



# International Journal of Nursing and Healthcare Research

Journal home page: [www.ijnhr.com](http://www.ijnhr.com)

<https://doi.org/10.36673/IJNHR.2021.v05.i01.A11>



## EFFECTS OF PEER-FACILITATED TRAINING AND PEER-AND-VIDEO TRAINING ON ANXIETY AMONG PATIENTS UNDERGOING CARDIAC PROCEDURES

Premalatha Paulsamy<sup>\*1</sup>, Krishnaraju Venkatesan<sup>2</sup>, Kumarappan Chidambaram<sup>2</sup>  
Pranave Sethuraj<sup>3</sup>

<sup>1</sup>\*College of Nursing for Girls, King Khalid University, Khamis Mushayit, Asir Province, Saudi Arabia.

<sup>2</sup>Department of Pharmacology, College of Pharmacy, King Khalid University, Abha, Asir Province, Saudi Arabia.

<sup>3</sup>Vee Care College of Nursing Chennai, Tamil Nadu, India.

### ABSTRACT

Anxiety after a catastrophic cardiac event can obstruct recovery and is linked to increased morbidity and mortality. A increasing body of research demonstrates that a negative emotional state such as anxiety is present in patients due to unusual special procedures like angiogram, angioplasty etc which affects them in numerous ways. Hence, this study has been conducted to assess effects of Peer-Facilitated Training (PT) and Peer-and-Video Training (PVT) on anxiety among patients undergoing cardiac procedures. This randomised controlled trial with comparative study design was conducted among 40 patients (20 in each PT and PVT group) undergoing cardiac procedures at two selected hospitals. The State-Trait Anxiety Inventory (STAI) was used to measure patient anxiety of both group, the day before the coronary angiography, before the intervention as well as 30 minutes before the patient was shifted to the operating room. The mean post intervention scores were  $33.427 \pm 7.24$  and  $30.17 \pm 5.26$  respectively for PT and PVT group which shows that there was a significant reduction in the level of anxiety among the patients after the intervention especially with PVT group which was significant at  $p = 0.01$  level. The study concluded that such trainings are recommended to decrease anxiety amongst patients undergoing cardiac procedures in hospitals and to help them to develop appropriate coping strategies.

### KEYWORDS

Anxiety, Peer-facilitated training, Peer-and-video training and State-trait anxiety inventory.

### Author for Correspondence:

Premalatha Paulsamy,  
College of Nursing for Girls,  
King Khalid University, Khamis Mushayit,  
Asir Province, Saudi Arabia.

Email: [pponnuthai@kku.edu.sa](mailto:pponnuthai@kku.edu.sa)

### INTRODUCTION

Anxiety is an emotional state in which a person feels uneasiness or apprehension as a result of a perceived or actual threat. The autonomic nervous system's subsequent activation can result in a variety of bodily symptoms, including palpitations, tachycardia and chest pain<sup>1</sup>. Furthermore, severe anxiety is linked to a lowered immunological response as well

as changes in cardiovascular function, such as a faster heart rate, endothelial dysfunction and vascular inflammation, all of which can lead to a worsening of a patient's coronary status<sup>2</sup>. Patients undergoing clinical or surgical procedures such as cardiac angiography frequently experience pain and anxiety, according to previous studies<sup>1,2</sup>.

As a result, techniques for improving clinical outcomes and identifying effective therapies to minimize patient anxiety are required. Patients having coronary angiography or comparable procedures may experience anxiety as a result of their lack of awareness about the technique. Stress and anxiety can be reduced by providing required, detailed and accurate procedure-related information, as well as a breakdown of the actions that must be completed before, during and after the process<sup>1-4</sup>. Several studies have shown that providing information about the angiography procedure can help patients feel less anxious.

Patient anxiety may be reduced by using an appropriate educational strategy, such as informative leaflets or peer-facilitated or video-based training<sup>5</sup>. Patients might benefit from their peers' experiences in terms of learning to cope since peer-facilitated training is based on the social learning hypothesis that people learn from each other through observation, imitation and modeling. While a mix of visual and aural information is an excellent technique for facilitating knowledge acquisition and retention, reducing anxiety, improving coping skills and increasing self-care behaviors, video-based training may also lower anxiety, stress and depression<sup>6-8</sup>.

Hence, the goal of this study was to see how peer-facilitated (PT) and Peer-and-Video Training (PVT) training influenced anxiety in patients undergoing coronary angiography at two different hospitals.

## **MATERIAL AND METHODS**

This randomised controlled trial with comparative study design was conducted among 40 patients (20 in each PT and PVT group) undergoing cardiac procedures at two selected hospitals. Only patients aged 30-60 years old with no previous record of angiography and no cognitive disorders or physical

disabilities were included in the study. Patients were excluded if they underwent emergency angiography like cardiac procedures, were receiving intensive care before procedure. On the evening before the procedure, the intervention took place in a quiet area with adequate lighting and comfortable seats.

A 30-minute peer-facilitated training (PT) session was held for the PT group. Two patients who had recently undergone cardiac procedure were asked to talk to between four and six of the participants about their feelings under the supervision of the researcher. The peers who couldn't make it in-person were speaking with the study participants through video calls. The participants also were given phone numbers of the clients who underwent the procedure for any further clarifications. Verbal feedback was used in the form of checklist, to evaluate effectiveness of the training. Institutional ethical clearance, no harm certificate and consent from both prospective patients and patients who already undergone the procedure were obtained before the study. In the PVT group, a 20-minute video-based training session was held as previously, followed by a 15-minute break before a 30-minute peer-facilitated group session under the researcher's observation.

The State-Trait Anxiety Inventory (STAI) is a 20-item questionnaire was used to measure patient anxiety both the day before the cardiac procedures like coronary angiography, before the intervention as well as 30 minutes before the patient was shifted to the operating room. The State-Trait Anxiety Inventory (STAI) is a commonly used measure of trait and state anxiety (Spielberger, Gorsuch, Lushene, Vagg and Jacobs, 1983)<sup>9</sup>. It can be used in hospital settings to identify the anxiety and to differentiate it from depressive syndromes. Demographic and clinical data of the patients were also recorded, including age, gender and duration of disease, marital status and history of hospitalisation, education level and economic status. Descriptive and inferential statistics was used to analyse the data.

## **RESULTS AND DISCUSSION**

The Table No.1 shows the demographic data of the patients of both the intervention. It shows that there

were no significant differences between the groups in terms of age, gender, marital status and duration of disease, history of hospitalisation and economic status of the patients which shows that both the participants of the group had the homogenous characteristics except the gender and educational status. Similar study findings were reported from the study by Habibzadeh H *et al*, (2018)<sup>10</sup>.

Table No.2 shows the mean pre-intervention anxiety scores of PT group was  $41.4 \pm 8.73$  and  $39.96 \pm 8.23$  for PVT group. The post intervention scores were  $33.427 \pm 7.24$  and  $30.17 \pm 5.26$  respectively for PT and PVT group which shows that there was a significant reduction in the level of anxiety among the patients after the intervention especially with PVT group where the mean difference was slightly higher.

The effect of interventions on the level of anxiety showed significant improvement in both the PT and PVT group at  $p = 0.01$  level. This result concludes that both the interventions were equally effective in reducing patients' anxiety related to cardiac procedures. Similar findings were reported from few studies which conclude that preparatory information before an invasive procedure has positive effects on the level of anxiety of the patients who undergo any medical or surgical procedures<sup>11-13</sup>.

**Table No.1: Demographic data of the Participants**

Demographic Data	PT Group	PVT Group	'p' value
Age in years (Mean =SD)	$54.23 \pm 6.97$	$55.21 \pm 8.57$	
<b>Gender</b>			
Male	16	14	0.023*
Female	4	6	
<b>Marital status</b>			
Married	20	19	0.96
Unmarried	0	1	
<b>Medical history</b>			
Presence of chronic disease	17	13	0.77
Mean duration of disease in years $\pm$ SD	$3.72 \pm 2.74$	$2.60 \pm 2.60$	0.22*
History of hospitalisation	19	12	
Mean number of hospital admissions $\pm$ SD	$1.46 \pm 0.90$	$1.06 \pm 0.80$	
<b>Years of Education (Duration)</b>	$9.61 \pm 1.17$	$8.45 \pm 1.97$	
<b>Economic Status</b>			
Unfavourable	5	3	0.98
Partly favourable	11	9	
Favourable	4	8	

**Table No.2: Mean Anxiety Scores of the Groups**

S.No	Duration	PT Group	PVT Group	p' value
1	Pre intervention	$41.4 \pm 8.73$	$39.96 \pm 8.23$	0.91
2	Post intervention	$33.27 \pm 7.24$	$30.17 \pm 5.26$	0.01
3	Mean Difference	$-8.13 \pm 1.49$	$-9.79 \pm 2.97$	0.01

**CONCLUSION**

Peer training and peer-and-video training were equally effective in reducing patient anxiety related to cardiac procedures. Such trainings are

recommended to decrease anxiety amongst patients undergoing cardiac procedures in hospitals.

## FUNDING

This research was funded by Deanship of Scientific Research at King Khalid University; grant number “RGP 2/186/42”.

## ACKNOWLEDGMENT

The authors extend their sincere appreciation to the Deanship of Scientific Research at King Khalid University for funding this study through the Large Research Group Project under grant number “RGP 2/186/42”.

## DECLARATION OF CONFLICTING INTEREST

The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.

## BIBLIOGRAPHY

1. Buzatto L L, Zanei S S. Patients’ anxiety before cardiac catheterization, *Einstein (Sao Paulo)*, 8(4), 2010, 483-487.
2. Abollahzadeh F, Moghaddasian S, Rahmani A, Shahmar M. Effect of video education in native language on the anxiety level of patients undergoing coronary angiography, *Qom Univ Med Sci J*, 8(6), 2015, 53-60.
3. Varaei S, Shamsizadeh M, Cheraghi M A, Talebi M, Dehghani A, Abbasi A. Effects of a peer education on cardiac self-efficacy and readmissions in patients undergoing coronary artery bypass graft surgery: A randomized-controlled trial, *Nu Cr Car*, (1), 2014, 19-28.
4. Jamshidi N, Abbaszadeh A, Kalyani M N. Comparison of video and verbal education on satisfaction and post operative complications of patients undergoing coronary angiography, *J Fasa Univ Med Sci*, 1(4), 2012, 233-237.
5. Fortinash K M, Holoday Worret P A. Psychiatric mental health nursing, *Mar Hei, Mis, USA: Mosby*, 5<sup>th</sup> Edition, 2011, 59-86.
6. Price N, Knibbs S. How effective is peer education in addressing young people’s sexual and reproductive health needs in developing countries? *Child Soc*, 23(4), 2009, 291-302.
7. Jamshidi N, Abbaszadeh A, Kalyani M N. Effects of video information on anxiety, stress and depression of patients undergoing coronary angiography, *Pak J Med Sci*, 25(6), 2009, 901-905.
8. Ruffinengo C, Versino E, Renga G. Effectiveness of an informative video on reducing anxiety levels in patients undergoing elective coronarography: An RCT, *Eur J Cardiovasc Nurs*, 8(1), 2009, 57-61.
9. Spielberger C D, Gorsuch R L, Lushene R, Vagg P R and Jacobs G A. Manual for the state-trait anxiety inventory, *Palo Alto, CA: Consulting Psychologists Press*, 1983.
10. Habibzadeh H, Milan Z D, Radfar M, Alilu L and Cund A. Effects of peer-facilitated, Video-Based and combined peer-and-video education on anxiety among patients undergoing coronary angiography: Randomised controlled trial, *Sultan Qaboos University Medical Journal*, 18(1), 2018, e61-e67.
11. Vardaman Samaje. A descriptive study to assess the level of anxiety among patients with cardiac pace maker, *Int. J. Nur. Edu. and Research*, 4(1), 2016, 31-41.
12. Astin F, Jones K, Thompson DR. Prevalence and patterns of anxiety and depression in patients undergoing elective percutaneous transluminal coronary angioplasty, *Heart Lung*, 34(6), 2005, 393-401.
13. Lenzen M J, Gamel C J, Immink A W. Anxiety and well-being in first-time coronary angioplasty patients and repeaters, *European Journal of Cardiovascular Nursing*, 1(3), 2002, 195-201.

**Please cite this article in press as:** Premalatha Paulsamy et al. Effects of peer-facilitated training and peer-and-video training on anxiety among patients undergoing cardiac procedures, *International Journal of Nursing and Healthcare Research*, 5(1), 2021, 40-43.