EFFECTIVENESS OF VIDEO TEACHING ON ANXIETY AMONG PATIENT

UNDERGOING CORONARY ANGIOGRAPHY

Author name(s):
Manisha Saklani[1]
Diksha Thakur [2]
Dr. Jyoti Sarin[3]

Author(s) affiliations:

[1]Assistant Professor, Maharishi Markandeshwar Deemed to be University, Mullana, Ambala, Haryana.

[2] Nursing Tutor, Maharishi Markandeshwar Deemed to be University, Mullana, Ambala, Haryana.

[3]Principal, Maharishi Markandeshwar Deemed to be University, Mullana, Ambala, Haryana.

Author's contribution

[1,] Concepts, design, and definition of intellectual content, data collection, data analysis, manuscript preparation and manuscript review.

[2,] Concepts, design, and definition of intellectual content

[3]Content review and logistic support, documentation and data acquisition.

Corresponding Author:

Dr. (Mrs.) Jyoti Sarin
Dean- Principal,
MM College of Nursing,
Maharishi Markandeshwar Deemed to University Mullana, Ambala, Haryana.

Abstract

BACKGROUND

Anxiety is the vital component which is common among the people who are hospitalized and persistent anxiousness can result in several complications related to health which is needed to be cured effectively. The purpose of the present study was to evaluate the effectiveness of video-teaching learning on anxiety of the patient undergoing coronary angiography admitted at MMIMSR hospital Mullana, Ambala.

OBJECTIVE

The objective of the present study was to evaluate the effectiveness of video-teaching learning on anxiety of the patient undergoing coronary angiography admitted at MMIMSR hospital Mullana, Ambala.

MATERIALS AND METHODS

In the present study, quasi-experimental pre test post test research design was used. 35 patients were selected using purposive sampling techniques. Data was collected through face-to face interaction using state trait anxiety inventory. Anxiety was assessed before and after the procedure. Video was showed to the patient before the procedure.

RESULTS

The result of study was revealed the anxiety score in the pre-test ranges from 40-65 whereas in the post-test it ranges from 46-67 respectively. There was no significant difference (t = -1.47, p = -1.50) found in the mean anxiety score of the patient. There was no significant association seen between the mean anxiety score with the selected

demographic variables.

CONCLUSION

The study concluded that anxiety is common among patients undergoing coronary angiography. So, it is vital that some effective measures shall be taken in order to reduce the anxiety among patients.

Introduction

Cardiovascular diseases [CVDs] have become the leading cause of mortality in India.

A quarter of all mortality is attributable to CVD.

Ischemic heart disease and stroke are the predominant causes and are responsible for <80% of CVD deaths. The global burden of disease study estimate of age – standardized CVD death rate of 272 per 1,00,000 population in India is higher than the global average of 235 per 1,00,000 population. Premature mortality in terms of years of life lost because of CVD in India increased by 59%, from 23.2 million (1990) to 37 million (2010).1 Coronary angiography is a common invasive procedure based on radiological imaging of coronary vessels to diagnose cardiac disease using radio opaque substance and catheter during the procedure. Despite the success, experience and reliability of cardiology health care professionals in practice, dis-interventional technique can cause a emporary increasing preoperative psychological parameters such as anxiety in most patient's.2

Over 1 million coronary angiography are performed in North America annually and asignificant number are interpreted angiograms were found in 19% of patient's.5 Patients undergoing CAG between April 2009 and April 2010 were including in this prospective cohort study. Anxiety levels were measured using the self reported scales of anxiety, ranging from 0 to 100. In total 2604 patients were included, with 70.4% male participants with the mean age of 65+12. Result showed that anxiety score were highest pre-procedure (44.2+27.0mm).

Female patients reported a significantly higher pre-procedure anxiety score (50.4+26.5) compared to males (41.5+26.8, p=0.02).

Other factor associated with higher levels of anxiety at different time points were age<65.3.

Anxiety is a challenge in patient's high level of anxiety associated with worse outcomes in coronary artery disease patients.

A study conducted in 2013 reported that an audio-visual training given before CAG procedure help to lower the patient's anxiety. Patients in the experimental group were informed about the procedure for a limited time they obtained lower state anxiety scores than those in the control group.

The result showed that the mean age of patient's was 59.33, 63.6% of were men and 50.7% were primary school graduates in edition 51.4% had a monthly income below 1500, 53.6% lived in district and 52.9% new person undergoing CAG patient had moderate level of trait anxiety.2 A study conducted to evaluate the effectiveness of an educational video intervention in lowering the level of anxiety of the patient's admitted for diagnostic cardiac catheterization and to determine association between educational video and demographic characteristics such as age, gender and educational level.

The result showed that there was a positive effect of the education by used video in lowering the level of anxiety of the patients entering the CAG procedures, where the level of the anxiety in the control group was much higher than in the study group after he video presentation.

The study also reported that anxiety is highest during the waiting time immediately prior to the procedures, characterized by symptoms such as palpitations, sweating, trembling, or shaking, shortness of breath and discomfort.[4] So, present study was taken to see the effectiveness of video teaching on anxiety level of the patient's.

Methodology

Study Design

The present study used quasi experimental pre- test posttest design

Setting and Population

The present study was conducted on patient undergoing coronary angiography.

Sampling and Sample Size

The purposive sampling technique was used to collect the data from 35 patients.

Data Collection Tool and Technique

The Tool Comprised of two sections:

Data Analysis

The tools prepared for the collection of data comprise the following sections:

Part A: Structured demographic questionnaire for the coronary angiography patients

Part B: State trait anxiety inventory to assess the anxiety to coronary angiography

patients

DESCRIPTION OF TOOLS:

Part A- Socio Demographic Variables:

It comprises the socio demographic variables like age in years, gender, and religion, and educational status, type of family, job, and types of coronary intervention.

Part B – State trait anxiety inventory for adults

State trait anxiety inventory for adults was used to assess the anxiety of coronary angiography patients. It comprises of 20 questions pertaining to assess the anxiety

level of patients. The scale rated the items as

☐ 'NOT AT ALL (1)

☐ SOMEWHAT (2)

☐ MODERATELEY (3)

☐ VERY MUCH SO (4)

Description of video teaching:

A video teaching was prepared. The pre procedural, intra procedural and post procedural information regarding coronary angiography was included in the video.

Video was shown to the patient after assessment of anxiety score.

Table 1: Frequency and percentage distribution of the socio demographic variables

N=35

Sample characteristics	Frequency (f)	Percentage (%)
Age in years		
• 45-55	13	37
• 56-65	16	46
• 66-75	4	11
• >75	2	6
Gender		
• Male	24	68
• Female	11	32

Marital status		
• Married	34	92
• Widowed	1	8
Educational status		
• Primary school	12	34
• High school	7	20
• Diploma	2	6
• University degree	8	23
• Illiterate	6	17
Employment status		
• Employed	3	9
• Housewife	10	28
• Retired	3	9
• Self employed	19	54

This section describes the socio-demographic variables like age, gender, maritalstatus, educational status, employment status.Finding related to age showed that 37 percent patients were in the age group of 45-55

years, 46 percent were in the age group of 56-65 years, 11 percent were in the agegroup of 66-75 years whereas 6 percent were in the age group of more than 75 years.Further in relation to gender it was noted that 68 percent were male and 32 percent were female. In relation to marital status 92 percent were married and 8 percent were

widoed.

According to the educational status 34 percent were having primary education, 20 percent were having high school education, 6 percent were having diploma, 23 percent were having university degree and remaining 17 percent were illiterate. In relation to Employment status 54 percent patients were self-employed, 28 percent were housewives, 9 percent had retired and 9 percent were employed.

Table 2: Mean, Median, Standard deviation and range anxiety score of the patient.

Group	Mean±SD	Median	Range
Pre test	53.29 ±5.22	54	40-65
Post test	55.14±5.18	55	46-67

Table 2 describes the mean, median, minimum and maximum anxiety score of pretest and posttest of

the patients undergoing coronary angiography.

It was seen that the pretest mean score was 53.29 ±5.22 which was 55.14±5.18 in posttest. It can also

be noted that the median of pretest was 54 whereas it was 55 in the post test.

The anxiety score in the pretest ranges from 40-65 whereas in the post test it ranges from 46-67.

Table 3: Mean of pre-test and post-test, paired t test

Group	Pre test mean	Post test mean	Paired t test	df	P
1	53.29	55.14	-1.47	34	.150

Table 3 represents the mean anxiety score of the patient undergoing coronary angiography before and after the intervention. To test the significant difference in the mean anxiety score of the patient following hypothesis was formulated:

H_1: There will be significant difference in the mean anxiety score of the patient. H_0: There is no

significant difference in the mean anxiety score of the patient.

The above table shows that the mean anxiety score in the pretest was 53.29 and it was 55.14 in the post test. Paired t test shows that there was no significant difference (t= - 1.47, p= -1.50) in the anxiety score of the patient. Thus, the study failed to reject the null hypothesis. Hence it was concluded from the study that there was no enough evidence to say that video teaching was effective in reducing the anxiety score of the patient.

Table 4: Association of mean anxiety score with selected socio demographic variables.

N=35

Socio demographic variables	f (%)	Mean anxiety score	One way ANOVAs (f)	df	p value
Age in years	13(37%)	52.85			
• 45-55	16 (46%)	53.75	.14	31	.93
• 56-65	4(11%)	53.75			
• 66-75	2(6%)	51.50			
• >75					
Gender					
• Male	24(68%)	53.54	.17	33	.67
• Female	11(32%)	52.73			
Marital status					
• Married	34(92%)	53.32	.06	33	.80
• Widowed	1(8%)	52.00			

Educational status					
• Primaryschool	12(34%)	53.75	.30	30	.86
• High school	7(20%)	53.43			
• Diploma	2(6%)	56.50			
	8(23%)	52.63			
• University degree					
• Illiterate	6(17%)	52.00			
Employment status					
• Employed	3(9%)	53.00	.22	31	.88
• Housewife	10(28%)	52.50			
• Retired	3(9%)	55.33			
• Self employed	19(54%)	53.42			

Discussion

Finding related to the socio-demographic variables showed that 37 % patients were in the age group of 45-55 years, 46% were in the age group of 56 -65 years, 11% were in the age group of 66- 75 years whereas 6% were in the age group of more than 75 years. Findings in relation to gender describes that 68 % were male and 32% were female. In relation to marital status 92% were married and 8% were widowed. According to the educational status 34% were having primary education, 20% were having high school education, 6% were having diploma, 23% were having university degree and remaining 17% were illiterate. In relation to employment status 54% patients were self- employed, 28% were housewives, 9% had retired and 9% were employed.

Similar study conducted in 2013 to assess the anxiety among patient revealed that reported that the mean age of patients was 59.33,63.6% of were men and 50.7% were primary school graduates in edition 51.4% had a monthly income below 1500, 53.6% lived in district and 52.9% new person undergoing CAG Patient had moderate level of trait anxiety.[2]

The findings related to mean anxiety score showed that the pre – test mean Score 53.29± 5.22 which was 55.14± 5.18 in post- test. It can be noted that median of pre- test was 54 where as it was 55 in the post- test. The anxiety score in the pre-test ranges from 40- 65 where as in the post test it ranges from 40- 67. There was no significant association seen in the mean anxiety score of the patient.

The present findings of the study supported by a study conducted in 2008, to assess the effect of the Neuman system model on anxiety in patient undergoing coronary angiography. The results of the study revealed that there was no significant difference was found between the mean anxiety score of the two groups before intervention. However, the mean anxiety score of the intervention group was significantly lower than that of the control group.

IMPLICATIONS

• The assessment of patient anxiety helps to know the patient anxiety before procedure.

Limitations of the study

• Data was collected from one hospital

• Study was confined to a small no. of object.

• The study was limited to only the patient who has visited to MMIMSR and limited

   data collection period

Recommendation

• The study can be replicated on a large sample to validate the findings and make generalization.

• Comparative studies can be done.

Conclusion

The study was done to assess the effectiveness of video teaching the anxiety level of patients visited to MMIMS&R. The study was done on 35 patients. The study concluded that there was no enough evidence found which showed that video teaching was effective in reducing the anxiety of the patient.

References

1.

Srinath Reddy K, Shah B,Varghese C, Ramadoss A. Responding to the threat of chronic disease in India. Lancet. 2005; 366:1744-1749.

2.

Astin F., Closs, S.J., &McLenachan, J. (2009). Primary angioplasty heart attack: mismatch between expectations and reality? Journal of advanced nursing, 65(1), 72- 83.

3.

Delewi R, vlastra W, Rohling WJ, Wagenaar TC, Zwemstra M, Meesterman MG, Vis MM, Wykrzykowska JJ, Koch KT, de Winter RJ, Baan J Jr, Piek JJ, Sprangers MA, Henriques JP. Anxiety levels of patients undergoing coronary procedures in the catheterization

4.

Abbas Abdul HasanQasim. "Effectiveness of an educational video intervention on anxiety level of patients prior to diagnostic coronary catheterization in AL- Nasiriyas cardiac

5.

Schwartz, L., & Bourassa, M. G. (2001). Evaluation of patients with chest pain and normal coronary angiograms enter."IOSR Journal of nursing and health sciences (IOSR-JNHS), vol.6, no.4, 2017, pp. 57-64.

6.

Edéll-Gustafsson UM, Hetta JE. Anxiety, depression and sleep in male patients undergoing coronary artery bypass surgery. Scand J Caring Sci. 1999;13:137–143.

7.

Paterniti S, Zureik M, Ducimetière P, Touboul PJ, Fève JM, Alpérovitch A. Sustained anxiety and 4-year progression of carotid atherosclerosis. ArteriosclerThrombVasc Biol. 2001;21:136–141.

8.

Eaker ED, Sullivan LM, Kelly-Hayes M, D'Agostino RB Sr, Benjamin EJ. Tension and anxiety and the prediction of the 10-year incidence of coronary heart disease, atrial fibrillation, and total mortality: the Framingham Offspring Study. Psychosom Med. 2005;67:692–696.

9.

Eaker ED. Psychosocial factors in the epidemiology of coronary heart disease in women. PsychiatrClin North Am. 1989;12:167–173.

10.

Bittl JA. Advances in coronary angioplasty. N Engl J Med. 1996;335(17):1290-1302.

11.

Levine GN, Bates ER, Blankenship JC, et al. ACCF/AHA/SCAI guideline for percutaneous coronary intervention. Circulation. 2011;124(23):574-651.

12.

National Registry of Diseases Office. Singapore Myocardial Infarction Registry Annual Report 2016. 2018;1-58.