



Reviewing the Effect of Face-to-Face Self-Centered Care Training on the Happiness of Patients Diagnosed with Acute Coronary Syndrome

Fateme Eshghi¹, Aref Faghieh¹, Mehraban Shahi¹, Zahra Khademi¹, Sanaz Bostani^{2*}

¹Department of Nursing, Faculty of Nursing and Midwifery, Hormozgan University of Medical Sciences, Bandar Abbas, Iran.

²M.Sc Educator, Faculty Member, Department of Nursing, Faculty of Nursing and Midwifery, Hormozgan University of Medical Sciences, Bandar Abbas, Iran.

ABSTRACT

Introduction and objective:in cardiovascular diseases, mental factors and the negative feelings resulting from these disorders can negatively affect the happiness of patients in addition to intensifying these diseases. Thus, presenting information to patients and training them can be considered as crucial component of nursing care in the respect of increasing happiness. There are various ways for training patients, one of which is the individual and the face-to-face method which is actually an effective method in this field. Therefore, the present study aims to review the effect of face-to-face care needs training on the happiness of patients with acute coronary syndrome who were hospitalized in the ShahidMohammadi Hospital in Bandar Abbas in the year 2016-2017.

Methods and materials:this research has been conducted on 50 patients with acute coronary syndrome who were randomly selected based on the determined criteria for entering the study. This study included five 45-minute intervention sessions. Then, the Oxford Happiness Inventory (OHI) was used for evaluating the level of happiness of patients before and after the intervention. The SPSS ver.19 was used along with descriptive and inferential statistics for analyzing the data.

Findings:research findings suggested that the mean score of happiness of patients before the intervention has increased after the intervention ($P=0.001$); in that the mean and standard deviation of the happiness scores before the intervention was 45.46(14.08) and it was 54.02(15.62) after the intervention.

Conclusion:the results have shown that patients had become happier after the intervention. The results indicated that the face-to-face training has had a desirable impact on the happiness of patients suffering from acute coronary syndrome. The individual face-to-face training method is considered as a useful method since it takes into account the behavior of learners, interaction, reception of feedback, the needs of learners, and because of its simplicity and cost-effectiveness and it is recommended to employees of the treatment centers.

Keywords:face-to-face training, happiness, acute coronary syndrome, self-care

Corresponding author: Sanaz Bostani

INTRODUCTION

Cardiovascular diseases are the most common cause of death and disability all around the world (Akbari and et al, 2015; Nichols and etal, 2014). Studies all over the world have shown that 29.6% of the deaths in the year 2010 were because of cardiovascular diseases (Nichols and etal, 2014). According to the reports of the World Health Organization, annually, 3.8 million males and 3.4 million females die because of coronary artery diseases and half of these deaths are because of myocardial infarction (Farrell , 2011). According to the reports of Ministry of Health Care, coronary artery diseases are the first cause of death based on the number of deaths and they are the second cause of death based on the years of life that have been lost (Naghavi and Jafari, 2006).

Acute Coronary Syndrome (ACS) includes myocardial infarction with ST segment elevation and myocardial infarction

without ST segment elevation and unstable angina (Thygesen and etal, 2012). ACS includes a wide and heterogeneous population of a range of patients from those who suffered from chest pain, nonspecific changes on the ECG and natural markers and those with myocardial infarction and cardiogenic shock (Scirica, 2010). The terms ACS is used because coronary artery disorders have mutual pathophysiological mechanisms which reflect the urgent nature of the problem and the need for a quick diagnosis in order to obtaining the best and most desirable results (Chen and etal, 2005). Patients diagnosed with ACS might experience nonspecific symptoms for weeks or even months before the cardiac problems including fatigue, shortness of breath, digestive disorders, chest pain and discomfort as well as anxiety (Graham and et al, 2008).

Different researches have reviewed the factors affecting heart diseases, most of which focus on physiological factors such as hyperlipidemia, hypertension, diabetes, or factors such as

cigarettes and alcohol. However, psychologists believe that psychological factors such as stress, job tension, social isolation, exhaustion with life, lack of social support, hostility and anger, depression and anxiety play a role in a person's diagnosis with heart diseases (Bordbar and et al, 2011) and also, mental factors are half of the factors that affect the etiology and aggravation of heart diseases (Akbari and et al, 2015). Friedman and Roseman were the first ones who found out the role of psychological factors in the appearance of heart diseases (Friedman and Rosenman ,1974). Also, epidemiological studies have proved that disorders such as anxiety and depression come along with cardiovascular diseases and the prevalence of symptoms of depression and anxiety in patients with heart diseases have been reported to be equal to 47% and 68%, respectively (Hansen and et al, 2003).

Most people show mental reactions, as well as physical reactions, to threats and stress (Vafaie and etal, 2013). In addition, in cardiovascular diseases, emotions and expressing or suppressing them are among effective mental factors that can lead to cardiovascular diseases or intensify them (Friedman and Rosenman ,2008). On the other hand, all of the negative emotions resulting from these disorders can have harmful impacts on the happiness of these individuals (Zvolensky and Smits,2007).

Among the different dialects, cultures and values of human beings, mental experiences and facial expressions, such as happiness and fear, are basic and considerable feelings (Zvolensky and Smits, 2007). Happiness is a general sense of well-being, joy, pleasure, evolution and mental growth (David and Boniwell, 2013).

Reviews have also shown that happiness can improve physical health regardless of how it has been emerged. Happiness is an important component of having a high-quality life and it is even more significant that wealth or sexual activity. Researchers consider happiness as a psychological or mental well-being. Happy people feel more safe, they make decisions easier and are more satisfied with the people they live with. Of course, happiness of patients suffering from cardiovascular diseases has not been reviewed specifically. It can be argued that the happier these patients are, the more hopeful they will be for living a healthy life (Akbari and etal, 2015). For instance, in a comparative study done by Akbari et al. on the happiness of patients with heart diseases, came to the conclusion that the level of happiness of these patients is lower than ordinary people (Akbari and etal , 2015). In addition, a study was conducted by Abdollahi et al. (2012) on 40 patients diagnosed with hypertension who were divided into two groups: an experimental group and a control group. The results showed that Fordyce happiness training has affected the reduction of systolic blood pressure and increase of happiness of patients suffering from high blood pressure in the experimental group (Abdolahi and et al, 2012).

Training patients has an impact on the awareness, health-related behaviors and experiences of a person regarding his/her disease, and helps maintain health or adapt to the current conditions, especially in chronic diseases. Training can also change the attitude of patients to their disease and factors that control it. Thus, training a patient is something beyond transferring information to the patients (Abdolahi and etal, 2012). Face-to-face training is one of the most powerful and effective ways for the learner to learn (Abdolahi and et al, 2012). In this method, the teacher provides an active learning opportunity in an actual condition while presenting desirable models in proportion with individual characteristics. One of

the most important features of this method is observation of the behavior of the learner, in such a way that the trainer and the trainee cannot hide from one another (Van den Borne, 1998). This method is a cost-effective training method, especially for people who are not used to reading books and articles and also watching television, this method can be a good source of health-related information (Rakhshaei and Vanaki, 1998); also, despite the individual differences, trainees are trained in similar conditions (Karimi and etal, 2006). Another training method is using training pamphlets which is accessible and cheap but it's not proper for illiterate people (Rakhshaei and Vanaki, 1998). Pamphlet includes a folded paper sheet containing educational materials printed on the both sides of it which can be used for individual and group training (Khakbazan and etal, 2008). In the research conducted by Abbaszadeh (2012) on the effect of face-to-face training on the awareness and attitude of patients suffering from myocardial infarction and the results have been indicative of the positive impact of this method (Moumeni and Malekzadeh ,2000). In addition, in the study done by Noorian et al. on patients who were candidates for non-emergency surgery, it was concluded that in environments where health care workers are faced with pressure in terms of the load of work and time and don't have enough time for face-to-face verbal training for providing the patients with the necessary information, training pamphlets that have been properly prepared can be used for promoting the awareness and knowledge of patients (Abbaszadeh and et al, 2012).

Numerous studies have shown that the association between psychiatric disorders and heart diseases are factors that affect the increase of treatment costs, duration of hospitalization and reduction of the performance of patients (Hansen and etal, 2011; Scherrer and et al, 2003, Noorian and et al, 2013). Therefore, reduction of the psychiatric disorders that follow heart disease have been a proper strategy for improving prognosis and reduction of the duration of hospitalization of these patients (Wells and etal, 1989). Further, there are numerous convincing studies on negative emotions resulting from depression, anger and death caused by cardiovascular diseases; while there are much useful results about the level of happiness and the effect of training on the increase of this level in patients diagnosed with cardiovascular diseases (Zvolensky and Smits, 2007).

Considering the high prevalence and the fact that the cardiovascular diseases are chronic diseases and have a negative impact on the mental health of patients suffering from them, many patients have a quite low level of happiness. All of these factors provide the substrate for cardiovascular diseases and also worsen the condition of physical and mental health of these patients. The other issue that is of great importance is that many of these patients are not much aware of their disease and the cares and requirements that are necessary for preventing the upcoming risks and for improving the quality of life. Since training in the field of risk factors that lead to cardiovascular diseases is considered to be a health care priority and due to the importance of training and existence of different training methods, this study has aimed to review the effect of face-to-face self-centered care training on the happiness of patients diagnosed with cardiovascular.

MATERIALS AND METHODS

This is an interventional study (a clinical trial) with an experimental group, a pretest and a posttest. The statistical population of this study is composed of 50 patients diagnosed

with acute coronary syndrome who were hospitalized in the ShahidMohammadi Hospital of Bandar Abbas in 2016. The samples were selected using the simple sampling method. Patients were evaluated to see whether or not they had the criteria for entering the study and no one was eliminated from the research samples. The terms for entering the research: being diagnosed with acute coronary syndrome with the confirmation of the doctor, being hospitalized over the course of the study, being fully conscious and understanding the Persian language. There were some terms for existing the study as well, such as having problems and hearing disabilities, having a history of consuming psychotropic drugs based on the documents in the patient's file, being diagnosed with other debilitating diseases, not wanting to participate in the rest of the study and being absent in the sessions.

Measurements

After getting a permission from Hormozgan University of Medical Sciences and coordinating with the staff of the hospital and the relevant sections, all of the participants cautiously signed a written census for participating in the study. In addition, the patients were reassured that their information will remain confidential and they can exit the study at any given time. In order to earn the trust of patients, instead of being asked to write their names down, they were asked to use codes on the questionnaire. Then, the patients filled out demographic information forms prepared by the researcher containing personal characteristics including marital status, age, gender, income status, body mass index, history of using sedatives, level of education, duration of the illness, history of having underlying diseases such as diabetes, hyperlipidemia, and hypertension. In addition, all of the volunteers took the pretest using the Oxford Happiness Inventory (OHI) so that the level of happiness of patients would be evaluated in order to determine the ones who were qualified to participate in the test. The Oxford Happiness Inventory was designed by Argyle, Martin and Crossland in 1989. Ultimately, with the final reviews, the 29-item Oxford Happiness Inventory was created. Each item includes four phrases, with the first one meaning the score 0, the second one meaning the score 1, the third one meaning the score 2 and the fourth one meaning the score 3. Ultimately, the respondent achieves a score between 0 and 87 and the higher the score is, the happier the respondent is considered to be. In order to review the validity and reliability of Argyle's inventory (2001), a sample composed of 142 Iranian men and 227 Iranian women of 18 to 53 years with the mean of 25 filled out Oxford Happiness Inventory, Eysenck's Personality Inventory and Beck's Depression Inventory. By reviewing the internal consistency of OHI, it became clear that all of the 29 items of this inventory had a high total correlation score. The Cronbach's alpha for the entire inventory is equal to 0.91. In Iran, this coefficient was calculated to be 0.93 for 101 testees by Alipoor and Noorbala (1999) (Hosaka and et al, 1999).

INTERVENTIONS

The study was approved by the ethics committee of Hormozgan University of Medical Sciences (hums.REC.1395.111). At first, the nature and objective of the study were explained to patients in details. Then, they were asked to fill out the happiness and demographic information inventories. In previous studies with similar tests, there were 3 to 12 face-to-face self-centered care training sessions. In the present study, there were 5 consecutive sessions a week as 45 to 90-minute classes. Then, the necessary explanations were presented to each of the participants as a pamphlet at the end of the sessions.

Procedure of the face-to-face care needs training

Face-to-face training is one of the most powerful and effective ways for the learner to learn (Abdolahi and et al, 2012). In this method, the teacher provides an active learning opportunity in an actual condition while presenting desirable models in proportion with individual characteristics. One of the most important features of this method is observation of the behavior of the learner, in such a way that the trainer and the trainee cannot hide from one another (Van den Borne H, 1998). This method is a cost-effective training method, especially for people who are not used to reading books and articles and also watching television, this method can be a good source of health-related information (Rakhshaei and Vanaki, 1998). Another training method is using training pamphlets which is accessible and cheap but it's not proper for illiterate people ((Rakhshaei and Vanaki, 1998).

This method was implemented in five 45-minute consecutive sessions a week for 50 patients suffering from acute coronary syndrome where each of the trainees was face-to-face with the trainer. At the beginning of the first session, the researcher explained to the patients that the goal of this method is to help increase their awareness about care needs and therefore to increase the level of their happiness. In addition, the patients were also asked not to leave the sessions and participate in all of the sessions from the beginning to end. The interventions began when the patients were hospitalized but were at a proper state, both mentally and physically and in a calm and peaceful environment so that they would have more information in the considered fields. In addition, in order to prevent the patients from getting tired during the 45-minute sessions, which was considered as a confounding factor, a one-hour break was set between the training sessions; in that each session was divided to a 20-minute part and a 25-minute part with a one-hour break in between. The training included subject matters such as issues regarding the nature of the illness, how to use drugs, the necessary cares that must be taken regarding the consumption of drugs, sticking to a food diet, being active and resting, not smoking or abusing substances and regularly visiting the doctor. At the end of the training, a training pamphlet was handed out to the patients in order to promote their awareness in association with self-care. The content of the training program was set based on the newest articles and books. In the next stage, in order to determine the effectiveness of the training program on the happiness of patients, immediately after the training, the questionnaires were again handed out to the participants by the researcher in a calm and peaceful environment and in a proper mental and physical condition, and then the data was collected.

STATISTICAL ANALYSIS

The collected data was then analyzed by the statistical software SPSS ver.19. In order to review the individual - social characteristics of patients, including marital status, age, gender, income status, body mass index, history of using sedatives, level of education, duration of the illness, history of having underlying diseases such as diabetes, hyperlipidemia, and hypertension and the level of happiness of patients before and after the intervention, the descriptive statistics including the number, percentage, mean and standard deviation were used in addition to descriptive tables. In the second stage, in order to analyze the collected data, the inferential statistics such as the Mann-Whitney, Kolmogorov-Smirnov, Kruskal-Wallis and Wilcoxon tests were used which can be used in clinical trials and the results were reviewed after studying the effect of the training program.

RESULTS

The participants in this study were 50 patients diagnosed with acute coronary syndrome who were hospitalized in the ShahidMohammadi Hospital of Bandar Abbas in 2016. The results of this study in association with the demographic variables (table 1) showed that most of these 50 patients were women (70%) and the most frequency was associated with the age group of 46-60 years (52%). The majority of the samples under study (78%) had a body mass index of higher 25. Most of the patients suffering from heart disease were married (96%). In terms of education level, most of these participants could only read and write (66%). Out of the samples under study, duration of diagnosis with heart diseases was shorter than a year in most samples (46%). In terms of income status, most of the participants (70%) were not earning enough money. 31 of the samples were diagnosed with diabetes mellitus (62%) and 32 patients (64%) had a history of smoking. Moreover, 28 patients suffered from hyperlipidemia (56%) and 37 patients suffered from hypertension (74%). Most of the participants had a family history of heart diseases (62%). In order to review the normality of the main variable, the Kolmogorov-Smirnov test was used and the obtained results were desirable and included the happiness scores after the intervention (sig=0.20). The pre-intervention happiness score did not have a significant difference with the post-intervention happiness score based on marital status (p=0.52), hyperlipidemia (p=0.23), hypertension (p=0.33), age (p=0.135), education (p=0.687), income status (p=0.356) but it did have a significant difference based on age (p=0.001); in that men had obtained a higher score than women. Further, there was a significant difference between individuals who were diagnosed with diabetes and those who weren't diagnosed with diabetes (p=0.019); meaning that the pre-intervention happiness score of those who were not diagnosed with diabetes was higher. The mean and standard deviation of the happiness score before the intervention and after the intervention were equal to 45.46(14.08) and 54.02(15.62) after the intervention. There was a significant difference between the happiness scores before and after the intervention (p=0.001) (table 2).

Table 1 - reviewing the distribution of frequency of samples under study in terms of demographic variables

Underlying variable	Test group	
	Number	Percentage
Gender	Female	35 7.0
	Male	15 3.0
Age groups	31-45 years	13 26.0
	46-60 years	16 52.0
	61 plus years	11 22.0
BMI	18-25	11 22.0
	Higher than 25	39 78.0
Marital status	Single	2 04.0
	Married	48 96.0
Education level	Just reading and writing	33 66.0
	Cycle	9 18.0
	Diploma	7 14.0
	Bachelor degree and higher	1 02.0

Duration of the illness	Less than a year	23	46.0
	2-4 years	20	4.0
	More than 4 years	7	14.0
Income status	Less than adequate	35	7.0
	Adequate	14	28.0
	More than adequate	1	02.0
Being diagnosed with diabetes mellitus	Yes	31	62.0
	No	19	38.0
Smoking and abusing substances	Yes	32	64.0
	No	18	36.0
High blood lipid (hyperlipidemia)	Yes	28	56.0
	No	22	44.0
High blood pressure (hypertension)	Yes	37	74.0
	No	13	26.0
Family heart disease	Yes	31	62.0
	No	19	38.0

Table 2 - mean and standard deviation of the happiness score achieved by participants under study

Main variable	Mean	Standard deviation	P-value
Happiness	Before intervention	45.46	14.08
	After intervention	54.02	15.62
			0.001

DISCUSSION

The present study was done with the purpose of reviewing the effect of face-to-face self-care needs training on the happiness of patients suffering from acute coronary syndrome. As the results indicate, there is a significant difference between the happiness scores before and after the intervention in patients who participated in the study (p=0.001) (table 2) which means that face-to-face self-care needs training has had an impact on the happiness of patients suffering from acute coronary syndrome. The mean of the happiness scores of the participants after the intervention were clearly higher than the scores before the intervention which is an indication of the significant effect of face-to-face training. Research findings have confirmed the hypothesis of research indicating that face-to-face self-care needs training has had a positive impact on the happiness of patients suffering from acute coronary syndrome. Although other studies have also focused on happiness, however, it seems that the present study is the first one in Iran and outside of Iran which has aimed to review the

effect of face-to-face self-care needs training on the happiness of patients suffering from acute coronary syndrome. The results of the present study comply with the findings of the following studies and no study was found with results opposite of this study.

In a comparative study done by Akbari et al. on the happiness of patients with heart diseases, came to the conclusion that the level of happiness of these patients is lower than ordinary people (Akbari and etal, 2015).

Another study called "comparing anxiety sensitivity and happiness of patients with irritable bowel syndrome (IBS) and healthy individuals in the city Shiraz", a low level of happiness was reported in patients suffering from IBS (Alipoor and Noorbala, 1999).

A study was conducted by Abdollahi et al. (2012) on 40 patients diagnosed with hypertension who were divided into two groups: an experimental group and a control group. The results showed that Fordyce happiness training has affected the reduction of systolic blood pressure and increase of happiness of patients suffering from high blood pressure in the experimental group (Abdollahi and etal, 2012).

In a study done by Suvarnarong et al. (2013) on 54 nursing students showed that a yoga program has had a positive impact on the happiness and self-esteem of university students in the experimental group of the research (Ghasemi, 2012).

In an interventional study conducted by FalakAflaki and MalekiTabar (2016) on 20 mothers with children under artificial cochlear implantation treatment, it was concluded that the group positive psychotherapy method has affected the happiness of participants in the experimental group of the research (Suvarnarong and etal, 2013).

Since cardiovascular diseases are one of the most common chronic diseases which usually last long, not only they significant influence the patient physically, they also affect them mentally. Some of the negative mental effects of these diseases, we can refer to job tension, social isolation, fatigue with life, depression and anxiety which can intensify cardiovascular diseases as well (Akbari and etal, 2015). On the other hand, all of the negative emotions resulting from these disorders can have harmful impacts on the happiness of these individuals (Zvolensky and Smits, 2007). By using numerous medicinal and treatment methods, the negative physical effects of these diseases can be controlled to some extent, but in order to reduce the negative mental effects of cardiovascular diseases, proper methods can be used including teaching patients about their disease, the duration of their disease and treatment and care needs. In this regard, Face-to-face training is one of the most powerful and effective ways for the learner to learn. In this method, the teacher provides an active learning opportunity in an actual condition while presenting desirable models in proportion with individual characteristics. One of the most important features of this method is observation of the behavior of the learner, in such a way that the trainer and the trainee cannot hide from one another (Abdollahi and et al, 1998). In the face-to-face training method, there is much more interaction between the trainer and the trainee and that is why it is more effective than other methods and it has been approved by the results obtained in this study.

Therefore, according to the findings obtained from the study, the difference between the mean of happiness scores of patients suffering from acute coronary syndrome before and after the intervention ($p=0.001$) (table 2); which shows that the levels of happiness of patients under review before and after the intervention have not been the same and the face-to-face self-care needs training method has effectively increased the happiness of patients.

According to the findings of the present study, there is a significant difference between the happiness scores before and

after the intervention based on the age factor ($p=0.001$); in that the scores achieved by men were higher than women. This result complies with the results of the study conducted by Barati et al. (2013) (FalakAflaki and Malekitabar, 2016). Lower happiness scores achieved by women can be associated with the higher prevalence of depression in this group (Hosaka and et al, 1999; Barati and et al, 2015). In addition, there was a significant difference between individuals who were diagnosed with diabetes and those who weren't diagnosed with diabetes ($p=0.019$); meaning that the pre-intervention happiness score of those who were not diagnosed with diabetes was higher. Since diabetes is a disease that can be embedded in the etiology of cardiovascular diseases and because simultaneously suffering from diabetes and cardiovascular diseases, which are both chronic diseases, can have significant negative impacts on the mental and physical health of the patient, the level of happiness of the patient can be considerably reduced.

LIMITATIONS

Among the limitations of this research, we can refer to the fact that the researcher was forced to complete some of the questionnaires because the respondents were illiterate and couldn't do it by themselves, which might affect how the questions have been answered. Another limitation can be the noise of the alarm of devices and not being able to transfer them to a more proper environment for the training which might have affected the procedure of the intervention and the training of the patients.

CONCLUSION

In general, the results of this study showed that patients suffering from coronary artery syndrome experience mental pressure during the time of hospitalization which can have negative effects on the patient. On the other hand, a simple, cheap, efficient and cost-effective method can be used for increasing the level of happiness of patients. The individual face-to-face training method is considered as a useful method since it takes into account the behavior of learners, interaction, reception of feedback, the needs of learners, and because of its simplicity and cost-effectiveness and it is recommended to employees of the treatment centers. The results of this research can be used in various fields of nursing services including training and emphasizing patients' training as a crucial component of clinical nursing cares as presenting individual trainings and for emphasizing on this type of trainings especially in important heart surgeries as a basis for future researches. What is recommended to the future researchers to conduct the present research with a larger sample volume and on other groups of patients by controlling the underlying variables, etc.

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