International Journal of Health Sciences and Research
Vol.12; Issue: 12; December 2022
Website: www.ijhsr.org
Original Research Article *ISSN: 2249-9571*

Assessment of Psychological Problems and Its Associated Factors Among Post CABG Patients Attending OPD in a Selected Hospital of Kolkata, West Bengal

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DOI: https://doi.org/10.52403/ijhsr.20221223

ABSTRACT

Patients undergoing coronary artery bypass grafting surgery often face psychological problems even after getting discharge from the hospital which has a strong influence in recovery during post-operative period. So, a study to assess the psychological problems among the post CABG patients attending OPD was conducted with the aim to assess the psychological problems and its associated factors. A quantitative descriptive survey research approach was adopted to collect data from 100 patients selected by non-probability sampling technique. Standardised DASS 21 scale and Pittsburgh Sleep Quality Index scale were administered by interview method to collect data related to psychological problems and a semi-structured interview schedule to assess the factors associated with psychological problems. Findings revealed that majority (57%) of the patients had no depressive features, maximum (33%) number of patients had mild anxiety, majority (85%) of the patients had normal stress levels and majority (61%) of the patients suffer from bad quality of sleep. The main factors associated with the psychological problems were loss of independence, feeling disturbed about present body image and feeling disturbed due to physical discomfort. The computed chi square (χ^2) result showed that there is no significant association between psychological problems and selected demographic variables. Present study had several implications in nursing research, administration, nursing practice and nursing education. The present study recommended to conduct further studies regarding different measures adopted by post CABG patients to overcome psychological problems.

Keywords: post CABG patients, psychological problems, OPD

INTRODUCTION

"*From every wound there is a scar, and every scar tells a story. A story that says, 'I survived'***."** -
Craig Scott

Surgery always seems to be a frightening phase of a patient's life. Recovery from the main illness remain in one hand while coping up with the post surgical complications remain in other. Surgical complications may affect patient psychologically due to challenges such as prolonged recovery or long-lasting disability. Psychological distress could further delay patient's recovery as stress delays wound healing and compromises immunity[1]. One such complicated surgery is CABG or Coronary Artery Bypass Grafting after which patient undergoes through a series of mental and physical discomfort.

Coronary artery bypass graft surgery is one of the important treatment procedures of coronary artery disease (CAD) which is a major incident with a psychological and emotional impact on patients and their families [2]. It is the most commonly performed cardiac surgery procedure

worldwide, representing annual volume of approximately 200,000 isolated cases in the United states and an average incidence rate of 62 per 100,000 inhabitants in western European countries[3]. In India it was first performed in 1975, 13 years after its advent in 1962. In the mid 1990 some 10,000 CABG surgeries were being performed annually in India which is presently increased to 60,000 per year according to industrial sources[4].

Cardiac surgery, due to being associated with stressors, has many physiological, psychological, emotional growths and spiritual consequences. Patient concerns related to coronary artery bypass graft surgery are length of the waiting period before operation, fear of death, previous negative hospital experience, fear about the recovery process, fear of pain and discomfort, fear about loss of appetite, weakness, sleep disturbances, resumption of normal life activities after surgery, cardiac monitoring, drug addiction, length of hospitalization and hospital costs[2].

Recently more attention has been paid to psychological responses particularly depression, following CABG surgeries because depression influences the recovery process and poses life-threatening complications that can endanger health. Approximately 800,000 patients undergo CABG surgery worldwide annually of which 20-45% experience depression shortly afterwards. Depression was found to be influenced by various factors such as level of education, source of teaching information regarding the surgery, length of stay, hospital type, and gender. Whereas higher level of education, longer hospital stay, public hospitals and female patients were associated with higher level of depressive manifestations, receiving teaching from nurses were associated with lower level of depression [5].

Purpose

The purpose of the study is to assess the psychological problems and its associated factors among post CABG patients attending OPD.

Objectives

- To assess the psychological problems among post CABG patients
- To assess the factors associated with psychological problems among post CABG patients.
- To find the association between psychological problems of post CABG patients with selected demographic variable.

LITERATURE REVIEW

The related research and non-research literature were reviewed from published and unpublished thesis, books, journals through online search regarding various psychological problems faced by the post CABG patients.

The relevant research and non-research related literature were reviewed and organised under following headings

- Assessment of psychological problems among post CABG patients
- Factors associated with psychological problems among post CABG patients

Psychological problems among post CABG patients

Acikel EM (2019) conducted a study on Evaluation of Depression and Anxiety in Coronary Artery Bypass Surgery Patients: A Prospective Clinical Study. The aim of this study was to determine the depression and anxiety levels in coronary artery bypass graft (CABG) surgery patients in the pre and postoperative periods. 65 patients were taken up for the study whose depression and anxiety level were assessed by Beck's Depression Inventory (BDI) and Beck's Anxiety Inventory (BAI) tests. The tests were done on the preoperative 1st day and postoperative 3rd day with in-hospital patients and on the postoperative 7th and 30th days with out-hospital patients. Result showed that depression and anxiety levels were higher in the postoperative than in the preoperative period. Both anxiety and

depression levels were increased significantly following CABG operation when compared with preoperative levels in all patients. The researcher concluded that both depression and anxiety appear to cause morbidity risks, although their behavioral and biological mechanisms are poorly understood. Good management of the psychological condition of cardiac surgery candidates, as well as post-bypass patients, will improve quality of life and cardiovascular outcomes in these patients [7].

Sanson G, Khlopenyuk Y, Milocco S, Sartori M, Dreas L, Fabiani A(2018) conducted a longitudinal study on Delirium after cardiac surgery, incidence, phenotypes, predisposing and precipitating risk factors. The main objective of the study is to evaluate the risk factors, incidence, fluctuations, phenotypic characteristics and impact on patient's outcomes of delirium. One ninety nine post operative patients were assessed three times a day through an adapted version of the Intensive care Delirium Screening Checklist. Result showed that delirium and subsyndromal delirium were 30.7% and 31.2% respectively after cardiac operations. The researcher concluded that delirium screening should be a systematic or intentional activity after every cardiac operations[8].

Nguyen Q, Uminski K, Heibert B, Tangri N, Arora R(2017) conducted a study on Midterm outcomes after postoperative delirium on cognition and mood in patients after cardiac surgery. The objective of the study was to determine the primary impact of delirium on self-reported problems with midterm cognitive functioning and mood postcardiac surgery. 197 patients were assessed for the study with the help of Montreal Cognitive Assessment and Patient Health Questionnaire 9. Result showed that 22% of the patients developed postoperative delirium. The researcher concluded that postoperative delirium is associated with increased anxiety and depression at 6 to 9 months post cardiac surgery. Further investigations should be done[9]

Perrotti A, Mariet SA, Durst C, Monaco F, Vandel P, Monnet E etal (2016) conducted a study on Relationship between depression and health-related quality of life in patients undergoing coronary artery bypass grafting: a MOTIV- CABG substudy. The aim of this study was to investigate the impact of preoperative depression on health-related quality of life changes over the first 12 postoperative months. 359 patients were taken up for the study whose preoperative depression were assessed by using Beck Depression Inventory on changes in SF-36 component summary scores. Result showed that 60.4% of the patients had no preoperative depression and 39.6% had preoperative depression. During follow up the mental component scores and physical component scores in SF-36 increased in both the groups but the improvement was of smaller magnitude in the group of patients depressed baseline as compared to those with no depression. The researchers concluded that preoperative depression has a negative impact on HRQol improvement during postoperative follow up after CABG so it is important to detect depression before CABG to begin antidepressant therapy and improve patient's HRQol[10].

Kidd T, Poole L, Ronaldson A, Leigh E, Jahangiri M, Steptoe A (2016) conducted a study on Attachment anxiety predicts depression and anxiety symptoms following coronary artery bypass graft surgery. The main objective of this study was to assess whether depression and anxiety were associated with poor recovery in coronary artery bypass graft patients as little is known about predictors of depression and anxiety symptoms. One hundred and fifty-five patients were taken who completed questionnaires measuring attachment depression by Beck Depression Inventory and anxiety symptoms were measured using the anxiety subscale of the Hospital Anxiety and Depression Scale. Result showed that 32.5% of the participants had depression at baseline, 24% at 6 to 8 weeks follow up and

22% at 12 month follow up scored less than 10. For anxiety 80% of the participants scored within the normal range, increasing to 90% at 6-8 weeks following surgery and 94% at 12 months. The researcher concluded that it is necessary to identify those who are susceptible to experience depression and anxiety symptoms in improving recovery outcomes for CABG patients[11].

Factors associated with psychological problems for post CABG patients

Modica M, Castiglioni P, Minotti A, Faini A, Racca V, Ferratini M (2018) conducted a study on Psychological Profile in Coronary Artery By-pass Graft Patients and Valve-Replacement Entering Cardiac Rehabilitation After Surgery with the aim to investigate differences in disease experiences and mood between patients undergoing cardiac rehabilitation after coronary artery by-pass graft or after valve replacement. 1,179 patients who have undergone CABG surgery and 73 patients who have undergone valve replacement were taken whose psychological problems were assessed by Illness Behaviour Questionnaire and the Hospital Anxiety and Depression Scale. Results showed that in 31.8% of the patients the level of anxiety is greater than normal and in 21.8% of the patients the level of depression is greater than normal with high prevalence among female patients. The scores decreased with increase in educational level and it did depend on age but not significantly on surgery. The researchers concluded that syndromes of depression and anxiety are substantially similar in valve replacement patients and in patients who have undergone bypass surgery, therefore structured psychological support should be made available to all patients after cardiac surgery and not only to those who have undergone CABG[12].

Sadeghi M, Hashemi M, Sararoudi BR, Merasi RM, Molaeinezhad M, Shamsolketabi H et al (2017) conducted a correlational study on "demographic and psychological predictors of recovery from coronary artery bypass graft". The aim of the study was to explore the demographic and psychological factors which predict the recovery process in CABG patients. 250 CABG patients were taken from two public and private hospitals, and were investigated for indexes of recovery during hospital stay and 4 weeks after discharge. Demographic and psychological variables were collected through checklist and Farsi validated and reliable versions of type D personality, the multidimensional scale of perceived social support, revised illness perception questionnaire (IPQ-R). Data were analysed through statistical tests through SPSS version 20. Result showed that 91.2% of CABG patients have not been recovered 4 weeks after surgery. Furthermore 99% of them reported high scores of depression and anxiety. Marital and insurance status and perceived personal control, showed significant difference between recovered and unrecovered patients based on total recovery, index ($P<0.05$). Age, gender, insurance status, and perceived personal control were the most frequent variables identified as predictors of recovery indexes, separately. The researcher concluded that the correlation between depression, anxiety, perceived personal control, and recovery status among the patients reveals the importance of considering psychological and mood assessment in developing guidelines for CABG patients[13].

Heidari A, Sharifi K, Firoozabadi DM (2016) reviewed several articles and publish a journal named "post CABG psychological disorder: New update for surgeons and nursing groups". They have reviewed the articles under different sections namely – psychological complications after CABG surgery, post CABG surgical depression, post CABG surgical quality of life and post CABG surgery delirium. They have found out in a study that pre and post CABG surgical prevalence of depression is reported as 47 and 61% respectively and people who have depression before surgery will suffer from this problem for a longer time after

surgery. Waiting for heart surgery, hospitalization, fear of death, knowing someone who had the same problem and died and generally the fear of the unknown are all factors that lead to the development of anxiety and depression in patients. At the beginning of the treatment patients develop moderate symptoms and then develop anxiety, stress and depression. The symptoms could be associated with symptoms such as fatigue, sleep disorders and mood state changes such as stress, fear, confusion, agitation, irritability and anger due to the feelings of worthlessness, lack of control and low self-esteem. In some cases it has been found that patient suffers from delirium after CABG surgery. The consequence of delirium includes increased length of hospital stay especially in ICU, increased mortality, increased susceptibility to post-traumatic stress disorder and possible long term cognitive disorder with an impact on quality of life[14].

Chaudhury S, Saini R, Bakhla KA and Singh J (2015) reviewed a study on prevalence of Depression And Anxiety Following Coronary Artery Bypass Graft : Current Indian Scenario. The objective of this review is to highlight early identifiable symptoms of depression and anxiety following CABG. The researcher found out that the range of the neuropsychiatric complications following CABG like anxiety, depression, neurocognitive deficits, delirium, and cerebrovascular accident varies from 2-4% to 25-40% in severe cases. The most common anxiety disorder occurs after surgery are found to be generalized anxiety disorder and panic anxiety disorder with prevalence ranging from zero to 11%. Post operative depression is associated with delayed wound healing, higher infection rate, poor physical and emotional health, reduced pain threshold and more adverse cardiac events like myocardial infarction and early death. The researcher concluded that there is a strong link between emotional state and coronary artery disease. Many patients may not be able to describe their symptoms in busy outpatient set-up and under such conditions patient education is necessary. After discharge from the hospital, an information brochure containing early warning signs of emotional disorder can be given to the patient or care giver and they must be encouraged to clarify their queries during their follow up[6].

MATERIALS & METHODS

A quantitative descriptive survey research approach was adopted to collect data from 100 patients selected by non-probability sampling technique. Standardised DASS 21 scale (anxiety, stress, and depressive features) and Pittsburgh Sleep Quality Index (sleep disturbances) scale were administered by interview method to collect data related to psychological problems and a semi-structured interview schedule was administered to assess the factors associated with psychological problems.

Statistical Analysis

Descriptive and statistical analysis were used to analyse the data. The level of psychological problems was computed by frequency distribution. The factors associated with the psychological problems were assessed by Chi Square test.

RESULT

The findings revealed that majority (57%) of the patients had no depressive features, maximum (33%) number of patients had mild anxiety, majority (85%) of the patients had normal stress levels and majority(61%) of the patients suffer from bad quality of sleep. The main factors associated with the psychological problems were loss of independence, feeling disturbed about present body image and feeling disturbed due to physical discomfort. The computed Chi square (χ^2) result showed that there is no significant association between psychological problems and selected demographic variables (age, gender, marital status, marital status, educational status, occupational status, family income, present hospital stay, family history of CABG, family history of psychiatric illness).

Table 1: Association between level of depressive features and selected demographic variables. n = 43

Sl. No.	Sample Characteristics	Level of Depressive features				χ^2 calculated	df	p-value 0.05 level	Significance
		Mild	Moderate	Severe	Extremely severe				
1.	Age								
1.1	51-56 years	-	-	-	-				
1.2	57-62 years	1	1	-	-	0.005	9	16.92	NS
1.3	63-68years	26	5	3	1				
1.4	69-74 years	-	2	2	2				
2.	Gender								
2.1	Male	22	7	3	1	0.183	3	7.82	NS
2.2	Female	5	1	2	2				
3.	Marital status								
3.1	Married	26	6	4	1				
3.2	Unmarried	-	1	1	-	3.221	6	12.59	NS
3.3	Widowed/ Separated	1	1	-	2				
4.	Educational status								
4.1	Primary	-	-	1	1				
4.2	Secondary	3	1	-	1	3.4555	9	16.92	NS
4.3	Higher Secondary	5	3	1	1				
4.4	Graduate and above	19	4	3	-				
5.	Occupational status								
5.1	Unemployed	1	-	-	-				
5.2	Retired	22	-	4	1				
5.3	Service	3	1	1	-	8.2559	12	21.03	NS
5.4	Business	1	6	-	2				
5.5	Others	-	1	-	-				
6.	Family income (monthly) Rs. 10,000-Rs 20,000								
6.1	Rs. 20,001- Rs. 30,000	-	-	2	-				
6.2	Rs. 30,001- Rs. 50,000	-	1	-	1	7.048	9	16.92	NS
6.3	Rs. 50,001 and above	7	2	2	1				
6.4		20	5	1	1				
7.	Present hospital stay								
7.1	6-10 days	25	1	5	-				
7.2	7.2.11-15 days	2	7	-	3	3.907	3	7.82	NS
8.	Family history of CABG								
8.1	Yes	-	4	2	3				
8.2	No	27	4	3	0	5.952	3	7.82	NS
9.	Family history of psychiatric illness								
9.1	Yes	-	-	1	2				
9.2	No	27	8	4	1	2.307	3	7.82	NS

NS – Not Significant

The data presented in the table shows that the calculated chi square values between level of depressive features and demographic variables like age, gender, marital status, educational status, occupational status, family income, present hospital stay, family history of CABG and family history of psychiatric illness was less than the p value.

So, the null hypothesis was failed to be rejected which states that the level of depressive features was independent and was not significantly associated with selected variables like age, gender, marital status, educational status, occupational status, family income, present hospital stay, family history of CABG and family history of psychiatric illness of post CABG patients at 0.05 level of significance.

Table 2: Association between level of anxiety and selected demographic variables n = 76

Sl. No.	Sample Characteristics	Level of Anxiety				χ^2 calculated	df	p-value 0.05 level	Significance
		Mild	Moderate	Severe	Extremely severe				
1.	Age								
1.1	51-56 years	-	2	-	-				
1.2	57-62 years	2	8	2	1	8.749		16.92	NS
1.3	63-68years	31	17	1	2		9		
1.4	69-74 years	-	4	1	5				
2.	Gender								
2.1	Male	26	26	3	2	0.004	3	7.82	NS
2.2	Female	7	5	1	6				
3.	Marital status								
3.1	Married	32	29	3	6				
3.2	Unmarried	-	1	1	-	0.001	6	12.59	NS
3.3	Widowed/Separated	1	1	-	2				
4.	Educational status								
4.1	Primary	-	-	1	1				
4.2	Secondary	3	1	-	1				
4.3	Higher Secondary	7	5	2	4	1.122		16.92	NS
4.4	Graduate and above	23	25	1	2		9		
5.	Occupational status								
5.1	Unemployed	1	-	-	-				
5.2	Retired	29	29	-	1				
5.3	Service	2	-	2	3	2.770		21.03	NS
5.4	Buisness	1	2	2	3		12		
5.5	Others	-	2	-	1				
6.	Family income (monthly)								
6.1	Rs. 10,000-Rs 20,000	-	-	1	1				
6.2	Rs. 20,001- Rs. 30,000	-	-	1	1	9.036		16.92	NS
6.3	Rs. 30,001- Rs. 50,000	6	3	1	3		9		
6.4	Rs. 50,001 and above	27	28	1	3				
7.	Present hospital stay								
7.1	6-10 days	31	25	3	6				
7.2	11-15 days	2	6	1	2	0.257		7.82	NS
							3		
8.	Family history of CABG								
8.1	Yes	-	5	1	3				
8.2	.No	33	26	3	5	0.002		7.82	NS
							3		
9.	Family history of psychiatric illness								
9.1	Yes	-	-	1	2				
9.2	No	33	31	3	6	3.956	3	7.82	NS

NS – Not Significant

The data presented in the table shows that the calculated chi square values between level of anxiety and demographic variables like age, gender, marital status, educational status, occupational status, family income, present hospital stay, family history of CABG and family history of psychiatric illness was less than the p value.

So, the null hypothesis was failed to be rejected which states that the level of anxiety was independent and was not significantly associated with selected variables like age, gender, marital status, educational status, occupational status, family income, present hospital stay, family history of CABG and family history of psychiatric illness of post CABG patients at 0.05 level of significance.

Table 3: Association between level of stress and selected demographic variables n = 15

Sl. No.	Sample Characteristics	Level of Stress				χ^2 calculated	df	p-value 0.05 level	Significance
		Mild	Moderate	Severe	Extremely severe				
1.	Age								
1.1	51-56 years	-	1	-	1				
1.2	57-62 years	4	1	1	-		9		NS
1.3	63-68years	1	1	1	-	2.997		16.92	
1.4	69-74 years	1	1	2	-				
2.	Gender								
2.1	Male	5	2	1	-	0.010	3	7.82	NS
2.2	Female	1	2	3	1				
3.	Marital status								
3.1	Married	3	3	3	-				
3.2	Unmarried	2	-	-	-	1.240	6	12.59	NS
3.3	Widowed/Separated	1	1	1	1				
4.	Educational status								
4.1	Primary	-	-	1	1				
4.2	Secondary	1	2	2	-	8.418	9	16.92	NS
4.3	Higher Secondary								
4.4	Graduate and above	2	1	1	-				
		3	1	-	-				
5.	Occupational status								
5.1	Unemployed	-	-	1	-		12		
5.2	Retired	-	-	2	-	4.395		21.03	NS
5.3	Service	3	3	-	-				
5.4	Business	3	1	1	-				
5.5	Others	-	-	-	1				
6.	Family income (monthly) Rs. 10,000-Rs 20,000								
6.1	Rs. 20,001- Rs. 30,000	-	1	1	-				
6.2	Rs. 30,001- Rs. 50,000	1	1	1	-	1.060	9	16.92	NS
6.3	Rs. 50,001 and above	5	1	-	1				
6.4		-	1	2	-				
7.	Present hospital stay								
7.1	6-10 days	4	2	3	1	0.103	3	7.82	NS
7.2	11-15 days	2	2	1	_				
8.	Family history of CABG								
8.1	Yes	4	2	3	1	1.152	3	7.82	NS
8.2	No	2	2	1	-				
9.	Family history of psychiatric illness								
9.1	Yes	-	-	2	1	1.259	3	7.82	NS
9.2	No	6	4	2	-				

NS – Not Significant

The data presented in the table shows that the calculated chi square values between level of stress and demographic variables like age, gender, marital status, educational status, occupational status, family income, present hospital stay, family history of CABG and family history of psychiatric illness was less than the p value.

So, the null hypothesis was failed to be rejected which states that the level of stress was independent and was not significantly associated with selected variables like age, gender, marital status, educational status, occupational status, family income, present hospital stay, family history of CABG and family history of psychiatric illness of post CABG patients at 0.05 level of significance.

Table 4: Association between quality of sleep and selected demographic variables n = 100

Sl. No.	Sample Characteristics	Quality of Sleep					χ^2 calculated	df	p-value 0.05 level	Significance
		Very Good	Good	Moderate	Bad	Worse				
1.	Age									
1.1	51-56 years	-	-	-	-	2				
1.2	57-62 years	1	2	11	1	-			21.03	NS
1.3	63-68years	16	13	43	1	-	3.753	12		
1.4	69-74 years	1	1	7	1	-				
2.	Gender									
2.1	Male	10	9	56	1	1	0.004	4	9.49	NS
2.2	Female	8	7	5	2	1				
3.	Marital status									
3.1	Married	17	15	60	1	1				
3.2	Unmarried	_	_	_	1	1	6.159	8	15.51	NS
3.3	Widowed/ Separated	1	1	1	1	_				
4.	Educational status	_	_	_	1	1				
4.1	Primary	_		2	2	1				
4.2	Secondary		1	_	_	_	2.090		21.03	NS
4.3	Higher Secondary	16	10					12		
4.4	Graduate and above	2	5	59	_	_				
5.	Occupational status									
5.1	Unemployed	-	-	-	-	1				
5.2	Retired	15	11	55	-	-				
5.3	Service	2	2	3	-	-	2.096	16	26.30	NS
5.4	Buisness	1	3	3	3	-				
5.5	Others	-	-	-	-	1				
6.	Family income (monthly)									
	Rs. 10,000-Rs 20,000	-	-	-	-					
6.1	Rs. 20,001- Rs. 30,000	-	1	1		2				
6.2	Rs. 30,001- Rs. 50,000	3	6	8	1	-				
6.3	Rs. 50,001 and above	15	9	52	-	-	2.287	12	21.03	NS
6.4					2	-				
7.	Present hospital stay									
7.1	6-10 days	16	13	56	1	1				
7.2	11-15 days	2	3	5	2	1	0.018	4	9.49	NS
8.	Family history of CABG									
8.1	Yes	1	1	4	2	1	0.001	4	9.49	NS
8.2	No	17	15	57	1	1				
9.	Family history of psychiatric illness									
9.1	Yes	-	-	-	2	1	3.032	4	9.49	NS
9.2	No	18	16	61	1	1				

NS – Not Significant

The data presented in the table shows that the calculated chi square values between quality of sleep and demographic variables like age, gender, marital status, educational status, occupational status, family income, present hospital stay, family history of CABG and family history of psychiatric illness was less than the p value.

So, the null hypothesis was failed to be rejected which states that the quality of sleep was independent and was not significantly associated with selected variables like age, gender, marital status, educational status, occupational status, family income, present hospital stay, family history of CABG and family history of psychiatric illness of post CABG patients at 0.05 level of significance.

Development of Hypothesis

Based on the present study findings a hypothesis was formulated.

H_1 – The post CABG patient faces psychological problems in the form of mild level of anxiety and moderate level of

quality of sleep with normal level of stress and depressive features.

DISCUSSION

In the present study the psychological problems among post CABG patients were assessed by Standardized DASS-21 scale and Pittsburgh Sleep Quality Index Scale. The findings of the present study showed that in case of depressive features majority (57%) of the patient had normal level of depressive features, 27% had mild depressive features, 8% had moderate depressive features, 5 % had severe depressive features and 3% had extra severe depressive features. In case of anxiety maximum (33%) of the patient had mild level of anxiety, 31% had moderate level of anxiety, 24% of total patients had normal level of anxiety, (4) 4% had severe level of anxiety, (8) 8 % had extremely severe level of anxiety. In case of stress majority (85%) number of patients had normal level of stress, (6) 6% had mild level of stress, (4) 4% had severe level of stress and (1) 1% had extremely severe level of stress. In case of sleep disorders majority (61%) of the patient had moderate quality of sleep, (18) 18% of the total patients had very good quality of sleep, (16) 16% had good quality of sleep, (3)3% had bad quality of sleep and (2) 2% had worse quality of sleep.

The present findings were supported by the following studies:

Modica M, Castiglioni P, Minotti A, Faini A, Racca V, Ferratini M (2018) conducted a study on psychological profile in coronary artery by-pass graft patients and valve-replacement entering cardiac rehabilitation after surgery. The result showed that out of 1,179 post CABG patients who were taken up for the study, 31.8% of the patients the level of anxiety is greater than normal and in 21.8% of the patients the level of depressive features is greater than normal with high prevalence among female patients [12].

The factors associated with psychological problems were assessed by semi-structured interview schedule. The present study showed that majority (74%) of the patients had feeling of loss of independence, 38% were worried about financial problems, 31% were feeling stress related to rejoining of work, 28% had fear of life expectancy, 39% were disturbed about sudden role change in the family, majority 83% were disturbed about present body image, and majority 87% were disturbed due to physical discomfort.

The present findings were supported by following study:

Chaudhury S, Saini R, Bakhla KA and Singh J (2015) reviewed a study on prevalence of Depression and anxiety following coronary artery bypass graft : Current Indian Scenario. The researcher found out that the range of the neuropsychiatric complications following CABG like anxiety, depression, neurocognitive deficits, delirium, and cerebrovascular accident varies from 2-4% to 25-40% in severe cases. Post operative depression is associated with delayed wound healing, higher infection rate, poor physical and emotional health, reduced pain threshold and more adverse cardiac events like myocardial infarction and early death. The researcher concluded that there is a strong link between emotional state and coronary artery disease[6].

CONCLUSION

Majority of the post CABG patients had quality of sleep in moderate level and anxiety in mild level with normal level of stress and depressive features

In context to the factors associated with psychological problems**,** majority of the patients had feeling of loss of independence, were disturbed about present body image and were disturbed due to physical discomfort.

There was no association between psychological problems categorised as depressive features, anxiety, stress and quality of sleep with the demographic variables of the patients, such as age,

gender, marital status, educational status, occupational status, type of family, monthly family income, present hospital stay, history of CABG in family and history of psychiatric illness in family at 0.05 level of significance.

So, it is evident that complicated surgeries like Coronary Artery Bypass Grafting provides a certain psychological impact on patient's health. The patient undergoes through mild to moderate anxiety regarding the financial and physical status. The pain, the itchiness around surgical area, the discomfort makes a greater impact on patient's sleep level. So, a preliminary counseling regarding the psychological complications after surgery should be done for every patient before discharge.

Declaration by Authors

Ethical Approval: Administrable approval was taken from Principal of B.M. Birla College Of Nursing and ethical approval was taken from ethics committee of B.M. Birla Heart Research Centre, Kolkata and from all the participants.

Acknowledgement: I like to convey my sincere gratitude to Dr. Sonali Ganguly, Principal, B.M. Birla College of Nursing and Prof. Bhanumati Dutta, of B.M.Birla College of Nursing Kolkata for their expert guidance and supervision for conducting this study.

Thanks to all the experts who had kindly agreed to validate the tools, and who had given their valuable time and energy in checking and modifying the tools.

Gratitude, to Dr. Daniel. J. Buyesse, Professor of Psychiatry and Clinical and Transitional Science, Pittsburgh, to give me the permission to use Pittsburgh Sleep Quality Index Scale in my research study.

A sincere acknowledgement to the Nursing Superintendent of B.M.Birla Heart Research Centre, and Nursing Director of B.P.Poddar Hospital and Medical Research Limited for allowing me to conduct the research study in their hospital.

A humble tribute to all other faculty members of B.M.Birla College of Nursing, Kolkata for innumerable times they had extended their help, guidance and encouragement to me.

And a special thanks to all the participants who had taken part in the study. This study has been inspired by them, had been planned with them in the mind, and it has been rendered a success by their co-operation.

Finally, there are no words to express my sincere gratitude to my loving parents, to all my dear friends and well wishers for their encouragement and constant unconditional emotional support.

Source of Funding: None

Conflict of Interest: The authors declare no conflict of interest.

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How to cite this article: Sreyasree Saha. Assessment of psychological problems and its associated factors among post CABG patients attending OPD in a selected hospital of Kolkata, West Bengal. *Int J Health Sci Res.* 2022; 12(12):136-147.
DOI: *https://doi.org/10.52403/ijhsr.20221223*

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