

A Descriptive Study to Assess the Anxiety Level and to Evaluate Its Effect on Physical Symptoms in Cardiac Patients Prior to Cardiac Catheterization and Angiography in Selected Hospitals of Amritsar, With a View to Develop “Self-Instructional Module”

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Abstract

Background of the study: People often experience a general state of worry, fear, or suspiciousness of being going through some problem, illness, hospitalization, diagnostic procedure, or therapeutic interventions. Before confronting something challenging such as a test, examination, all constitutes anxiety. Anxiety is a general symptom that causes nervousness, fear, apprehension, and worrying. These symptoms affect how person feel and behave, and it is manifested by real physical and physiological symptoms. Anxiety has been shown to lead to high levels of stress, creating delays in recovery and increased length of stay within the hospital. *Method and materials:* In the present study non experimental research approach was used with descriptive research design to assess the anxiety level and to evaluate its effect on physical symptoms in cardiac patients prior to cardiac catheterization and angiography. Study was conducted in Fortis escorts hospital, Amritsar. In this study, sample consisted of 200 cardiac patients for whom cardiac catheterization and angiography was planned were selected by purposive sampling technique based on inclusion criteria. The anxiety and physical symptoms were assessed 30 minutes prior to cardiac catheterization and angiography. Data were collected by using demographic variables questionnaire and anxiety physical symptoms assessment scale. The maximum score of the anxiety assessment scale was 60 and minimum score was 12 and in physical symptoms each component has maximum score of 5 and minimum score of 1. *Results:* Shown that highest (31.5%) of the patients belongs to the group of 51–60 years, majority (62.5%) of them were males, (52.5) percentages of the cardiac patients were Sikh and Majority (60%) of them were from urban area. Highest percentage (34%) of cardiac patients had passed matriculation. Highest percentages (52.5%) were unemployed. Around 45% of them undergone cardiac catheterization and 55% of the patents undergone angiography. Highest percentages (55.5%) of the patients were nonhospitalized. Mean score of anxiety (17.97 ± 38.72) which is for the patients with mild anxiety and severe anxiety. Lowest and highest mean score (3.2 ± 4.27) for cardiovascular system and sensory (somatic) was calculated in the area wise assessment of physical symptoms. Maximum association of physical symptoms is seen with the age, gender, and education and environment at the significance level of $p \geq 0.05$. Hence, no association was seen between occupation, area of living and type of procedure at the significance level of $p \geq 0.05$. Hence, it is concluded that all patients suffer from different levels of anxiety which affects the physical symptoms in patients prior to cardiac catheterization and angiography.

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INTRODUCTION

The anticipation of undergoing a coronary angiogram induces significant anxiety in addition to the equally stressful post-

procedure period.^[1–4] Also, studies identified that the waiting period before a scheduled invasive diagnostic test as stressful,^[5] and reported that patients

scheduled for coronary angiogram were anxious about the waiting time on the day of procedure.^[6]

The diagnosis of heart disease inflames anxiety in patients despite of the advancement in management and treatment of CVD. There is growing evidence that anxiety is an independent risk factor for CVD associated with arrhythmias and sudden cardiac death. As with any invasive procedure, all patients suffer a varying degree of anxiety before coronary angiogram.^[7]

Cardiac catheterization and angiography are used as standard methods for the diagnosis and treatment of coronary artery disease. Following cardiac diagnosis tests such as angiography, various complications are shown up, most common of it being anxiety which affects angiography to a high extent.^[8]

High anxiety level can over-sensitize the patient causing unpleasant stimuli which enhance their senses of touch, smell, or hearing resulting in intense pain, dizziness and nausea. These preprocedural physiological and psychological responses to the stressors increase the duration of invasive procedures, need for sedatives, analgesics, and anesthetic requirements.^[9]

Health professionals should offer information about particular sensation to be expected during and after procedure. This enables the patients to develop realistic expectations about the procedure and the associated level of pain that would be caused. Also, patient who are given

sufficient information, usually have reduced stress associated with the invasive procedures. In other words, better informed patients through psychological preparation get better quicker.^[10]

METHODS AND MATERIALS

In the present study, nonexperimental research approach was used with descriptive research design to assess the anxiety level and to evaluate its effect on physical symptoms in cardiac patients prior to cardiac catheterization and angiography. Study was conducted in Fortis escorts hospital, Amritsar. In this study, sample consisted of 200 cardiac patients for whom cardiac catheterization and angiography was planned were selected by purposive sampling technique based on inclusion criteria. The anxiety and physical symptoms were assessed 30 minutes prior to cardiac catheterization and angiography. Data were collected by using demographic variables questionnaire and anxiety physical symptoms assessment scale. The maximum score of the anxiety assessment scale was 60 and minimum score was 12 and in physical symptoms each component has maximum score of 5 and minimum score of 1.

Analysis

The data analysis was done by using descriptive (by calculating mean, frequency, percentage, and standard deviation) and inferential statistics, Chi-square test was used to explore the association between anxiety and physical symptoms with the selected demographic variables. The level of significance was set at 0.05.

Section I

Table 1. Calculation of Anxiety Scores and Categorizing Them Into Different Levels Based on the Anxiety Scores.

Sl. no.	Levels of anxiety	Score	Frequency	Percentage (%)	Mean	Standard deviation
1	No anxiety	1–12	0	0	0	0
2	Mild anxious	13–24	35	17.5	17.97	2.65
3	Moderately anxious	25–36	30	15	29.33	2.75
4	Severely anxious	37–48	55	27.5	38.72	1.80
5	Highly anxious	49–60	80	40	50.47	1.70

In Table 1, 40% of cardiac patients were suffering from highest level of anxiety, 27.5% patients were suffering from severe anxiety, 15% patients were suffering from moderate level of anxiety and nearly 17.5% patients had mild anxiety. But out of 200 patients no patient was free from state of anxiety.

The maximum mean anxiety score was 50.47(SD $\pm$ 1.70) for highly anxious cardiac patients, severely anxious cardiac patients score was 38.72(SD $\pm$ 1.80), 29.33(SD $\pm$ 12.75) was the mean score of moderately anxious patients and the minimum anxiety score was mild anxious patients was 17.97(SD $\pm$ 12.65).

Section II

Assess the physical symptoms of the patient.

Table 2. Area Wise Comparison of Mean and Standard Deviation of the Physical Symptoms of Cardiac Patients Anxiety.

Sl. no	Physical symptoms	Mean	Standard deviation
1	Fear	3.44	1.35
2	Tension	3.49	1.36
3	Insomnia	3.28	1.36
4	Intellectual	3.26	2.18
5	Mood	3.18	1.2
6	Somatic(muscular)	3.32	2.21
7	Somatic(sensory)	4.27	7.0
8	Cardiovascular symptoms	3.2	1.11
9	Respiratory	3.44	1.19
10	Gastrointestinal	3.27	1.21
11	Urinary	3.33	1.22
12	Autonomic nervous system	3.23	1.28

In Table 2, the area wise comparison of mean, standard deviation of the physical symptoms of cardiac patients anxiety shows the maximum mean score of 4.27 (SD $\pm$ 7.0) for the somatic sensory symptoms.

The minimum score of mean score is of cardiovascular system is 3.2 (SD $\pm$ 1.11).

Association of Anxiety Physical Symptoms with the Demographic Variables

Association between the age and physical symptoms of anxiety scores of cardiac patients with their demographic variables have shown a significant association with the fear (27.66), tension (21.72), intellectual (44.0), mood (61.5), somatic muscular (65.3), somatic (sensory) (26.84), cardiovascular symptoms (57.86), gastrointestinal symptoms (33.9), urinary tract symptoms (52.4), and autonomic symptoms (36.6) at the significance level of 0.05.

Association between the gender and physical symptoms of anxiety scores of cardiac patients with their demographic variables have shown a significant association with the fear (21.12), tension (18.55), insomnia (22.8), intellectual (18.9), mood (29.6), somatic(sensory) (19.7), cardiovascular symptoms (24.89), respiratory symptoms (19.7), and urinary tract symptoms (11.72) at the significance level of $p \geq 0.05$.

Association between the religion and physical symptoms of anxiety scores of cardiac patients with their demographic variables have shown a significant association with somatic muscular (26.4) symptoms of cardiac patients at the significance level of $p \geq 0.05$.

Association between the education and physical symptoms of anxiety scores of cardiac patients with their demographic variables have shown that there was no significant association found with the components of physical symptoms of anxiety that is fear (10.4), tension (4.68), insomnia (7.80), intellectual (10.3), mood (4.06), somatic muscular (4.39), somatic sensory (7.7), cardiovascular symptoms (3.8), respiratory symptoms (3.1), gastrointestinal symptoms (9.7), urinary

tract symptoms (6.2), and autonomic symptoms (10) at the significance level of $p \geq 0.05$.

Associations between the occupation and physical symptoms of anxiety scores of cardiac patients with their demographic variables have shown no significant association with at the significance level of $p \geq 0.05$.

Association between the type of procedure & physical symptoms of anxiety scores of cardiac patients with their demographic variables have shown no significant association with the physical symptoms and anxiety at the significance level of $p \geq 0.05$.

Association between the type of environment and physical symptoms of anxiety scores of cardiac patients with their demographic variables have shown a significant association with the physical symptoms of mood (11.40), somatic muscular (11.51), somatic(sensory) (11.76), with the anxiety at the significance level of $p \geq 0.05$.

Association between the area of living and physical symptoms of anxiety scores of cardiac patients with their demographic variables have shown no significant association at the significance level of $p \geq 0.05$.

CONCLUSION

From the findings, it can be concluded that highest (31.5%) of the patients belongs to the group of 51–60 years, majority (62.5%) of them were males, (52.5) percentages of the cardiac patients were Sikh and majority (60%) of them were from urban area. Highest percentage (34%) of cardiac patients had passed matriculation. Highest percentages (52.5%) were unemployed. Around 45% of them undergone cardiac catheterization and 55% of the patents undergone angiography. Highest percentages (55.5%)

of the patients were nonhospitalized. Mean score of anxiety (17.97 ± 38.72), which is for the patients with mild anxiety and severe anxiety. Lowest and highest mean score (3.2 ± 4.27) for cardiovascular system and sensory (somatic) was calculated in the area wise assessment of physical symptoms. Maximum association of physical symptoms is seen with the age, gender, and education and environment at the significance level of $p \geq 0.05$. Hence, no association was seen between occupation, area of living and type of procedure at the significance level of $p \geq 0.05$.

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