



The Effect of Recommended Recitals on Blood Pressure and Pulse Rate in Patients Admitted to the Coronary Care Unit

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Abstract

Background: Hospitalization in intensive care units causes anxiety and hemodynamic changes in patients. Nowadays, citation therapy as one of the therapeutic methods in complementary medicine plays an important role in reducing the anxiety and stability of hemodynamic changes.

Objectives: This study was conducted to investigate the effect of recommended recitals on blood pressure and pulse rate of patients admitted to the cardiac care unit (CCU).

Methods: This quasi-experimental study was performed on 60 patients admitted to the cardiac care unit in the two groups containing 30 controls and 30 test patients. At least 4 times a day and every time 100 times the mention of "There is no power but from God" and 7 times Hamad Surah was repeated. The average blood pressure and pulse rate in the two groups were recorded before and after the intervention by a digital barometric device attached to the patient. The data were analyzed by SPSS V. 16 software by independent *t*-test.

Results: There was no significant difference in terms of blood pressure in the control group before and after the intervention ($P = 0.25$). But after the intervention, there was a significant difference ($P = 0.006$). There was no significant difference in the pulse rate before and after the intervention in the control and control groups ($P = 0.023$). Moreover, there was no significant difference between the two groups after the intervention ($P = 0.55$).

Conclusions: The results showed that spiritual care such as curative therapy as a non-pharmacological and non-invasive method plays a significant role in the improvement and stability of hemodynamic changes such as blood pressure and pulse rate. Therefore, these non-prescriptive methods can be used as complementary therapies.

Keywords: Recommended Recitals, Blood Pressure, Pulse Rate

1. Background

Cardiovascular diseases are one of the most common disorders and the main cause of death and disability in the countries of the world (1). It has been recognized as one of the major health problems in developing and developed countries (2). Studies have shown that death from heart disease by 2020 will account for 75% of the world's most commonly reported deaths (3). In the United States, the prevalence of congestive heart failure (CHF) is > 5.7 million, with 670000 new cases annually. In Europe and globally, the prevalence is > 15 million and 37.7 million, respectively (3). CHF hospitalization rates are high and it occurs in patients > 65 years of age, with more than 1 million primary presentations or 1% to 2% of all hospital-

izations yearly. Annual medical care expenditure in the United States exceeds 17 billion USD (4). Currently, cardiovascular disease in Iran is the first cause of death in people over 35 years old, which is expected to reach 44.8% of deaths by 2020 (3). Hospitalized patients in the CCU section are confronted with several stressors during admission (5). These patients usually face a wide range of negative emotions, such as anxiety, anger, and depression, especially when the disease results in the reduction of roles and valuable activities, and changes in patient's communication. Socializing and doing the patient's previous activities is either difficult or impossible because of the disease, and is usually owing to prematurity. Heart failure is caused by dyspnea, cardiac dysfunction, depression, and mental im-

pairment, which causes fatigue and suffering (6,7). Anxiety and fear are the responses of patients admitted to the CCU, which causes hemodynamic changes in the condition of these patients (8, 9). Patients admitted to the CCU may be encounter increased anxiety, stimulation of sympathetic activity, and increase the release of catecholamine. In the blood plasma, they present with increased blood pressure and increased heart rate, which may increase the risk of a heart attack in hospitalized patients (10). The presence of anxiety in both hands, especially at the start of the treatment, can increase the heart rate, blood pressure, the risk of bleeding, the metabolism of the body, and the consumption of oxygen (11). In such circumstances, when a person is physically disabled and admitted to the hospital, the mentality propagation can take him to another place that may be healing (12). Therefore, during an illness, religious beliefs play crucial roles and make the person accept the disease. They also help the person to understand the life events, especially the painful and distressing events and give a pleasant encouragement to the patient's mood (5,13) because daily spiritual experiences play an important role in the adaptation, recovery process, and the patient's acceptance of the illness (14,15). Among the spiritual sources, pray and recitals are considered the most commonly used therapies (13, 16). To mention a Qur'anic method plays an important role in the prevention and control of anxiety (5). Studies show that recital sing and repeating the recommended mentions will improve the patient's body and dealing with crises (16) when recital sing and praying parts of the brain are responsible for creative thinking and decision making. Active parts of the parietal lobe of the brain are disabled. This causes people to lose their sense of place and time when they pray and thereby their pulse rate is reduced (11). The prayer secretes cortisol hormones, epinephrine, and norepinephrine from the adrenal gland in response to the stress (17). Hasanpour-Dehkordi et al. reported that this cure reduces the pain of heart patients (16), Ai et al. indicated that prayer therapy reduces the duration of hospital admission in cardiac patients (18), Hojjati and Hekmatipour showed prayer and is therapeutic application increased the life expectancy of patients admitted to CUU (5). Also, Sharifnia et al. acclaimed that this therapy increases spiritual well-being of hemodialysis patients (12). Taghizadeh et al. advocated that Prayer therapy reduces and improves hemodynamic symptoms in hospitalized patients (19). Furthermore, Carvalho et al. indicated that the application of this therapeutic approach reduces anxiety, as well as systolic and diastolic blood pressure in patients undergoing chemotherapy (20). Therefore, nurses as a professional group during the hospitalization and staying in the hospital should pay attention to the spiritual and religious needs of the patients and while addressing the spiri-

tual needs, provide a good opportunity for spiritual fulfillment for patient adaptation (5, 16). Regarding the cultural and religious context of Iran, non-pharmacological treatments such as recommended recitals as a complementary medicine for the treatment of patients can be used.

2. Objectives

The researcher, based on his own clinical experience, aimed to study the effect of curative therapy on the blood pressure and pulse rate of coronary care unit patients.

3. Methods

3.1. Setting

This quasi-experimental study was conducted on patients admitted to the CCU of Gonbad-e-Kavoush and Hakim Jorjani Hospital in Gorgan, Iran in 2017.

3.2. Inclusion and Exclusion Criteria

The inclusion criteria for patients who were hospitalized for heart problems in the CCU unit were all Iranian and Muslim, and were physiologically stable at the time of doing the research. On average, every patient was admitted to the CCU for 3 days. The exclusion criteria were the patients with a heart problem and other chronic diseases such as diabetes, multiple sclerosis, and cancer.

3.3. Sampling Method

This study was conducted on 60 subjects in two groups of 30 (30) and 30 (30) controls, based on Hasanpour-Dehkordi et al with a power of 80%, confidence interval of 0.95%, a significance level of 0.05 and an effect size of 0.86 using software. G* POWER were calculated (16) and randomly homogeneous in terms of age, sex, education, marital status and literacy level were divided into two groups of test and control.

3.4. Measures

The data collection tool was used to record the patient's heart rate monitor (pulse, blood pressure, and respiration). The validity of this is based on the view of hospital engineering and departmental officials and its reliability through blood pressure control. The Beurer's German-made BM20 digital armband pressure gauge was approved by the researcher himself for measuring the pulse with a watch and a touch.

3.5. Education and Treatment Program

In this study, the researcher did not train and give to the other group after the approval of the plan at the university and obtaining an ethics code from Chalus Branch, Islamic Azad University with number consideration IR.IAU.CHALUS.REC.92/7/11 and obtaining a license and presenting it to the hospital authorities and obtaining their consent in the form of an accident to the group who had the conditions for entry into the study. In the experimental group, after confirmation of the patient's initial condition, explaining the purpose of the research and informed consent and confidence from the anonymity of the research units in the pre-test group, after the physiology status was confirmed in the CCU section, information (pulse, blood pressure, and breathing). Then the researcher in the test group gave a prayer and encouraged the patients to pray for the prayers of Hazrat Zahra, in which more than 100 words were used by Allah, and the teaching of sublingual reading 7 times of Hamad Surah, and the expression of 100 times the recitals "There is no power but from God" and patients were asked to do this at least 5 times a day. The researcher then looked at the subtleties of the hospital staff to see if the group was doing this. In the course of the intervention, the researcher was asked by asking the section about the recitals of the recitals, especially the recitals of the letters of Hazrat Zahra. Also, only routine medical and nursing care was performed in the test group.

3.6. Statistical Analysis

The researcher used the SPSS V. 16 software after collecting pre-test data before the intervention and post-test after the intervention at the time of transplantation or transfer from the CCU. The results for comparing the demographic characteristics of the two groups in terms of age and duration of hospitalization with independent *t*-test and for comparing two groups of sex and marriage with chi-square test and Fisher's test, and also for comparison before and after intervention in each group of *t*-test Independent *t*-test with a significant level of 0.05 was used to compare the two groups.

4. Results

The results of this study did not show a significant difference in terms of demographic characteristics between the test and control groups, sex ($P = 0.39$), marital status ($P = 1$), level of education ($P = 0.61$), and mean of days of admission ($P = 0.1$) (Table 1).

Table 1. The Frequency of Demographic Characteristics of Patients in Two Intervention and Control Groups

| Variable | Test | Control | P Value |
|---------------------------|---------------|--------------|---------|
| Age | 59.22 ± 11.89 | 58.83 ± 6.22 | 0.87 |
| Sex | | | 0.39 |
| Female | 11 | 13 | |
| Male | 19 | 17 | |
| Marital status | | | 1 |
| Single | 6 | 6 | |
| Married | 24 | 24 | |
| Level of education | | | 0.61 |
| Elementary | 11 | 9 | |
| Middle school | 8 | 6 | |
| High school | 4 | 8 | |
| Diploma | 3 | 3 | |
| Academic | 4 | 4 | |
| Average days of admission | 3.03 ± 0.85 | 2.66 ± 0.88 | 0.1 |

The pulse rate of the patients in the control group before the intervention was 79.52 ± 10.71 and after the intervention was 77.66 ± 10.95 , which showed a significant difference ($P < 0.01$). The difference in the number 2.16. Also in the test group, the pulse rate before the intervention was 84.80 ± 20.8 and after the intervention 75.8 ± 13.9 , ($P < 0.01$), which showed a significant difference 9.09 was (Table 2).

Table 2. Comparison of Pulse Rate in the Control Group Before and After Intervention

| Time | Test Group | Control Group | P Value |
|------------------------|--------------|---------------|---------|
| Before intervention | 84.80 ± 20.8 | 79.52 ± 10.71 | < 0.01 |
| After the intervention | 75.8 ± 13.9 | 77.66 ± 10.59 | < 0.01 |

The pre-test blood pressure level in the control group was 140.75 ± 7.98 and after the intervention was 137.53 ± 6.26 , which was statistically significant ($P < 0.01$). This difference was 3.21 mmHg. In the test group, the pre-interventional blood pressure level was 136.87 ± 16.72 and after the intervention was 128.47 ± 16.32 , which was statistically significant ($P < 0.01$) This difference was 8.39 mmHg (Table 3).

Table 3. Comparison of Blood Pressure in the Control Group Before and After Intervention

| Time | Test Group | Control Group | P Value |
|------------------------|----------------|---------------|---------|
| Before intervention | 136.87 ± 16.72 | 140.75 ± 7.98 | < 0.01 |
| After the intervention | 128.47 ± 16.32 | 137.53 ± 6.26 | < 0.01 |

5. Discussion

The results of this study showed a significant difference between the experimental and control groups. In both groups, control and control of pulse rate and blood pressure were observed. This difference and reduction of hemodynamic symptoms were due to the use of medication and nursing care. However, by comparing the pulse and blood pressure differences in the control and control groups before and after the intervention, there was a significant decrease in the pulse and blood pressure in the test group, which indicates the effectiveness of the therapeutic recitals on the stability of the hemodynamic status of patients admitted to the CCU. These results, with the study of Hasanpour-Dehkordi et al., the effect of recital singing the recommended treatment would reduce the pain and decrease the blood pressure and pulse in the patients before and after surgery (16). Tayebi et al., hearing the Qur'an and performing religious practices reduced and regulated the vital signs. Patients will be able to reduce their anxiety, blood pressure, respiration, and pulse (11). Sharifnia et al., pray will increase spiritual well-being and compliance in patients (12). Hojjati and Hekmatipour, therapeutic indications increase life expectancy in post-myocardial infarction patients (5). This research shows that when praying, parts of the brain that have been active before, including parts of the frontal lobe that are thought to be creative and decision-making, are activated, and parts of the parietal lobe are deactivated, which makes it possible. In order to reduce the amount of time and space that people feel when they pray, this reduces the blood pressure and pulse of the patients (11). Because of the stressful conditions, increases in epinephrine and norepinephrine hormones increase heart rate and blood pressure. Spirituality can reduce the heart rate and blood pressure in patients with relaxation (21). Prayer studies show that meditation and citation therapy are a good and effective therapist for improving self-concept and mental health (22). Religious beliefs become more important in times of illness than ever before, makes the person accept the disease and also helps the person. The events of life, especially the events that are painful and anxious, can be a source of encouragement and joy in the spirit and soul of the individual (23, 24). Religious practices, prayers and prayers not only affect emotional states, but also improve the physical fitness of a person, and sometimes improve physical illness in a few moments or days (5). In this regard, Herbert Cardiologist at Harvard School of Medicine on heart trouble believes that prayer can be beneficial, such as decreasing physician visits to relieve heart pain by about 26 percent lowering blood pressure, reducing drug use in 80 percent of patients. To have blood pressure and heart patients and

to reduce the number of visits made by health organizations for patients. He showed that during religious practices such as prayer, relaxation method is a treatment to reduce stress in patients with chronic pain, heart disease, hypertension and other stress-related illnesses (25). Remembrance of God makes fear of death calm. It eliminates problems, reduces fear and apprehension, eliminates distrust and hopes for the future (26). Remembering God, thinking about the majesty of the Lord, thinking about the philosophy of creation, the blessing of the essence of truth, and grateful blessings bring peace and relief to the heart (24). Moeini et al., religious beliefs are more important when it comes to heart disease because it helps one to perceive this pain as divine providence and to accept pain and to relieve pain by mediating and appealing to God (25). Nurses should accompany them as a professional group during their stay and stay in the hospital. Because the hospital is a good place to distinguish spiritual disturbances. That nurses can increase the general health of patients through nursing support and meeting spiritual needs in addition to promoting spiritual health (24).

5.1. Limitation and Recommendation

From the limitations of this study, short-term hospitalization of patients in the intensive care unit and the lack of a heart part in the social security hospitals of Golestan province, which could not continue the interventions in the heart. Therefore, it is suggested that a longer study should be done in this study. Also, by adding a group that is in contact with the clergy of the hospital, the effects of these methods should be compared.

5.2. Conclusions

Since religion is considered as one of the therapeutic methods in complementary medicine, the results of this study showed that dental caries is also considered one of the treatments with a globular approach globally. However, unfortunately, the religious and spiritual needs of patients are not paid much attention in hospitals. It has been observed many times that it is not necessary for the patient to carry out religious activities. The spiritual and religious needs of the clients who are familiar with their religious practices are better understood and provide facilities that help clients understand their religious practices and provide facilities that the client can do religiously.

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Footnotes

Conflict of Interests: It is not declared by the authors.

Ethical Approval: Clinical trials with the issue number 2753/5; ethical code number IR.IAU.CHALUS.REC.92/7/11.

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References

- Naderi N, Mohammad-Aliha J, Khalili Y, Karami P. [Knowledge, attitude, and practice of nurses about self-care education for people with chronic heart failure]. *Cardiovasc Nurs J*. 2017;5(4):46–53. Persian.
- Mohamadi N, Kheirollahi N, Haghghat S, Roshanaie G. [Correlation between adaptability and quality of life in people with chronic heart failure]. *Cardiovasc Nurs J*. 2017;6(1):6–13. Persian.
- Raufi S, Yaghmaei F, Mohajeri S, Naderlou M, Nasseryan J. [Perceptions of MI patients from influential factor on quality of life: A qualitative study]. *J Health Promot Manag*. 2015;4(4):95–103. Persian.
- Iyngkaran P, Liew D, Neil C, Driscoll A, Marwick TH, Hare DL. Moving from heart failure guidelines to clinical practice: Gaps contributing to readmissions in patients with multiple comorbidities and older age. *Clin Med Insights Cardiol*. 2018;12(1.1795468188094E+15). doi: [10.1177/1179546818809358](https://doi.org/10.1177/1179546818809358). [PubMed: [30618487](https://pubmed.ncbi.nlm.nih.gov/30618487/)]. [PubMed Central: [PMC6299336](https://pubmed.ncbi.nlm.nih.gov/PMC6299336/)].
- Hojjati H, Hekmatipour N. [Compare two methods of pray and mentioning on life expectancy: Patients hospitalization in CCU Ward Social Security Golestan Hospitals in 1393]. *Compl Med J Facul Nurs Midwifery*. 2016;6(1):1384–94. Persian.
- Naghi JJ, Philip KJ, Phan A, Cleenewerck L, Schwarz ER. The effects of spirituality and religion on outcomes in patients with chronic heart failure. *J Relig Health*. 2012;51(4):1124–36. [PubMed: [23304705](https://pubmed.ncbi.nlm.nih.gov/23304705/)].
- Alvarez JS, Goldraich LA, Nunes AH, Zandavalli MC, Zandavalli RB, Belli KC, et al. Association between spirituality and adherence to management in outpatients with heart failure. *Arq Bras Cardiol*. 2016;106(6):491–501. doi: [10.5935/abc.20160076](https://doi.org/10.5935/abc.20160076). [PubMed: [27192385](https://pubmed.ncbi.nlm.nih.gov/27192385/)]. [PubMed Central: [PMC4940148](https://pubmed.ncbi.nlm.nih.gov/PMC4940148/)].
- Shi XL, Kang Y, Chen C, Zhang Q. [Prevalence of anxiety and depression in hospitalized patients with heart failure]. *Sichuan Da Xue Xue Bao Yi Xue Ban*. 2017;48(3):435–40. Chinese. [PubMed: [28616921](https://pubmed.ncbi.nlm.nih.gov/28616921/)].
- Feola M, Garnero S, Vallauri P, Salvatico L, Vado A, Leto L, et al. Relationship between cognitive function, depression/anxiety and functional parameters in patients admitted for congestive heart failure. *Open Cardiovasc Med J*. 2013;7:54–60. doi: [10.2174/1874192401307010054](https://doi.org/10.2174/1874192401307010054). [PubMed: [24044027](https://pubmed.ncbi.nlm.nih.gov/24044027/)]. [PubMed Central: [PMC3772569](https://pubmed.ncbi.nlm.nih.gov/PMC3772569/)].
- Babaii A, Adib-Hajbaghery M, Hajibagheri A. [The effect of aromatherapy with damask rose and blindfold on sleep quality of patients admitted to cardiac critical care units]. *Iran J Nurs*. 2015;28(93):96–105. Persian. doi: [10.29252/ijn.28.93.94.96](https://doi.org/10.29252/ijn.28.93.94.96).
- Tayebi V, Asadi R, Taherpoor M, Mousavi Jajarmi SM. [The effect of listening to prayers on anxiety and vital signs before an elective surgery]. *Teb Tazkiyeh*. 2015;23(3):45–54. Persian.
- Sharifnia SH, Hojjati H, Nazari R, Qorbani M, Akhoondzade G. [The effect of prayer on mental health of hemodialysis patients]. *Iran J Crit Care Nurs*. 2012;5(1):29–34. Persian.
- Hojjati H, Taheri N, Akhoondzadeh G, Sharifnia H, Mohammadnejad S, Heydari B. [Restoring to pray rate in hemodialysis patients of Golestan province]. *Iran J Crit Care Nurs*. 2010;3(2):75–9. Persian.
- Hojjati H, Sarbani A, Alimohammadzadeh K. [The relationship between daily spiritual experiences and perceived stress in the spouses of war veterans with post-traumatic stress]. *J Mil Med*. 2017;19(2):135–42. Persian.
- Ilali E, Taraghi Z, Yazdani J, Golmohammadi M, Savasari R, Mosavi Jarahi A. The relationship between praying and spiritual health among Iranian older people with cerebrovascular accidents. *Salmand*. 2016;11(3):424–31. doi: [10.21859/sija-1103424](https://doi.org/10.21859/sija-1103424).
- Hasanpour-Dehkordi A, Khodadi K, Khaledifar A, Salehi S. [The effect of recommended recitals on the severity of perceived pain in hospitalized patients undergoing surgery: A randomized clinical trial]. *J Shahrekord Univ Med Sci*. 2015;16(6):111–8. Persian.
- Koenig HG. Research on religion, spirituality, and mental health: A review. *Can J Psychiatry*. 2009;54(5):283–91. doi: [10.1177/070674370905400502](https://doi.org/10.1177/070674370905400502). [PubMed: [19497160](https://pubmed.ncbi.nlm.nih.gov/19497160/)].
- Ai AL, Ladd KL, Peterson C, Cook CA, Shearer M, Koenig HG. Long-term adjustment after surviving open heart surgery: The effect of using prayer for coping replicated in a prospective design. *Gerontologist*. 2010;50(6):798–809. doi: [10.1093/geront/gnq046](https://doi.org/10.1093/geront/gnq046). [PubMed: [20634280](https://pubmed.ncbi.nlm.nih.gov/20634280/)]. [PubMed Central: [PMC2982210](https://pubmed.ncbi.nlm.nih.gov/PMC2982210/)].
- Taghizadeh K, Asad Zandi M, Tadrissi D, Ebadi A. [The effect of pray on virulent severity of patients in ICU]. *Iran J Crit Care Nurs*. 2011;4(1):6. Persian.
- Carvalho CC, Chaves Ede C, Iunes DH, Simao TP, Grasselli Cda S, Braga CG. [Effectiveness of prayer in reducing anxiety in cancer patients]. *Rev Esc Enferm USP*. 2014;48(4):683–9. Portuguese. [PubMed: [25338250](https://pubmed.ncbi.nlm.nih.gov/25338250/)].
- Kalhornia-Golkar M, Banijamali S, Bahrami H, Hatami HR, Ahadi H. [Effectiveness of mixed therapy of stress management training and spiritual therapy on level of blood pressure, anxiety and quality of life of high blood pressure patients]. *J Clin Psychol*. 2014;6(3):1–11. Persian.
- Johnson KA. Prayer: A helpful aid in recovery from depression. *J Relig Health*. 2018;57(6):2290–300. doi: [10.1007/s10943-018-0564-8](https://doi.org/10.1007/s10943-018-0564-8). [PubMed: [29383592](https://pubmed.ncbi.nlm.nih.gov/29383592/)].
- Hojjati H. [On the relationship between prayer frequency and spiritual health in patients under hemodialysis therapy]. *J Fund Ment Health*. 2010;12(46):514–21. Persian.
- Sharifnia SH, Hojjati H, Nazari R, Qorbani M, Akhoondzade G. The effect of prayer on mental health of hemodialysis patients referring to Imam Reza Hospital in Amol City. *Iran J Crit Care Nurs*. 2012;5(1):29–34.
- Moeini M. [Patients' religious beliefs in cardiac pain situations: A qualitative research]. *J Qual Res Health Sci*. 2014;3(1):104–13. Persian.
- Hojjati H, Hekmati Pour N, Khandousti S, Mirzaali J, Akhondzadeh G, Kolangi F, et al. [An investigation into the dimensions of prayer in cancer patients]. *J Relat Health*. 2015;3(1):65–72. Persian.