ANXIETY AMONG THE YOUNG CARDIAC PATIENTS - A NEGLECTED ILLNESS

Nosheen Zaidi, Najma Javed*, Mahmood Ur Rahman**

Foundation University Medical College Islamabad Pakistan, *Pakistan Health Research Center Islamabad Pakistan, **Army Medical College/ National University of Medical Sciences (NUMS) Rawalpindi Pakistan

ABSTRACT

Objective: To explore the prevalence of anxiety among young cardiac patients visiting tertiary care hospital, Rawalpindi.

Study Design: Observational cross-sectional study.

Place and Duration of Study: Rawalpindi Institute of Cardiology (RIC), from 27th Jun to 30th Sep 2016.

Material and Methods: After ethical clearance and approval of the supervisor of Rawalpindi Institute of Cardiology, data were collected from the OPD patients of Rawalpindi Institute of Cardiology over a period of one month. Patients were briefed about the nature of study and after informed written consent, information was collected through face to face interviews by trained data collectors using General anxiety Disorder (GAD) scale. SPSS-21 was used for data analysis.

Results: A total 237 patients were interviewed and male to female ratio was 1.4:1 (140:97). Age ranged from 20-40 years with mean of 32 ± 5.2 years. Overall prevalence of anxiety was 25.5%. There was not statistically significant difference observed in anxiety levels between male (23, 9%) and females (25, 11%), (*p*-value: 1.000). The participants were divided into 4 age groups and group 4 (36-40 years) was most affected group. However, none of the group showed statistically association with age groups. A statistically significant relationship is found with unemployment and anxiety (OR: 2.8, *p*-value: <.005). However there was no relationship between duration of cardiac illness and anxiety (*p*-value: .588).

Conclusion: Moderate level of anxiety was most prevalent among the 30-40 years age group.

Keywords: Anxiety, Cardiac, Patients, Young adult.

INTRODUCTION

Globally, people are not only threatened by the communicable but also by non-communicable diseases. Majority of the deaths worldwide are due to non-communicable diseases (35 million), out of which 17 million deaths are attributed to the cardiovascular diseases including coronary heart disease, cardiac arrhythmias, angina, myocardial infarction and thrombolytic diseases[1]. Out of the total 17 million deaths due to cardiovascular diseases worldwide, 3.6 million deaths occur in South East Asia alone[2]. One of the contributing factors to the modifiable risk factors is having "type A personality", which has shown tendency of showing early signs leading to cardiovascular diseases[3], which ultimately contribute to increased levels of stress and anxiety. The fast life and competition among people in the developed world has badly affected the trend of outdoor activity and social interaction, resulting not only in obesity in these people, but also the psychological disorders such as depression, anxiety and personality disorders[3]. It is estimated that over 80% of the deaths and 85% of disabilities from cardiovascular disease (CVD) occur in low and middle-income countries[4]. Pakistan, being a developing country itself is also facing the high burden of cardiovascular diseases. According to WHO statistics, cardiovascular diseases contribute 19% to Pakistan's total mortality (WHO NCD profile 2014)[5].

Although anxiety is a normal human response to cope up with daily stressful tasks, every individual responds differently to a stressful condition according to his/her own

Correspondence: Dr Nosheen Zaidi, House No. 66 Citti Villas near High Court Road Rawalpindi Pakistan
Email: drnosheenzaidi@gmail.com
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ability. This is the reason that why everyone does not suffer from the same level of anxiety. Anxiety can be broadly divided into different levels according to its severity, no anxiety at all, mild anxiety, moderate anxiety and severe anxiety[6].

According to a study in Pakistan, prevalence of anxiety and depressive disorders is 34%[7]. Similarly a study conducted in Karachi revealed that anxiety is more prevalent in women (39.4%) as compared to males (23.3%)[8].

During chronic illness overall well-being of a person is affected causing anxiety and other related disorders[9]. Some studies have evaluated the correlation between chronic illness and anxiety[9,10].

Verkerk AJ et al in his study reported that anxiety and depression among cardiac patients lead to poor disease outcomes[11].

To decrease the morbidity and mortality associated with cardiac illnesses, awareness through health promotion and reduction of risk factors is the most appropriate strategy[12].

Current study is designed to assess the level of anxiety in young patients (20-40 years of age) suffering from cardiovascular diseases to plan treatment of anxiety well in time as a prophylactic measures for cardiovascular disease among young patient.

MATERIAL AND METHODS

Study was conducted at public sector Rawalpindi Institute of Cardiology (RIC). It was conducted over a period of four months from 27th June to 30th September 2016.

Sample size was calculated by using Epi Info software; a sample of 237 was calculated. Non probability consecutive sampling was used. Inclusion subject must be a diagnosed as a case of a cardiac disease and of age between 20 to 40 years of either gender and willing to participate. Patient suffering from any other chronic illnesses will be excluded from study.

After ethical clearance from the Institutional Ethical Committee and approval from the supervisor of Rawalpindi Institute of Cardiology, patients visiting the OPD were invited to participate in study as per inclusion criteria. After taking a written consent, information was collected using pretested validated questionnaire. Data were collected on employment, duration of

Table-I: Distribution of GAD scores among study population.

	GAD Scores	Number of patients	Percentage
1	0-4	28	12
2	5-9	72	30
3	10-14	91	38
4	Above 10	46	20
		237	100

Table-II: Distribution of different anxiety levels among age groups.

Age Groups	No of Patients n(%)	No anxiety n(%)	Mild n(%)	Moderate n(%)	Severe n(%)	*p*-value
20-25 (1)	26 (11)	7(27)	6 (23)	6 (23)	7 (27)	0.352
26-30 (2)	42 (18)	4 (10)	15 (36)	14 (33)	9 (21)	
31-35 (3)	50 (21)	3 (6)	17 (34)	20 (40)	10 (20)	
36-40 (4)	119 (50)	15 (13)	35 (27)	47 (41)	22 (19)	
	237	29	73	87	48	

Table-III: Independent predictors of severe anxiety symptoms in patients with cardiac illness.

Variable	OR	95% - CI	Z statistics	*p*-value
Gender	1.610	0.841 - 3.05	1.45	0.145
Age	0.882	0.657 - 1.18	0.150	0.403

illness and presence of anxiety. General anxiety disorder (GAD) scale was used for this purpose. GAD 7 scale is a tool for screening and measuring severity of anxiety disorders. It comprises of seven questions, which measure the severity of signs observed in anxiety. The level of anxiety in an individual can be assessed according to the total score obtained in the GAD questionnaire. The GAD 7 score is calculated by assigning scores of 0, 1, 2 and 3 to the response categories "not at all", "several days", "more than half the days" and "nearly every day" respectively and the adding the scores for the 7 questions. The score of 5-9 suggests mild anxiety; 10-14 moderate and 15 or greater indicates severe anxiety. GAD scale was translated into Urdu. Data were recorded by trained data collectors through face to face interviews.

Data were cleaned after collection; it was coded and entered in statistical package for the social sciences (SPSS)-21 for analysis. The categorical variables were presented as percentages and the continuous ones as means and standard deviations whereas odds ratios calculated and risk factors were analyzed using logistic regression.

RESULTS

A total 237 patients were interviewed and male to female ratio was 1.4:1 (140:97). Age ranged from 20-40 years with mean of 32 ± 5.2 years. Overall prevalence of anxiety was 25.5%. No statistically significant difference was observed in anxiety levels between male (23, 9%) and females (25, 11%) (*p*-value 1.000).

Participants were divided into 4 age groups. About (11%) were in 20 to 25 years age group (Gp-1), 18% were 26 to 30 years of age (Gp-2), 21% were 31 to 35 (Gp-3) and 50% were 36 to 40 years of age (Gp-4) table-II. None of the group showed statistical association with age groups. Regarding final scores of GAD, details are given in table-I.

Further analysis showed that the overall anxiety levels are significantly high in the male population as compared with the female (fig). However, it varies at severe levels of anxiety which were higher in females.

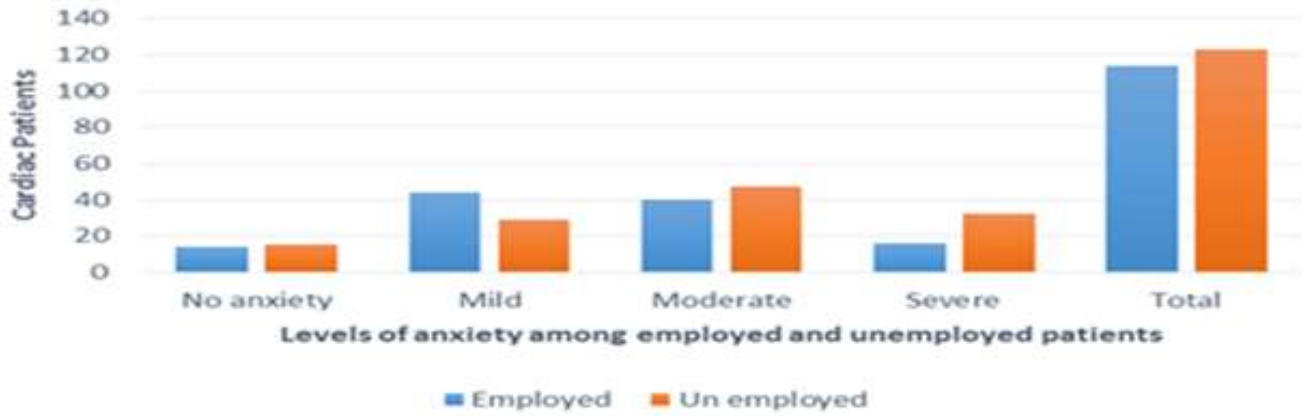

Figure: Comparison of anxiety levels among employed and unemployed cardiac patients.

Severe anxiety was more common in unemployed group of cardiac patients as compared to employed (table-III). A statistically significant relationship was found with unemployment and anxiety (OR: 2.8, *p*-value <.005). However there was no relationship between duration of cardiac illness and anxiety (*p*-value .588).

DISCUSSION

Anxiety is one of the most major and common reactions to a cardiac illness. A latest

study from Pakistan has revealed high levels of anxiety (50.2%)[11] whereas the average total prevalence of depression and anxiety found in public samples is 33.62%, with a point prevalence of 45.5% amongst females and 21.7% amongst males[12]. Employment and education status were found to be significantly associated (p=0.01) with anxiety. In current study prevalence of anxiety among cardiac patients was 25.5% whereas the prevalence of anxiety in patients coming to the primary care centers ranges from 21% to 57%[11]. The difference may be due to the fact that our study population though relatively having serious disease, does not affect major population whereas in primary health care centers patients of all disciplines and functional also visit.

It has been found that adults (20-40 yrs) suffering from congenital heart[13] usually show high levels of anxiety. Same is shown in our study i.e. unemployed patients have highest level of anxiety as compared to employed patients.

Hassan et al[13] in their study reported that mean anxiety score of the population was 5.7 ± 3.86 and female sex (adjusted odds ratio (AOR=2, 95% CI 1.28–3.22) and physical illness (AOR=1.56, 95% CI 0.97–2.48) were found to be significant. These findings are compatible with our results.

A study conducted in Pakistan has shown that female gender and middle age are associated with increased anxiety. Same is found in our study. However a study from Iran showed that mean anxiety score was significantly different among male and female patients in coronary artery disease (5.85 ± 5.24 in males, 9.33 ± 6.24 in females, p<0.001)[14]. Same study has shown that there is no significant correlation between age and anxiety symptoms in any of the study groups comprising coronary artery disease (r=-0.037, p=0.384). Our results are compatible with their findings as age groups show no statistical relationship with severe anxiety.

A Canadian study reported that unemployment among people with higher age and presence of chronic illnesses particularly cardiovascular disease are more likely to be suffering from anxiety[15]. The results are in accordance with our findings.

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CONCLUSION

Moderate level of anxiety was prevalent and the most affected age group was 30-40 years.

CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

REFERENCES

1. Park K. Preventive and social medicine. 20th ed. India. Banarsidas Bhanot 2010.
2. Pikart F, Mcdonald M. The global burden of non-communicable diseases, pfizer corp, USA 2011 (15).
3. Allan R, Am J Cardiol, John Hunter: Early Association of Type a Behavior with Cardiac Mortality 2014; 114(1): 148-50.
4. Suchert V, Hanewinkel R, Isensee B. Sedentary behavior and indicators of mental health in school-aged children and adolescents: A systematic review. Prev Med 2015; 76: 48-57.
5. Goyal A, Yusuf S. The burden of cardiovascular disease in the Indian subcontinent. Indian J Med Res 2005; 124: 235-44.
6. Feyyaz M. Conceptualizing terrorism trend patterns in pakistan - an empirical perspective. Prespectives on Terrorism 2013; 7(1).
7. Mirza I, Jenkins R. Risk factors, prevalence and treatment of anxiety and depressive disorders in Pakistan: systematic review. BMJ 2004; 328: 794.
8. Khan H, Kalia S, Itrat A, Khan A, Kamal M, Khan MA, et al. Prevalence and demographics of anxiety disorders: a snapshot from a community health centre in Pakistan. Ann Gen Psychiatry 2007; 6: 30.
9. Ohayon MM, Schatzberg AF. Using chronic pain to predict depressive morbidity in the general population. Arch Gen Psychiatry 2003; 60: 39-47.
10. Bayat N, Alishiri GH, Salimzadeh A, Izadi M, Saleh DK, Lankarani MM, et al. Symptoms of anxiety and depression: a comparison among patients with different chronic conditions. J Res Med Sci 2011; 16: 1441-7.
11. Khan MS, Bawany FI, Ahmed MU, Khan MS, Adnan M. Frequency of generalised anxiety disorder and associated factors in an urban settlement of Karachi. J Pak Med Assoc 2013.

12. Mirza I, Jenkins R. Risk factors, prevalence, and treatment of anxiety and depressive disorders in Pakistan: systematic review. BMJ 2004; 328: 794.
13. Institute of medicine, committee on nervous system disorders in developing countries. neurological, psychiatric, and developmental disorders: meeting the challenge in the developing world. Washington, DC: National Academy Press 2001.
14. Bayat N, Alishiri GH, Salimzadeh A, Izadi M, Saleh DK, Lankarani MM, et al. Symptoms of anxiety and depression: a comparison among patients with different chronic conditions. J Res Med Sci 2011; 16: 1441-7.
15. Rizvi SJ, Cyriac A, Grima E. Depression and employment status in primary and tertiary care settings. Canadian Journal of Psychiatry Revue Canadienne de Psychiatrie 2015; 60(1): 14-22.