

# The effect of recommended Azkar on anxiety, stress, and depression in families of patients undergoing open heart surgery

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## ABSTRACT

**Introduction:** Admission of a family member to hospital would cause stress on other family members also. One of the most stressful treatment interventions imposing high level of anxiety to the families of patients is when the patients are undergoing a surgery, especially a cardiac surgery. So, we decided to investigate whether recommended Azkar could reduce stress, anxiety, and depression in families of the patients.

**Materials and Methods:** This study is a quasi-experimental study conducted on 120 immediate relatives of patients undergoing a cardiac surgery. Families of patients undergoing open heart surgery were randomly divided into two groups of study and control. The Depression, Anxiety, and Stress Scales (DASS 21) questionnaires were completed by both groups. Then, some explanations about how to use recommended prayers were given to the study group, and an hour later, the questionnaires were completed again. The data were analyzed by SPSS.  $P < 0.05$  were considered significant.

**Results:** Stress, anxiety, and depression showed a significant difference in the study group before and after intervention. Similarly, there was a significant difference in the mean scores of anxiety, stress, and depression in the study and control groups after intervention.

**Conclusions:** Findings of the present study showed that recommended religious prayers can significantly reduce anxiety, depression, and stress of families of the patients undergoing open heart surgery.

**Key words:** Anxieties, depression, family of patients, open heart surgery, recommended Azkar, stress

## INTRODUCTION

Anxiety and internal pressure have negative effects on individuals' health. It has been reported that stress and anxiety stimulate adrenal gland and sympathetic nervous system which, in a sophisticated process, leads to an increase in BP, respiratory irregularities, dyspnea, an increase in the rate of respiration and hearth rate, and in case of frequent prolonged exposure to chronic stress and anxiety, it results in hypertension and other diseases.<sup>[1]</sup>

Restlessness, sorrow and sadness, loss of appetite, hypertension, an increase in respiratory irregularities, palpitation, and disturbance in concentration and doing daily activities are among the signs and symptoms of these depressive and stress-causing factors.<sup>[1,2]</sup> Anxiety is one of the most repeated nursing diagnosis in the world.<sup>[3]</sup> Studies

investigating anxiety, stress, and depression in patients' families have been conducted, and it has been revealed that a disease creates a stressful situation for both the patients and their families.<sup>[4]</sup> Research showed that hospitalization of a family member imposes high stress on other members and leads to depression,<sup>[5]</sup> especially when their patient is to undergo invasive interventions.<sup>[6]</sup> On the other hand, family, as the first social unit in Iranian society, has a specific role and acts as a base for physical, cultural, and social health.<sup>[5]</sup> Therefore, supporting the families whose patients undergo treatment is one of the main duties of nurses.<sup>[7]</sup> This can be given by nurses to families as psychological, mental, and social support.<sup>[8]</sup> As the families have a key role in maintenance of patients' health after discharge, relieving their anxiety is helpful and of great importance.<sup>[6]</sup> One of the factors which play a major role in the reduction of anxiety, depression, and stress is individuals' religious beliefs. Muslims always remember God when exposed to anxiety and stress and seek help from Him.

Remembering God can be in the form of litany and prayer. One type of litany is Recommended Azkar, as Muslims believe Zekr can relax, clear heart, treat pain, meditate the soul, and light wisdom.<sup>[9]</sup> It has been shown in Muslim

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countries that prayer can decrease pain in addition to reducing anxiety, stress, and depression. Azma *et al.* showed that praying results in reduction of disease signs.<sup>[10]</sup>

Rosmarin (2009) showed that strong belief in God can also reduce stress and anxiety and increase happiness in non-Muslims.<sup>[11]</sup> International studies reported that individuals, to seek help, refer to clergymen (42%), a general physician (29%), a psychologist or a psychiatrist (18%), and social workers' institutes (11%).<sup>[9]</sup> In some countries, there is a nurse at the operating room who tries to help families reduce their anxiety, stress, and depression through various methods.<sup>[12]</sup> Meanwhile, where there are no such supporting systems, nurses should not forget the patients' families and should try to find methods to reduce patients' families' anxiety, stress, and depression. With regard to high prevalence of anxiety, stress, and depression in families of patients before surgery and with respect to the importance of making peace for families, and the treatment property of Recommended Azkar as well as the socio-cultural conditions of Iranian society, the present study was conducted to investigate the effect of religious Recommended Azkar on anxiety, stress, and depression of the families of the patients undergoing an open heart surgery.

## MATERIALS AND METHODS

This is a pre-experimental study conducted on 120 family members of the patients undergoing open heart surgery in Shafa Medical Center in Kerman, Iran in the first half of 2011. The researcher referred to the surgical waiting room on different days when the families of the patients undergoing open heart surgery existed. After giving them information about the study and obtaining a written consent from them, they were assigned to two groups of study and control through random allocation. It was such that all eligible individuals who fulfilled the inclusion criteria had equal chance to enter any of the groups (study or control). The inclusion criteria were no history of mental diseases, no history of intake of psychotropic medication including anti-depressants and anti-anxiety medication, no drug abuse, being a Muslim, being an immediate family member of the patient (father, mother, spouse, sister, or brother), being literate at least to the extent of reading and writing Persian to fill the questionnaire, and being over 20 years of age (in order to be mature enough to understand the meanings of Recommended Azkar). The exclusion criteria was having open heart surgery for more than one time. To conduct the intervention, the researcher randomly selected a patient referring for open heart surgery to the cardiac surgery ward through lotto and assigned his/her accompanying person to the study group if he/she was an immediate family member of the patient. On another day, another patient was randomly selected (through lotto) and his/her accompanying person

was assigned to the control group if he/she was an immediate family member of the patient.

The Depression, Anxiety, and Stress Scales (DASS 21) questionnaire was filled by both groups before intervention. Then, the study group underwent training about the use of Azkar including Hamd-Va-Soureh for seven times and La-ilaha-illallah for 100 times for 20 min at the session of selection.<sup>[9,13]</sup> The importance of Recommended Azkar such as La-ilaha-illallah and Hamd-Va-Soureh has been emphasized in various textbooks of Muslims.<sup>[14-15]</sup> Generally, Muslims believe in two types of Recommended Azkar: 1) verbal Recommended Azkar, which is naming God and saying Tasbih, Tahmid, Takbir, and Tahlil (La-ilaha-illallah) and 2) internal Recommended Azkar, which is remembering God from the bottom of heart. Among the Recommended Azkar causing relaxation and reducing anxiety and restlessness, Hamd-Va-Soureh and La-ilaha-illallah (no power and force is greater than of God's) have been recommended more.<sup>[13]</sup> So, the researcher used those Recommended Azkar, and 1 h after intervention, the questionnaire was filled again. In the control group, no training on Recommended Azkar was given and just the routine interventions were administered, and the questionnaire was filled after 1 hour. As an open heart surgery lasts for an average of 3 h and the highest level of anxiety, stress, and depression of patients' families is observed in these 3 h, the researcher devoted the first hour in explaining to patients' families, obtaining a signed consent form, and in initial filling up of the questionnaire. The second hour was devoted to educating them on Recommended Azkar and making them say that, and the third hour was devoted to refilling the questionnaires. At the end of research, if any subject in the control group had accidentally used Recommended Azkar, he/she was left out of the study. Before completing the questionnaire, an informed written consent was obtained from the subjects and the questionnaires were anonymous. The subjects were assured that their acceptance or rejection to participate in the study had no effect on their patients' treatment.

DASS 21 questionnaire includes 21 questions through which signs of anxiety, stress, and depression are separately measured by seven questions, respectively. Each question is scored in a 4-point Likert's scale (none-many) ranging from 0 to 3, and the scores are summed up at the end. In this scale, the scores ranged 0-21. Scores 0-4 show normal level of depression, 0-3 show normal level of anxiety and 0-7 show normal level of stress, 5-7 show low level of depression, 4-5 show low level of anxiety and 8-9 show low level of stress, 8-11 show moderate level of depression, 5-7 show moderate level of anxiety and 10-13 show moderate level of stress, 12-15 show severe level of depression, 8-9 show severe level of anxiety and 14-17 show severe level of stress,

25 + show extremely severe level of depression, 10 + show extremely severe level of anxiety and 18 + show extremely severe of stress. This questionnaire was suggested firstly by Loviband (1995) and tested in a larger sample of humans. It was adopted on numerous subjects in England and its reliability and validity were confirmed.<sup>[16]</sup> Gysten *et al.*, in a study titled "Investigation of the association between stress and work," used DASS 21 questionnaire.<sup>[17]</sup> Aghebati, in a study on the effect of touch therapy on the level of pain and mental signs of depression, anxiety, and stress in cancer patients, used this questionnaire and reported its reliability<sup>[17]</sup> as 0.9 in Iran. The present study had limitations and the researchers tried to modify them. One of the limitations was the contact between subjects and the families of the patients who had already undergone surgery, which could have an effect on the obtained results. So, the researchers tried to separate subjects from other patients' families. Descriptive and inferential statistical tests (Chi-square, independent *t*-test, and paired *t*-test) were used to analyze the data in SPSS.  $P < 0.05$  was considered significant. Scientific and ethical contents of the research project have been approved by Kerman University of Medical Sciences, Iran.

## RESULTS

A total of 120 family members of the patients filled the questionnaire. There was no significant difference in the demographic characteristics concerning age, gender, and level of education in the study and control groups ( $P > 0.05$ ).

There was also no significant difference in anxiety, depression, and stress before intervention in the two groups ( $P > 0.05$ ). Independent *t*-test showed a significant difference in the mean scores (SD) of anxiety, depression, and stress in the study and control groups ( $P < 0.05$ ).

Tables 1 and 2 compare the mean and SD values before and after intervention in both groups. Independent *t*-test (based on relative changes) was used to compare the mean (SD) of changes in the two groups with regard to neutrality of values before intervention. This means that the values before the intervention decreased the value after the intervention intervention and then the calculated sum was divided to values before intervention. Then, comparison between the two groups was done. Mean (SD) values of relative change index have been presented in Table 3.

**Table 3: Mean (SD) relative changes in the study and control groups**

Group	Anxiety mean (SD) changes	Depression mean (SD) changes	Stress mean (SD) changes	Significant
Control	1.30 (1.23)	0.91 (0.25)	1.01 (0.19)	$P < 0.05$
Study	5.79 (1.34)	1.93 (1.38)	3.62 (0.18)w	

SD: Standard deviation

Paired *t*-test showed a significant difference in anxiety, stress, and depression in the study group before and after intervention ( $P < 0.05$ ), but in the control group in which no extra intervention except routine interventions were administered, no significant difference was observed.

## DISCUSSION

The findings showed that Recommended Azkar can reduce anxiety, stress, and depression of the patients undergoing open heart surgery. So, this method can be used to reduce tension and to prevent anxiety, stress, and depression.

In the past two decades, numerous studies have been conducted on reduction of anxiety, but few studies have been carried out to reduce patients' accompanying persons' anxiety. The present study showed that patients' open heart surgery imposes anxiety, stress, and depression to their accompanying persons.

In this regard, Syahkali *et al.*, in a study on the factors related to anxiety of accompanying persons of the patients hospitalized in ICU, showed that 77% of patients' families had anxiety and the families that encouraged the patients to surgery faced sixfold more of anxiety.<sup>[5]</sup> Pochard *et al.* showed that observing a beloved person in a critical condition is stressful.<sup>[18]</sup> Present study showed that Askar can reduce anxiety, stress, and depression of patients' accompanying persons. Nikbakht Nasrabadi (2002), in a study comparing

**Table 1: Comparison of mean (SD) in the control group before and after intervention**

Control	Mean (SD)		Paired <i>t</i> test	<i>P</i>
	Before	After		
Anxiety	8.42 (4.35)	7.13 (3.15)	1.17	0.2
Depression	4.24 (2.67)	4.35 (2.41)	-0.8	0.4
Stress	13.77 (3.03)	12.66 (3.13)	1.21	0.1

SD: Standard deviation

**Table 2: Comparison of mean (SD) in the study group before and after interventionw**

Study	Mean (SD)		Paired <i>t</i> test	<i>P</i>
	Before	After		
Anxiety	9.01 (4.32)	3.32 (15.3)	32.7	0.001
Depression	4.01 (2.84)	2.12 (1.52)	17.3	0.02
Stress	12.26 (4.87)	8.84 (4.73)	21.4	0.01

SD: Standard deviation

the effect of Benson relaxation method and Recommended Azkar on reduction of patients' anxiety status before an abdominal surgery, concluded that Recommended Azkar had more effect on reduction of anxiety compared to Benson relaxation method,<sup>[9]</sup> which shows the effect of relying on God and its role in giving peace to humans. Hosini (2008), in a study on the effect of prayer with emphasis on cognitive processes, showed that during praying, stimulation and activity starts in a special part of a human being's brain. This activity includes processing of the meaning of pray words, which causes recalling the saved information in the memory in addition to their related events and memories. It consequently leads to lowering stress, BP, and heart rate, which gives us the ability to face the high-risk events appropriately.<sup>[19]</sup> Peterson *et al.*, in a study on patients undergoing open heart surgery, found out that praying was effective on patients' rapid recovery as well as control of stress signs.<sup>[20]</sup> Vasegh, in a study on Muslim students, showed that although religious beliefs lower anxiety, they cannot reduce stress and depression.<sup>[21]</sup> In a study conducted by Rosmarin *et al.*, they concluded that remembering God increases the feeling of well-being in psychological and mental dimensions (anxiety, stress, and depression).<sup>[11]</sup>

## CONCLUSIONS

The present study showed that recommendation of religious Recommended Azkar can reduce anxiety, depression, and stress in families of patients undergoing open heart surgery, and the nurses in Muslim countries and in other countries where patients' families believe in God can use this method to lower families' anxiety.

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