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A Study of Prevalence of Anxiety in Patients with Cardiac Disorders

Mounika Chinta[1], Hari Manasa[2] and Suresh Kumar Kota[3*]

[1]Junior Resident, Department of Psychiatry, Katuri Medical College and Hospital, Guntur, AP, India

[2]Assistant Professor, Department of Psychiatry, Katuri Medical College and Hospital, Guntur, AP, India

[3]Hod & Professor, Department of Psychiatry, Katuri Medical College and Hospital, Guntur, AP, India

ABSTRACT

Background: Anxiety is commonly experienced among patients with cardiovascular disease. Psychiatric disorders such as depression and anxiety, represent an additional risk for cardiovascular disease besides contributing to impaired functions. To date, depression has received the most attention in the population, given its high prevalence and association with poor cardiac health, especially in patients who have experienced a major cardiac event, such as an Acute Coronary Syndrome (ACS). However, anxiety has recently emerged as another important psychological construct that is highly prevalent, frequently co-occurs with depression and impedes response to depression treatment, and may ultimately influence the course of cardiovascular disease independent of depression.

Objectives: To assess the prevalence of anxiety among patients diagnosed with cardiac disorders.

Methods: A cross sectional study was done among 100 cardiac patients. A self-designed semi structured questionnaire consisting of demographic details, relevant cardiac and psychiatric history and General Anxiety Disorder (GAD-7) scale was used. The obtained data was entered in MSexcel and analysed using SPSS software.

Results: 43% patients were recognised to have anxiety. Among them 21% had mild anxiety, 12% had moderate anxiety and 10% had severe anxiety. A significant association of 0.002 was found in females having cardiac illness. A significant association of 0.043 was found between coronary artery disease and anxiety.

Conclusion: These analyses confirm that anxiety is associated in patients with cardiac disorders; however, this relationship is not as strong as that of depression and may be explained partly by other clinical factors.

***Corresponding author**
Suresh Kumar Kota, Hod & Professor, Department of Psychiatry, Katuri Medical College and Hospital, Guntur, AP, India.

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Introduction

The Association between psychiatric disorders and cardiovascular disease (CVD) has received growing attention in recent scientific literatures. Psychiatric disorders such as depression and anxiety, represent an additional risk for Coronary Artery Disease (CAD) Both physiologic (autonomic dysfunction, inflammation, endothelial dysfunction, changes in platelet aggregation)and health behavior mechanisms may help to explain the relationship between anxiety disorders and cardiovascular disease [1,2].This linkage between anxiety and Cardiovascular disease is further corroborated by evidence suggesting that treatment of anxiety may improve cardiac symptoms [3]. A Danish survey found that 25% of patients with cardiac disease experienced symptoms indicating anxiety and that anxiety was associated with an increased risk of death [4]. Prevalence of anxiety disorder in coronary artery disease reaches upto 15% and about half of patients with coronary artery disease have comorbid anxiety or depression [5]. A history of stress exposure increases the pathophysiological response to ischemia and anxiety-like behaviour, whereas inhibiting microglial activation reduces neuronal damage and mitigates the development of anxiety behaviour after cardiac arrest [6].

Aims and Objectives

To study the prevalence of anxiety in patients diagnosed with cardiac illness.

Methodology

Inclusion Criteria

- Patients having cardiac illness and fulfilling the criteria for anxiety according to ICD 10.
- Age between 18 and 80
- Patients who gave informed consent.

Exclusion Criteria

- Patients with past psychiatric illness

- Patients with major physical illness.
- Pregnant and lactating women.

Procedure of the Study

- Patients with cardiac illness were included in the study.
- Sociodemographic variants of the patients were noted down.
- They were diagnosed based on the ICD 10 criteria into Generalised Anxiety Disorder.
- They were graded as normal, mild, moderate and severe using the GAD-7 Scale.

Data Analysis

- Following data collection, all information was entered into Microsoft Excel and analysed using the Statistical Package for Social Sciences (SPSS Statistics version 24).
- P value was used to calculate association between cardiac illness and anxiety.
- P-value less than 0.05 and 0.001 was taken as significant.

Results

This Study was done on a Total of 100 Patients who were Diagnosed with Cardiac Illness. Among the total Sample 45% were Males and 55% were Females

Gender Distribution among Total Sample

Gender	Frequencyy	Percentage (%)
Male	45	45
Female	55	55

Figure 1: Gender Distribution of Study Subjects

Out of 100 sample, 45% were males and 55% were females.

Marital Status

Marital Status	Frequency	Percent
Married	70	70.0
Widow	14	14.0
Widower	8	8.0
Divorcee	3	3.0
Unmarried	5	5.0
Total	100	100.0

Figure 2: Marital Status of the Study Subjects

Out of the 100 sample,70% were married,14% were widows,8% were widowers,3% were divorcee,5% were unmarried.

Socioeconomic Status

SES	Frequency	Percent
LowSES	59	59.0
MiddleSES	38	38.0
HighSES	3	3.0
Total	100	100.0

Figure 3: Socioeconomic Status

Out of the 100 sample,59% belong to low socioeconomic status,38% belong to middle socioeconomic status and 3% belong to high socioeconomic status.

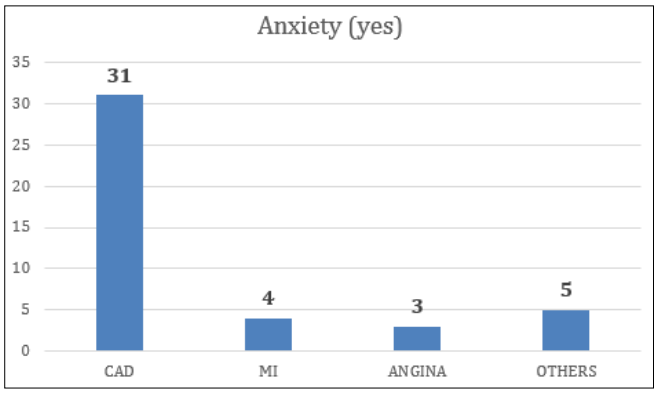
Rural/Urban

Area	Frequency	Percent
Rural	70	70.0
Urban	30	30.0
Total	100	100.0

Figure 4: Rural/Urban Distribution of the Study Sample

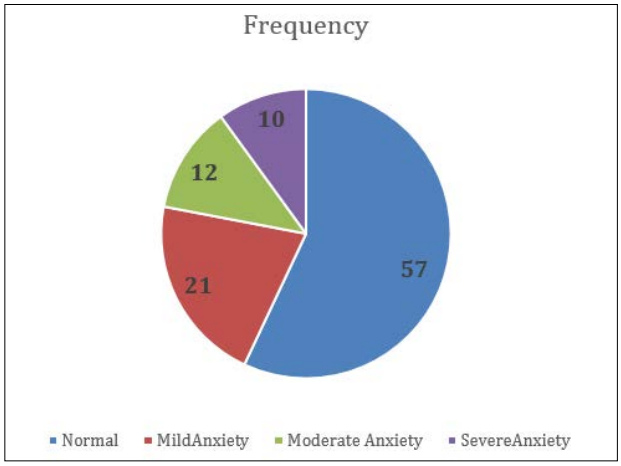
Out of 100,70% belong to rural area and 30% belong to urban area.

Anxiety in Various Cardiac Disorders



Among the various cardiac disorders,31% of CAD patients had anxiety,4% of MI patients had anxiety,3% of ANGINA patients had anxiety and 5% of other cardiac disorders had anxiety.

Distribution of Anxiety



Out of the 100 sample,57% were having no anxiety,21% had mild anxiety,12% had moderate anxiety and 10% had severe anxiety.

Association of Anxiety with Gender

Gender	Anxiety (Yes)	No	Total	P-Value
Male	12(26.6%)	33(73.4%)	45	0.002
Female	31(56.3%)	24(43.7%)	55	

- In our study, 56.3% of females who were having cardiac illness had anxiety when compared to the males (26.6%).
- A significant association($p<0.05$) was found with females having cardiac illness.

Association of Anxiety in Cad

Disease	Anxiety (yes)	NO	Total	P-Value
CAD	31(55.3%)	25(44.7%)	56	0.043
MI	4(25%)	12(75%)	16	
ANGINA	3(33.3%)	6(66.7%)	9	
OTHERS	5(26.3%)	14(73.7%)	19	

Among various cardiac disorders, patients with coronary artery disease were having more anxiety when compared to other cardiac disorders that is 55.3%.

A significant association of 0.043 was found between coronary artery disease and anxiety.

Grading of Anxiety

GAD7	Frequency	Percent
Normal	57	57
Mild Anxiety	21	21
Moderate Anxiety	12	12
Severe Anxiety	10	10
Total	100	100

Out of the 100 sample,57% had no anxiety,21% had mild anxiety,12% had moderate anxiety and 10% had severe anxiety.

Discussion

The present study showed that the prevalence of anxiety in patients with cardiac disorders was 43%. Among 43%, 21% had mild anxiety,12% had moderate anxiety and 10% had severe anxiety. A significant association of 0.002 was found in females having cardiac illness. A significant association of 0.043 was found between Coronary Artery Disease and Anxiety. Among various cardiac disorders 55.3% patients of Coronary Artery Disease (CAD) had anxiety,25% patients of Myocardial Infarction (MI) had anxiety,33.3% patients of Angina had anxiety and 26.3% patients of other cardiac disorders had anxiety. Meeri Koivula et al and colleagues, in their study first to examine fear and anxiety of coronary artery bypass patients at different time points, in the coronary artery bypass process and changes between different time points [7]. The highest levels of fear and anxiety were measured in the waiting period to Coronary Artery Bypass Grafting (CABG). Tove Aminda Hanssen et al and colleagues, in their study of acute myocardial infarction reported 19.7% and 13.6%, high levels of anxiety and depressive symptoms, respectively. At baseline, acute myocardial infarction patients were more anxious, but not more depressed, when compared with the reference population($P<0.001$ and $P=0.092$,respectively) [8].Jeff C Huffman et al and colleagues, in their study they found that 25% of patients with chest pain who come to hospital emergency departments have panic disorder [9].According to study done by Erika Friedmann et al and colleagues, there is a high prevalence of anxiety and confirms the high prevalence of depression in the heart failure outpatient population [10]. Katherine Easton et al and colleagues, in their study there is a prevalence of 13.1% for anxiety disorders, 28.79% for probable clinically significant anxiety and 55.5% for elevated symptoms of anxiety was identified [11].

Conclusion

- In addition, the government should create awareness programs for the general public about mental health in cardiac patients on a large scale in regular basis all over the country.
- The present study shows that the proportion of psychiatric morbidity among patients with cardiac disorders is very high. There is a need to improve the knowledge of psychiatry among general practitioners and cardiologists so that they can adequately screen the patients for psychiatric morbidity and refer them to psychiatric facilities where possible.

Limitation

- Short duration of study
- Other psychiatric disorders are not looked into

Type of Study: Cross-sectional study

Ethics Committee: Approval was taken from the ethical committee of the institute

Study Setting: Katuri Medical College & Hospital, Guntur, Andhra Pradesh

Study Period: June 2022- September 2022(3 months)

Sample Size: 100

Sampling Method: Convenience Sampling

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