

Examining the Effect of Nursing Counseling on Anxiety and Depression in the Elderly Patients Undergoing Open Heart Surgery

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Abstract

Introduction: Anxiety and depression are of the most common psychological responses of the old patients who experience open heart surgery. Nursing counseling is among the most effective nursing interventions to control anxiety and depression in the elderly. **Purpose:** To determine the effect of nursing counseling on the level of anxiety and depression among the elderly patients undergoing open heart surgery. **Method:** In this clinical trial study, 50 elderly patients admitted to the cardiac wards of Shahid Rajaei Hospital, Karaj were selected according to the inclusion criteria and were randomly divided into two groups: intervention and control. Six sessions were performed for the elderly in the nursing counseling intervention group. Data was collected using Hospital Anxiety and Depression Scale (HADS) and analyzed using statistical methods and SPSS 20. **Results:** The mean age of the participants in the intervention group was 67.8 ± 4.97 and 66.8 ± 4.26 years in the control group, which was not statistically significant ($P = 0.449$). Examining the individuals in terms of other demographic characteristics did not show statistically significant differences either. The results showed that the reduction in anxiety and depression levels after the intervention was significantly different in the intervention compared to the control group ($P < 0.005$). **The application of results in the clinic:** According to the results, nursing counseling has reduced anxiety and depression in the elderly patients who undergo open heart surgery; thus, one can use it as a non-pharmacological intervention to reduce anxiety and depression in the elderly patients.

Keywords: Anxiety, depression, heart surgery, elderly, nursing counseling

INTRODUCTION

The elderly population in the world is growing that is known as the most important anthropological phenomenon of the 21st century [1]. Recent scientific progress has increased life expectancy, which has led the population towards aging, and according to the estimates of the World Health Organization (WHO) the aging growth will increase to about 10% in 2025 and 25% in 2050 [2]. According to the 2016 census in Iran, about 9% of the population (about seven and a half million people) are 60 years and older [3] that will increase to 26% by 2050 [2]. Coronary artery disease is one of the main reasons of death throughout the world. Of the 17.3 million annual death cases related to heart diseases, 7.3 million are coronary artery disease [4]. Age affects the process of atherosclerosis by inducing vascular physiological changes and increasing the duration of exposure to risk factors. Put [5]. Coronary artery disease is the most common cause of functional complications and injuries in the elderly, which causes serious problems for them [6]. Nowadays, in America and Europe, where coronary artery disease is the leading cause of death (50% of all deaths), one-third of the population over the age of 65 and half of the elderly over 85 suffer from coronary heart disease [7]. Coronary artery bypass graft is a good

treatment for patients with coronary artery disease and its effectiveness has been proven by many studies; however, it leads to serious side effects in some patients [8]. The patients undergoing open heart surgery are older than a decade ago [9]. Given the significant advances in the treatment and prevention of coronary heart disease, the age of patients candidate for open-heart surgery has increased, from over 65 to over 80 years of age. Among the 25,000 heart operations performed in England each year, a quarter are over the age of

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70^[10]. Nowadays, more than half of all heart surgeries are performed on people over the age of 75, and this group of patients is steadily increasing^[11]. This has had many physical and psychological effects. One of the most common postoperative complications, especially in the elderly is depression. The postoperative depression in the elderly is estimated to be between 17.5% and 28.7%, which is the second leading cause of postoperative disability after physical factors. Open heart surgery is a stressful process and the elderly rarely consider it a safe phenomenon. Their evaluation of the operation includes feelings of danger, fear, loss, and anxiety^[12]. Even without the presence of other negative factors, anxiety and depression increase the risk of heart disease by increasing ventricular arrhythmias^[9]. Despite its high prevalence and destructive effects on function, anxiety issue in the elderly has received less empirical attention^[13]. However, despite the importance of the effect of these negative emotions on quality of life, illness, and mortality, clinical caregivers still do not consider it a significant risk factor^[14]. In his theory, the legendary theorist Hildegard Peplau considers the goal of the relationship between nurse and patient as effective nursing care that brings about the promotion and maintenance of health^[15]. Peplau argues that the structure of the nurse-patient relationship is based on trust, and believes that nurses have a significant role in helping reduce anxiety. Moreover, she argues that the relationship between nurse and patient significantly affects the results of care^[16]. Counseling is the science of communication and dialogue between the nurse, the patient, and the family through which the patient is understood, his or her thoughts and feelings are sought, and appropriate nursing interventions are done^[17]. Counseling is an important component of nursing services and is actually a method of calming and controlling stress in a non-invasive, non-pharmacological, uncomplicated and low-cost way to maximize help to patients, especially during invasive procedures. Nurses spend more time with the patient than doctors, which is why counseling may be more complete by nurses^[18]. Patrisson (1973) considers counseling as a relationship between a trained professional and another person (or group) who voluntarily want to solve their problems and this therapeutic relationship is designed to make changes in the client. The purpose of counseling is to help people defeat the barriers to their personal growth and to help them expand their personal resources. In counseling, more emphasis is placed on the client's abilities, skills, strengths, and personal growth potential^[19]. The counselor nurse communicates with the patient with sufficient skill and helps him express his fears and doubts, enabling the patient's counselor nurse to find possible solutions to the problems^[20]. Thus, given the high number of elderly patients with heart diseases and the need to perform open heart surgery and prevent the psychological effects of anxiety and depression in them, the importance of the role of nursing in the care of these patients, more attention to non-pharmacological interventions and given the lack of studies on the role of nursing counseling in nursing care, the study was carried out to determine the effect of nursing counseling on anxiety and depression in elderly patients who have open heart surgery.

METHOD

The study was a clinical trial with two groups where the population was the elderly patients who were candidates for open heart surgery admitted to Shahid Rajaei Medical Center, Karaj from April to July 2019. The sample size was 20 people per group and 25 people - given the probability of drop in the number of subjects - were considered for each group and a total of 50 elderly patients were examined. The samples were selected by convenient sampling method and according to inclusion criteria and were assigned to two groups by random allocation. Sampling was first done in the control group and after the last person of this group was discharge, sampling was done in the intervention group. The inclusion criteria were elderly people aged 60 or older (calendar age), experiencing cardiac surgery for the first time, having non-emergency heart surgery, only coronary artery bypass graft surgery done in the operating room (no other simultaneous surgeries), not having known anxiety and depression beforehand, not being addicted to alcohol and drugs, not having hearing problems and cognitive impairments, being fluent in Persian, being able to understand the researcher's questions, not having psychological diseases beforehand. The elderly who did not cooperated well to continue the study were excluded. In this study, a questionnaire was used to collect data.

The questionnaire had two parts: the first part was the questionnaire related to demographic information and surgical specifications. The researcher completed this section by an interview and using the client's file at the beginning of the study. The second part was HADS, used to measure anxiety and depression in hospitalized patients, widely used in clinical and non-clinical populations. The questionnaire has 14 questions including two sections: anxiety and depression. Odd questions are for measuring anxiety, and even ones for measuring depression. The answers to the questions are ranked and in four-option mode. A score between zero and three is awarded to answer each question, so that each option showing depression and anxiety gets the highest score, three, and the other options, two, one and the option showing no depression and anxiety zero, respectively. Then the score of each area is added. Each person will have a score between zero and twenty-one in each field. Scores in the range 0-7 are considered normal, 8-10 mild, 11-14 average, and 15-21 intense. HADS validity and reliability have been verified by Bocerean & Dupret (2014)^[21]. The study has shown that HADS subscales are positively correlated with the overall score of related subscales, and Spearman correlation between HADS-A and BECK-BAI (BECK Anxiety Inventory) and HADS-D and BECK-BDI (BECK Depression) has been from 0.6 to 0.7. Moreover, HADS Cronbach's alpha ranged from 0.79 to 0.84, and its sensitivity and specificity 69.9 and 90.9, respectively. HADS has been verified by Kaviani et al. (2009) in the Iranian population in terms of validity and reliability^[22]. After observing the ethical considerations in the study and after obtaining informed consent, before talking to the elderly patients selected as samples, the files of these patients were

examined and coordinated after obtaining coordination and permission from the ward officials. Then the required information was extracted on the type of surgery and other patient conditions. Then elderly patients and their families were interviewed at a separate time when the elderly were in good condition to complete the demographic information questionnaire. Only routine hospital care was provided in the control group. However, in the intervention group, nursing counseling program was conducted during six sessions (first session: introducing the nurse and mutual trust and effective therapeutic relationship, second session: complete training on the nature of the disease and various aspects of treatment including surgery, raising awareness about possible benefits and risks of surgery, and treatment program during hospitalization, third session: elderly patient and counselor agreement on problems, fourth session: discovering options and applicable solutions, fifth session: elderly implementing options based on their reality, time and needs, sixth session: effectiveness of interventions and behavioral changes in the elderly patient) individually and face to face in 30 to 60 minutes according to the needs of the elderly for the samples of this group. The counseling sessions started from the time the candidate was nominated for the operation and continued until the discharge. Anxiety and depression in the elderly were measured in both the intervention and control groups, once during the elderly's candidacy for surgery (before counseling in the intervention group) and again before discharge using HADS. Finally, after completing and collecting the questionnaires used, data analysis was done in SPSS 20. Data were analyzed using independent t-test, paired t-test and chi-square.

RESULTS

The study examined 50 elderly people admitted to Shahid Rajaei Medical Center, Karaj. Demographic variables were compared between the two groups using Chi-square test, and it was shown that the two groups did not differ significantly, which showed that the two groups were similar (Table 1).

Table 1: Demographic characteristics in the intervention and control groups

Variables	Intervention group	Control group	P-value
Gender			0.569
Male	13 (52)	15 (60)	
Female	12 (48)	10 (40)	
Marital status			0.561
Married	14 (56)	16 (64)	
Divorced	0	1 (4)	
Widow	11 (44)	8 (32)	
Level of Education			1
High school	20 (80)	20 (80)	
Diploma	5 (20)	5 (20)	
Employment status			0.118
Retired	8 (32)	6 (24)	
Housewife	10 (40)	9 (36)	
Unemployed	5 (20)	1 (4)	
Self employed	1 (4)	3 (12)	
No service	1 (4)	6 (24)	

Insurance			0.496
Has	21 (84)	18 (72)	
Does not have	4 (16)	7 (28)	
Smoking			0.564
Smokes	9 (36)	11 (44)	
Does not smoke	16 (64)	14 (56)	
Residence			0.667
City	23 (92)	21 (84)	
Village	2 (8)	4 (16)	
Residential property type			0.544
Private	16 (64)	18 (72)	
Rent	9 (36)	7 (28)	
Taking medication			0.349
Takes	24 (96.0)	21 (84)	
Does not take	1 (4)	4 (16)	

The individuals' anxiety was examined before and after the intervention using an independent T-test. The results showed that the anxiety in the intervention group was significantly different from the control group. Moreover, using the paired t-test, the mean score of anxiety in the intervention group before and after the intervention was examined as intra-group, indicating a significant difference, whereas it was insignificant in the control group (Table 2).

Table 2: Comparison of anxiety before and after the intervention

Variables	Intervention group	Control group	P-value
Anxiety			
Prior to intervention	13.88 ±3.07	13.52±3.65	0.708
After intervention	10.76±2.66	13.08±3.41	0.010
P-value	0.001	0.086	

The individuals' depression was evaluated before and after the intervention using an independent T-test. The results showed that depression in the intervention group was significantly different from the control group. Additionally, using the pairwise t-test, the mean depression in the test group was examined as intra-group before and after the intervention, which showed significant differences, whereas in the control group it was insignificant (Table 3).

Table 3: Comparison of depression before and after the intervention

Variables	Intervention group	Control group	P-value
Depression			
Prior to intervention	12.48 ±3.26	11.482 ±3.44	0.297
After intervention	9.28 ±2.83	11.32 ±3.50	0.028
P-value	0.001	0.538	

The results of the paired t-test show a statistically significant difference between the scores of anxiety and depression scores before and after the intervention in the group i.e., the researcher's intervention was effective and reduced anxiety

and depression in elderly patients, but there were no statistically significant differences between mean anxiety and depression scores in the control group.

DISCUSSION

The purpose of the study was to determine the effect of nursing counseling on the level of anxiety and depression in elderly patients undergoing open heart surgery. The psychological effects of open heart surgery are clear and are anxiety and depression, with the prevalence of depression high in cardiovascular patients^[23]. Anxiety and stress before open heart surgery are common problems, and non-psychological educational interventions before surgery usually have little effect on this anxiety and depression^[24]. However, counseling interventions and psychological support have significant effects on anxiety and depression^[25].

The results of the study indicated that heart surgery is anxiety-inducing and stressful for most the elderly and causes some degrees of depression in them, and nursing counseling can have a significant role in reducing it according to the needs of each person. In most other similar studies like Sadeghi and Salehi (2018), nursing counseling has reduced the anxiety of family members of patients undergoing tracheostomy surgery, in line with the present study^[26]. In both studies, nursing counseling has reduced the anxiety caused by surgery, so it can be stated that nursing counseling is an effective nursing approach in reducing the anxiety caused by surgery in patients and those around them. Nikbakht Nasrabadi *et al.* (2012) showed that nursing counseling reduces the anxiety of patients under endoscopy^[18], but this counseling was performed only as one session and a few hours before endoscopy, whereas counseling was several sessions over time in the present study. It appears that as the target population in this study is the elderly and the behavioral patterns of this age group differ from others, nursing counseling will have better results in several sessions to gain their trust. These results alike the results of Bento & Brofman (2009)^[27], Lima *et al.* (2010)^[28], Khoshnava *et al.* (2017)^[20] showing that nursing counseling has been effective in reducing and controlling psychological complications caused by hospital procedures in most patients. According to the evidence, many of the anxieties of elderly patients are because of lack of information on the disease and heart surgery, and appropriate training not only reduces psychological complications, but also increases their participation in treatment. Hence, proper training as cardiac rehabilitation programs can be partially effective in reducing this problem. Moreover, many post-operative depressive states among the elderly are associated with feelings of inadequacy, inefficiency, dependence, and disease-induced feeling of being a burden. Solving these problems calls for organized planning in the health care system, especially nursing for the elderly. According to the results regarding post-operative depression in the elderly, it is seen that this age group enters a new stage after the successful physical stage of open heart surgery, which is a psychological crisis. Indeed, open heart surgery in the elderly has two aspects: physical

and mental. Going through these two steps needs effective nursing interventions, one of which is nursing counseling. Moreover, the elderly need follow-up and long-term plans during the postoperative months, which have to be included in care programs of the hospitals. Involving the families of the elderly patients in care and paying attention to the socioeconomic problems of this age group is effective in improving the results of nursing care as well. The results of this study are in line with those of Haj Nasiri *et al.* (2016). Their study showed that providing counseling services can reduce anxiety and depression in women after a legal abortion^[14]. Abortion in women and open heart surgery in the elderly are very stressful events that in most patients cause high levels of depression in need of strong interventions in the treatment part to cope, during which the effectiveness of nursing counseling was proven. Additionally, the results of Farzadmehr *et al.* (2015) showed that nursing counseling affects the anxiety of family members of patients admitted to the intensive care unit (ICU) of cardiac surgery, significantly reducing it. This shows that nursing counseling is an appropriate intervention in cardiac surgery and can be used as part of cardiac rehabilitation^[29]. Moreover, Cebeci (2011) in Turkey showed a positive effect of counseling on reducing anxiety and depression in patients undergoing heart surgery^[30]. The reason for the similarity of results can be attributed to the presence of heart disease in the samples in two studies. It seems that in heart patients due to prolonged illness and fatigue and despair, anxiety and depression are more common and nursing counseling is a good intervention for them. Grant (1990) showed that nursing counseling affects the anxiety of patients undergoing radiotherapy, which is in line with this study^[31]. In both studies, patients are involved in chronic processes and consider themselves close to death. In the present study, the researcher has tried to find the problems of elderly patients by creating the possibility of communication and talk with them and timely counseling and follow-up and providing the necessary training to patients in the intervention group using counseling sessions. The differences seen in the control and intervention groups might be due to the positive effects of the interventions in the intervention group.

Application of the results in clinic:

The results indicated that nursing counseling has reduced anxiety and depression in the elderly undergoing open heart surgery. The researchers found some results and it is hoped that they could be useful in improving the quality of nursing care. As the nurses are as one of the main members of the health team, it seems that this group full awareness of the nursing counseling methods is of great importance in reducing anxiety and depression in patients in need of open heart surgery. Therefore, it is recommended that nurses pay attention to the use of counseling methods in the elderly care program to improve the quality of service. Hence, it is essential to take measures to select the most effective nursing counseling programs for the elderly patients. Furthermore, it should be cost-effective in terms of costs and specialists needed, and have the greatest effect on improving the health of the elderly and reducing the anxiety and depression of the elderly. The study examined the effect of nursing counseling

on anxiety and depression of the elderly patients undergoing open heart surgery. Thus, given the effectiveness of its results, it is suggested that these counseling methods be used for other chronic diseases in the elderly in future studies and similar services be provided for the elderly with easier counseling and training.

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Conflict of interest

The study has no conflict of interests for the authors.

REFERENCES

- Golmakani E, Usefi M, Ghaneizare F, Moayyed L, Hasanazadeh E, Mortazavi H. Fall in elderly : A literature review. *Journal of North Khorasan University of Medical Sciences*. 2013;5(Student research committee supplementary):1159-63. [In Persian].
- Farajzadeh M, Ghanei-Gheshlagh R, Rashadmanesh N, Zarei M, Amini H. Does tea consumption reduce the chances of depression in the elderly? Case-control study. *Journal of Gerontology*. 2017;1(4):29-37. [In Persian].
- Statistical Center of Iran. 2015. Available at: www.amar.orj.ir (Accessed: Janaury 2017).
- Hamonangan R, Wijaya IP, Setiati S, Harimurti K. Impact of frailty on the first 30 days of major cardiac events in elderly patients with coronary artery disease undergoing elective percutaneous coronary intervention. *Acta Med Indones*. 2016;48(2):91-8.
- Kim DJ, Bergstrom J, Barrett-Connor E, Laughlin GA. Visceral adiposity and subclinical coronary artery disease in elderly adults: Rancho Bernardo Study. *Obesity*. 2008;16(4):853-8.
- Shan L, Saxena A, McMahon R, Newcomb A. Coronary artery bypass graft surgery in the elderly: a review of postoperative quality of life. *Circulation*. 2013;128(21):2333-43.
- Malavolta M, Caraceni D, Olivieri F, Antonicelli R. New challenges of geriatric cardiology: from clinical to preclinical research. *Journal of geriatric cardiology: JGC*. 2017;14(4):223-32.
- Šorm Z, Harrer J, Voborník M, Cermáková E, Vojáček J. Early and long-term results of minimally invasive coronary artery bypass grafting in elderly patients. *Kardiologia Polska (Polish Heart Journal)*. 2011;69(3):213-8.
- Krannich J-HA, Weyers P, Lueger S, Herzog M, Bohrer T, Elert O. Presence of depression and anxiety before and after coronary artery bypass graft surgery and their relationship to age. *BMC psychiatry*. 2007;7(1):47-50.
- Natarajan A, Samadian S, Clark S. Coronary artery bypass surgery in elderly people. *Postgraduate medical journal*. 2007;83(977):154-8.
- Pratesi A, Orso F, Ghiara C, Forte AL, Baroncini AC, Di Meo ML, et al. Cardiac surgery in the elderly: What goals of care? *Monaldi Archives for Chest Disease*. 2017;87(2):12-5.
- Asgari P, Bahramnezhad F, Mehrdad N, Noughabi AAA, Hekmatpou D, Mahmoudi M. Depression, functionality and adaptability of elderly patients after open heart surgery off-or on-pump. *Jundishapur Journal of Chronic Disease Care*. 2015;4 (4):30-34.
- Khademi MJ, Rashedi V, Sajadi S, Gheshlaghi SM. Anxiety and loneliness in the Iranian older adults. *International Journal of Psychology and Behavioral Sciences*. 2015;5(2):49-52.
- Hajnasiri S, Behbodimoghddam Z, Ghasemzadeh SR, F, Geranmayeh M. The study of the consultation effect on depression and anxiety after legal Abortion. *Iranian Journal of Psychiatric Nursing*. 2016;4(1):64-72. [In Persian].
- Gurgel PKF, Tourinho FSV, Monteiro AI. Collective consultation of growth and development of the child the light of the theory of Peplau. *Escola Anna Nery*. 2014;18(3):539-43.
- Penckofer S, Byrn M, Mumby P, Ferrans CE. Improving subject recruitment, retention, and participation in research through Peplau's theory of interpersonal relations. *Nursing Science Quarterly*. 2011;24(2):146-51.
- Manzini FC, Simonetti JP. Nursing consultation applied to hypertensive clients: application of orem's self-care theory. *Revista latino-americana de enfermagem*. 2009;17(1):113-9.
- Nikbakht-Nasrabadi A, Bakhshayeshi O, Parsayekta Z, Hoseyni M, Taghavi T, Rezvani H. The effectiveness of implementing nursing consultation on the anxiety of patients undergoing GI endoscopy. *Iran Journal of Nursing*. 2012;25(79):54-62. [In Persian].
- Saatchi M. *Counseling and Psychotherapy*. Tehran: Virayesh Nashr; 2007. [In Persian].
- Khoshnava Fomani F, Amiri M, Heravi Karimooi M, Rejeh N, Khani F. The Effects of applying Nursing Counseling Program on the Anxiety and Vital Signs of Patients undergoing Colonoscopy admitted in Imam Khomeini Hospital, Tehran. *Iranian Nursing Scientific Association*. 2018;13(5):77-84. [In Persian].
- Bocéréan C, Dupret E. A validation study of the Hospital Anxiety and Depression Scale (HADS) in a large sample of French employees. *BMC psychiatry*. 2014;14(1):354.
- Kaviani H, Seyfourian H, Sharifi V, Ebrahimkhani N. Reliability and validity of anxiety and depression hospital scales (HADS): Iranian patients with anxiety and depression disorders. *Tehran University Medical Journal*. 2009;67(5):379-85. [In Persian].
- Utriyaaprasit K, Moore S. Recovery symptoms and mood states in Thai CABG patients. *Journal of transcultural nursing*. 2005;16(2):97-106.
- Shuldham CM, Fleming S, Goodman H. The impact of pre-operative education on recovery following coronary artery bypass surgery. A randomized controlled clinical trial. *European heart journal*. 2002;23(8):666-74.
- Sørli T, Busund R, Sexton J, Sexton H, Sørli D. Video information combined with individualized information sessions: effects upon emotional well-being following coronary artery bypass surgery—a randomized trial. *Patient education and counseling*. 2007;65(2):180-8.
- Sadeghi M, Salehi S. The effect of nursing consultation on anxiety of tracheostomy patient's family. *Iranian Journal of Psychiatric Nursing*. 2019;7(1):89-96. [In Persian].
- Bento VFR, Brofman PRS. Impact of the nursing consultation on the frequency of hospitalizations in patients with heart failure in Curitiba, Parana State. *Arquivos brasileiros de cardiologia*. 2009;92(6):490-6.
- Lima FET, Araújo TLD, Serafim ECG, Custódio IL. Nursing consultation protocol for patients after myocardial revascularization: influence on anxiety and depression. *Revista latino-americana de enfermagem*. 2010;18(3):331-8.
- Farzadmehr M, Fallahi Khoshknab M, Hosseini M, Khankeh H, NoorAbadi Z. The effect of nursing consultation on satisfaction of patients' families at the Cardiac Surgery Intensive Care Units. *Iranian Journal of Rehabilitation Research in Nursing*. 2015;2(25):36-44. [In Persian].
- Cebeci F, Çelik SŞ. Effects of discharge teaching and counselling on anxiety and depression level of CABG patients. *Turkish J Thorac Cardiovasc Surg*. 2011;19(2):170-6.
- Grant M. The effect of nursing consultation on anxiety, side effects, and self-care of patients receiving radiation therapy. *Oncology Nursing Forum*; 1990;17(3):31-8.