelly J. Spiritual assessment in intensive and cardiac care nursing. *Nurs Crit Care* 2008; 13(3):124–31.
15. Libby P, Borrow RO, Zipes DP, Mann DL, Braunwald E. *Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine*. 8th ed. Philadelphia: Saunders/Elsevier; 2008.
16. McEwen M. Spiritual nursing care: state of the art. *Holist Nurs Pract* 2005; 19(4):161–8.
17. Mauk KL, Schmidt NA. *Spiritual Care in Nursing Practice*. Philadelphia: Lippincott Williams & Wilkins; 2003.
18. Sayyed Fatemi N, Rezai M, Givari A, Hosseini F. Impact of prayer on spiritual health of patients with cancer. *Payesh* 2006; 5(4):295–304.
18. Zigmond AS, Snaith RP. The Hospital Anxiety and Depression Scale. *Acta Psychiatr Scand* 1983; 67:361-70.
19. Chaturvedi SK, Chandra PS, Channabasavanna SM, Beena MB, Pandian RD. Detection of depression and anxiety in cancer patients. *NIMHANS J* 1994; 12:141-4.
20. Montazeri A, Vahdaninia M, Ebrahimi M, Jarvandi S. The hospital anxiety and depression scale (HADS): Translation and validation study of the Iranian version. *Health Qual Life Outcomes* 2003; 1:14-8.
21. Thornton E, Bundred P, Tytheleighm UK. Rehabilitation program. *Br J Cardiol* 2006; 13 (3):220-4.
22. Strik JJ, Denollet J, Lousberg R, Honig A. Comparing symptoms of depression and anxiety as predictors of cardiac events and increased health care consumption after myocardial infarction. *J Am Coll Cardiol* 2003; 42: 1801-7.
23. Seyedfatemi N, Rezaie M., Givari A, Hosseini F. Prayer and spiritual wellbeing in cancer patients. *Journal of the Iranian Institute for Health Sciences Research* 2006; 4(5): 295-303.
24. Fauerbach J, Bush D, Thombs B. Depression following acute MI. *Psychosomatic* 2005; 46: 355-61.
25. Lane D, Caroll D, Lyp GYH. Psychology in coronary care. *Q J Med* 1999; 92: 313-425.
26. Foruzandeh N, Delaram M, Foruzandeh M, Darakhshandeh S. Study of mental health status of cardiovascular diseases patients and determination of some effective factors on it in the patients hospitalized in CCU and cardiology wards of Hajar Hospital, Shahrekord. *J Clin Nurs Midwifery* 2013; 2(2):18–25.
27. Omidvari S. Spiritual health; concepts and challenges. *Quranic Interdiscip Stud J Iranian Student's Quranic Organiz*. 2009; 1(1): 5-17.
28. Strik JJ, Denollet J, Lousberg R, Honig A. Comparing symptoms of depression and anxiety as predictors of cardiac events and increased health care consumption after myocardial infarction. *J Am Coll Cardiol* 2003; 42: 1801-7.
29. Rebecca L. Depression and Rehospitalization Following Acute Myocardial Infarction. *Circ Cardiovasc Qual Outcomes*. 2011 Nov 1; 4(6): 626–633.
30. Blumenthal JA, Babyak MA, Ironson G, Thoresen C, Powell L, Czajkowski S, et al. Spirituality, religion, and clinical outcomes in patients recovering from an acute myocardial infarction. *Psychosom Med* 2007; 69(6):501-8.
31. Al Hassan M, Sagr L. Stress of myocardial infarction patient in the early period after discharge. *J Adv Nurs* 2002; 181-8.
32. Koenig HG. "Religion and remission of depression in medical inpatients with heart failure/pulmonary disease". *J Nerv Mental Dis* 2007; 195: 389-395.
33. Shuler P, Gelberg L, Brown M. The effects of spiritual/religious practices on psychological wellbeing among inner city homeless women. *Nurse Pract Forum* 1994. 5(2): 106-113.
34. Moghimiyani MF, Salmani M. Azarbarzin, Relationship of Test Anxiety and Spiritual Wellbeing in Nursing Student. *J Qom Univ Med Sci* 2011. 5(3): p. 31-36.
35. Aghahosseini S.S. The spiritual Wellbeing of Cancer Patient and the Factors Related to it. *J Qom Univ Med Sci* 2011. 5(3): 7-12.
36. Baker SL. The Liebowitz social anxiety scale as a self-report instrument: A preliminary psychometric analysis. *Behav Res Therapy* 2002. 40(6): 701-15.
36. Mahboobi M, Etemadi M, Khorasani E. The Relationship between Spiritual Health and Social Anxiety in Chemical Veterans. *Iran J Military Med* 2012; 14(3):186-91.