

ANXIETY AMONG PRE-OPERATIVE PATIENTS WAITING FOR CORONARY ARTERY BYPASS GRAFTING (CABG)

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Contribution

AA conceived the idea and designed the study. SM and AR did data collection and manuscript writing. SN did review and final approval of manuscript. All authors contributed equally to the manuscript.

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ABSTRACT

Objective: To find out the frequency of anxiety among patients waiting for CABG and its association of demographic characteristic.

Methodology: A cross sectional study was conducted on a sample of 202 participants, selected through convenient sampling, from a tertiary care hospital in Karachi from 1st January 2017 to 1st January 2018. After ethical approval from Intuitional Review Board (IRB), Dow University of Health Sciences (DUHS), Karachi; data were collected through the Aga Khan Anxiety Depression Scale (AKUADS) which is a brief 25 -items questionnaire designed to detect anxiety among participants with cut of score 21. Frequencies and percentages were calculated for demographic data; whereas, chi-square test of independence was used to measure the association of anxiety with other variables. $P \leq 0.05$ was considered as significant.

Results: Total of 202 participants were analyzed. Majority of the study participants, were male (80.7%), married (95.05%) and having age ranges 41 – 60 years (82.2%). Among all of the study participants, 51.49% patients had anxiety.

Conclusion: The finding of this study showed that most of the preoperative patients for CABG had anxiety. Income level and social class showed significant association with anxiety.

Key Words: Anxiety, CABG, Pre-operative, Tertiary care hospital

INTRODUCTION

Cardiovascular diseases (CVDs) are very common reason of death throughout the globe.¹ In United States, cardiac diseases are found as a major cause for morbidity and mortality; affecting more than sixteen million people. In Iran, CVDs are the prominent cause of death, and out of total deaths 46% are due to ischemic heart diseases.² Cardiac surgeries are the successful part related to cardiac care, but it is considered as an unwanted, stressful and experience a life-threatening condition for many patients. This condition is also related with anxiety and fear to the level that disturbing many parts of patient's life.³

Coronary artery bypass grafting (CABG) is considered as a stressor among preoperative patients.⁴ A study by Grady et al. found that stressors are condition that force people to response, and its result in manifest in physical, psychological and behavioral forms.⁵ Various factors causing preoperative anxiety among cardiac surgery patients, leading to severe chest pain, disability, fatigue, fear of death and various symptoms.⁶ Anxiety is a condition in which individual feel unpleasant experience that disturbs patients physically, emotionally and mentally. Patients may experience a high level of anxiety in the preoperative period and it also cause depression symptom and disturbs functional status, worries leading to breathing problem, chest pain, fear and outcome to surgery.⁷

Anxiety symptoms, depression, stress and pain may cause disturbance among patients with coronary artery diseases, including the patients waiting for CABG surgery.⁸ All factors cumulatively effect on physiological parameters perioperatively, prevailing disease, prolong recovery and negatively effect on quality of life after surgery.^{9,10}

A recent study in South Australia by Flinders Medical Centre showed that anxiety was associated with atrial fibrillation among patients in the postoperative period.¹¹

Various studies explored that anxiety increases among patients waiting for surgery. A study conducted by Tol and Pourreza's, showed that 97.3% had pre-operative mild anxiety and 64.7% of patients had moderate post-operative anxiety; explicitly, anxiety levels were lower after the surgery than that of before surgery, and were related to different variables including as sex, age, marital status and number of children.¹²

During literature search, the researcher could not find any research conducted in Pakistan regarding the preoperative anxiety level among patient waiting for CABG. Therefore, this study was theorized to determine the prevalence of anxiety among patients in Pakistani context, where the socio-demographics condition is also alarming.

The objective of this study was to find out the frequency of anxiety among patients waiting for CABG and its association with demographic characteristics.

METHODOLOGY

An analytical cross-sectional study was conducted among patients in a leading public sector tertiary care hospital, Karachi from 1st January 2017 to 1st January 2018. After taking ethical approval from IRB of Dow University of Health Sciences, Karachi, and permission from the study setting, and written informed consent from the study participants; data were collected through the self-developed demographic form by the research team and Aga Khan University Anxiety and Depression Scale (AKUADS), which is a brief 25-items questionnaire. Score ≥ 21 indicates presence of anxiety. Sample size calculation was performed through WHO online software, using prevalence of anxiety as 62% and confidence interval as 95%¹³.

Data analysis was carried out on SPSS version 21.0. Categorical variables were reported through frequencies and percentages; whereas, chi-square test of independence was used to measure the association of anxiety with other variables.

RESULTS

Total of 202 participants were included. This study showed that majority of the participants were male (80.7%), married (95.05%), and having age ranges 41 – 60 years (82.16%). Mostly participants (37.62%) were with primary education and (34.65%) had income level of 1,000 to 10,000 PKRs. per month. The mostly of the participants (50.50%) belonged to lower socioeconomic class. Among all of the study participants, 51.49% patients had anxiety. Brief detail of demographic characteristics of the study participants is given below in table 1.

Table 1: Demographic Characteristics of Study Participants (n=202)

Variables		Frequency (%)
Age (years)	30-40	12 (5.94%)
	41-50	79 (39.10%)
	51-60	87 (43.06%)
	61-70	24 (11.90%)
Sex	Male	163 (80.70%)
	Female	39 (19.30%)
Marital Status	Married	192 (95.05%)
	Unmarried	10 (4.95%)
Educational Level	Uneducated	46 (22.78%)
	Primary	76 (37.62%)
	Matric	53 (26.24%)
	Intermediate	20 (9.90%)
	Graduate	7 (3.46%)
Income Level	< 1000	54 (26.73%)
	1000-10000	70 (34.65%)
	11000-20000	65 (32.18%)
	>20000	13 (6.44%)
Social Status	Lower class	102 (50.50%)
	Middle class	100 (49.50%)

Anxiety level was found in 50% of male patients, and slightly higher among females (56.41%). (Table 2). On comparison, it was found that gender, age, educational level and marital

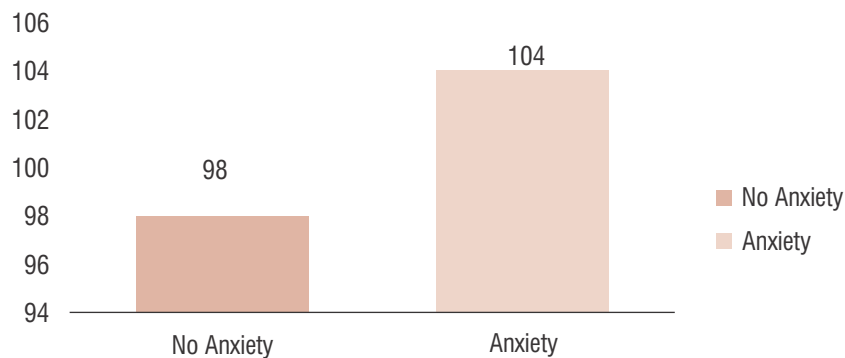
status were not significantly associated with anxiety, however income level ($p=0.027$) and social class ($p=0.034$) showed the significant association with anxiety.

Table 2: Association of Demographic Characteristics with Anxiety (n=202)

Variables		Anxiety Outcome		P Value
		No	Yes	
Gender	Male	81(49.69%)	82(50.30%)	0.493
	Female	17(43.58%)	22(56.41%)	
Age (Years)	30-40	07(58.33%)	05(41.66%)	0.772
	41-50	40(50.63%)	39(49.36%)	
	51-60	41(47.12%)	46 (52.87%)	
	61-70	10(41.66%)	14 (58.33%)	
Education level	Uneducated	22(47.82%)	24(52.17%)	0.157
	Primary	45(59.21%)	31(40.78%)	
	Matriculation	20(37.73%)	33(62.26%)	
	Intermediate	08 (40%)	12 (60%)	
	Graduate	03(42.85%)	04(57.14%)	
Social Class	Lower class	57(55.88%)	45 (44.11%)	0.034*
	Middle class	41(41%)	59(59%)	
Income Level (PKR)	<1000	20 (37.03%)	34(62.96%)	0.027*
	1000-10000	43(61.42%)	27(38.57%)	
	11000-20000	31(47.69%)	34(52.30%)	
	>20000	04(30.76%)	09(69.23%)	
Marital Status	Married	06(60%)	04(40%)	0.456
	Unmarried	92(47.91%)	100(52.08%)	

$p < 0.05$ was considered as significant.

Figure 1: Frequency of Anxiety among Preoperative Participants (n=202)



DISCUSSION

In this study, majority of the study participants were married (95.05%) and levels of anxiety were found higher (56.41%) among females than males. These findings were supported by the study conducted in Manipal, India and in Turkey.^{14,15} This study showed that the anxiety level among patients waiting for CABG was 51.49%. These findings were not different from study conducted in King Khalid University in Saudi Arabia showed 60% anxiety level among preoperative patients; anxiety level of 70.3% among preoperative patients in Ethiopia.^{16,17} Whereas some other studies did not support the findings, study conducted in Manipal, India revealed that anxiety level is on higher side that 84% among patients waiting for surgery, however some studies prevalence of anxiety were found on lower side, study conducted in India showed that the level of preoperative anxiety among patients was 31%.^{14,18} This study also revealed that income level and social class were strongly associated with preoperative anxiety with p values of 0.027 and 0.034 respectively, these findings were supported by other studies conducted in Ethiopia.¹⁷

CONCLUSION

This study showed that more than half of preoperative patients were suffering with preoperative anxiety. Monthly income and social class were the significant factors causing anxiety among preoperative patients. In Pakistan this research is the first attempt to identify the preoperative anxiety specially among patients waiting for CABG. Notable anxiety prevalence directs us to develop some intervention program to reduce preoperative anxiety among such patients.

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