IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 18, Issue 5 Ser. 4 (May. 2019), PP 60-64
www.iosrjournals.org

Assessment of Anxiety and Depression by Hospital Anxiety Depression (HAD) Scale among the Chronically Ill Patients Admitted In a Tertiary Care Hospital of Bangladesh

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Abstract: *Anxiety and depression are two common and important psychological problems, frequently present in patients with chronic illness. There should be a common and well-accepted procedure to diagnose the anxiety and depression and properly should be addressed along with primary medical problems. In this regards, hospital anxiety and depression scale (HAD) scale is an excellent tool to diagnose anxiety and depression in chronically ill patients. Here is the study of 100 consecutive patients with chronic respiratory, cardiac, malignant, renal, endocrine disease etc were being interviewed as per HAD scale questionnaire. Data were analyzed by using a standard statistical method with SPSS 19. Regarding gender distributions of the study patients where both male and female are equal in number. Regarding patterns of different medical disorders, cardiac disease was 20%, respiratory disease was 22%, gastrointestinal diseases were 22%, endocrine disorders were 12% neurological diseases were 12%. Table 1 showing cardiovascular 6(12%), respiratory 16(32%), gastrointestinal (28%) and neurological 6(12%) patients had more anxiety than other chronic disease conditions. Again respiratory 12(42.9%), neurological 6(21.4%), cardiac 4(14.3%) and gastrointestinal 4(14.3%) were more depressed than other conditions on the other Male were found more anxious(54.5%) than female(45.5%) and depression analysis revealed female(55.6%) were found more depressed than male(44.4%). Definite anxiety was present more in the age group 50-70 years patients others had less in frequency and definite depression was present in the age group 30-50 years 14(38.9%) and age group 50-70 years 16(44.4%). Anxiety and depression are common conditions in chronically ill patients especially cardiac, respiratory and neurological patients.*

Key words*: Anxiety, Depression, HAD scale, Chronic Disease.*

Date of Submission: 29-04-2019 Date of acceptance: 13-05-2019

I. Introduction:

Anxiety disorder, the most prevalent psychiatric illness in the general community and is present in 15-20% of medical clinic patients.1Anxiety can be defined as a subjective sense of unease, dread or foreboding, can indicate a primary psychiatric condition or can be a component of or a reaction to a primary medical disease. The primary anxiety disorders are classified according to their duration and course and the existence and nature of precipitations.2 When evaluating the anxious patients, the clinician must first determine whether the anxiety antedates or postdates a medical illness or is due to a medication side effect. Approximate one- third of patients presenting with anxiety have a medical etiology for their psychiatric symptoms but an anxiety disorder can also present with somatic symptoms in the absence of a diagnostic medical condition.3,4 Anxiety disorders are classified according to whether the anxiety is persistent (generalized anxiety disorder) or episodic, with the episodic condition classified according to whether the episodes are regularly triggered by the same cue (phobia) or not (panic disorder).5 The nature and prominence of the somatic symptoms often led the patient to medical services. Anxiety may be secondary to organic disease states e.g. acute myocardial infarction, angina pectoris, gastrointestinal ulcers etc which may require specific therapy. Another class of secondary anxiety states

(situational anxiety) results from circumstances that may have to be dealt with only once or only a few times, including anticipation of frightening medical or dental procedures and family illness or other tragedy.6 Depressive symptoms are common up to 30% of primary care patients and it is globally the fourth leading cause of disease burden and is often ignored. The symptoms of depression are often subtle and unrecognized both by patients and by physicians. Patients with vague complaints that resist explanation as manifestations of somatic disorders and those who might be simply called "neurotics" should be suspected of being depressed.7 Depressive disorder is characterized by disturbances of mood, speech, energy, and ideas. Patients often describe their symptoms in physical terms. Marked fatigue and headache are two most common physical symptoms of depressive illness and may be the first symptoms to appear. Patients describe the world as looking grey, lacking a zest for living and devoid of pleasure and interest in life (anhedonia). Anxiety and panic attacks are common, secondary obsessional and phobic symptoms may emerge concomitantly with depression. Depression and anxiety often coexist. These disorders should be addressed appropriately and should be treated accordingly. This is important as pain.8 Chronic diseases constitute a major cause of mortality and the World Health Organization (WHO) reports chronic non-communicable conditions to be by far the leading cause of mortality in the world, representing 35 million deaths in 2005 and over 60% of all deaths. Chronic illnesses cause about 70% of deaths in the US and in 2002 chronic conditions (heart disease, cancers, stroke, chronic respiratory diseases, and diabetes, Alzheimer's disease, mental illness and kidney diseases) were 6 of the top ten causes of mortality in the general population. 90% of seniors have at least one chronic disease and 77% have two or more chronic conditions.

II. Methods and Material

This was a cross-sectional study done in the Department of Medicine units of CMCH during a period of six months (July 2018 to December 2018). Patients admitted to the medicine ward with chronic disease were included as study population. Sampling technique was non-convenience purposive sampling and a total of 100 patients were included in the study. Inclusion criteria were age above 18, patients from both sexes and patients hospitalized due to chronic medical illness and exclusion criteria were patients hospitalized due to psychiatric illness as a primary disease or due to surgical or gynecological cause and patients refusing to give consent to take part in the study. After written consent, patients were counseled in a one-to-one manner by a qualified medical doctor and explained about the objective of the study. Each personal interview was carried out in full respect of confidentiality. Face-to-face interviews were performed by the researcher himself by using the questionnaire. Data were processed and analyzed by using computer bases software SPSS- 19 (Statistical Package for Social Science). Different statistical method was applied for data analysis. Qualitative data were presented with tables. P value was considered as statistically significant when it is less than 0.05.

III. Results

Table 1: Type of chronic medical disorder with grades of anxiety

Chronic medical disorders	Grading of anxiety			
	Anxiety not present	Anxiety doubtful	Anxiety definite	Total
Cardiac	6(12.0%)	6(21.4%)	8(36.4%)	20(20.0%)
Respiratory	16(32.0%)	4(14.3%)	2(9.1%)	22(22.0%)
Gastrointestinal	14(28.0%)	4(14.3%)	4(18.2%)	22(22.0%)
Endocrine	4(8.0%)	4(14.3%)	4(18.2%)	12(12.0%)
Musculoskeletal	0(0.0%)	2(7.1%)	0(0.0%)	2(2.0%)
Infectious	0(0.0%)	2(7.1%)	0(0.0%)	2(2.0%)
Neurological	6(12.0%)	4(14.3%)	2(9.1%)	12(12.0%)
Cancer	2(4%)	0(0.0%)	2(9.1%)	4(4.0%)
Others	2(4.0%)	2(7.1%)	0(0.0%)	4(4.0%)
Total	50	28	22	100
	100.0%	100.0%	100.0%	100.0%

Table 1 showing cardiovascular 6(12%), respiratory 16(32%), gastrointestinal (28%) and neurological 6(12%) patients had more anxiety than other chronic disease conditions.

Table 2: Type of chronic medical disorder with grades of depression

		Grading of depression			
		Depression absent	Depression doubtful	Depression definite	Total
Type of medical disorder	Cardiac	4(14.3%)	6(16.7%)	10(27.8%)	20(20.0%)
	Respiratory	12(42.9%)	8(22.2%)	2(5.6%)	22(22.0%)
	Gastrointestinal	4(14.3%)	10(27.8%)	8(22.2%)	22(22.0%)
	Endocrine	0(0.0%)	4(11.1%)	8(22.2%)	12(12.0%)
	Musculoskeletal	0(0.0%)	0(0.0%)	2(5.6%)	2(2.0%)
	Infectious	0(0.0%)	0(0.0%)	2(5.6%)	2(2.0%)
	Neurological	6(21.4%)	4(11.1%)	2(5.6%)	12(12.0%)
	Cancer	0(0.0%)	2(5.6%)	2(5.6%)	4(4.0%)
	Others	2(7.1%)	2(5.6%)	0(0.0%)	4(4.0%)
Total		28	36	36	100
		100.0%	100.0%		100.0%

Table 2 showing respiratory 12(42.9%), neurological 6(21.4%), cardiac 4(14.3%) and gastrointestinal 4(14.3%) were more depressed than other conditions.

Table 3: Gender variations with grades of anxiety

		Grading of anxiety		
		Anxiety not present	Anxiety doubtful	Definite anxiety
Sex	Male	30(60.0%)	8(28.6%)	12(54.5%)
	Female	20(40.0%)	20(71.4%)	10(45.5%)

Table 3 showing regarding gender variations male were more anxious(54.5%) than female(45.5%)

Table 4: Gender variations with grades of depression

		Grading of depression		
		Depression absent	Depression doubtful	Definite depression
Sex	Male	18(64.3%)	16(44.4%)	16(44.4%)
	Female	10(35.7%)	20(55.6%)	20(55.6%)

Table 4 showing regarding depression analysis female(55.6%) were found more depressed than male(44.4%)

Table 5: Age group and grading of anxiety

		Grading of anxiety		
		Anxiety not present	Anxiety doubtful	Definite anxiety
Age group	<30 years	8(16.0%)	4(14.3%)	4(18.2%)
	30- 50 years	10(20%)	14(50.0%)	6(27.3%)
	50-70 years	26(52.0%)	10(35.7%)	12(54.5%)
	>70 years	6(12.0%)	0(0%)	0(0%)

Table 5 showing definite anxiety was present more in age group 50-70 years patients others had less in frequency.

Table 6: Age group and grading of depression

		Grading of depression		
		Depression absent	Depression doubtful	Definite depression
Age group	<30 years	6(21.4%)	4(11.1%)	6(16.7%)
	30- 50 years	6(21.4%)	10(27.8%)	14(38.9%)
	50-70 years	14(50.0%)	18(50.0%)	16(44.4%)
	>70 years	2(7.1%)	4(11.1%)	0(0%)

Table 6 showing definite depression was present in the age group 30-50 years 14(38.9%) and age group 50-70 years 16(44.4%)

IV. Discussion

This is a hospital-based study for anxiety and depression among patients with medical diseases admitted in Chittagong Medical College hospital. The aim of our study was to see the frequency of anxiety and depression in chronically ill patients. We enrolled 100 chronically ill patients with different health problems. We found 22% patients have got anxiety and 36% patients have got depression. High prevalence of anxiety and depression were found in cardiac(20%), respiratory(22%) and malignancy(4%). Anxiety and depression were found highly prevalent in cardiac, respiratory and malignant disease patients and similar studies showed also the same association.9 An expert working group of the National Heart Foundation of Australia that reviewed the evidence had mixed findings. They concluded that there is an independent causal association between depression, its etiology, and prognosis of cardiovascular disease but did not find such a strong relationship with anxiety disorder/panic disorder.10 On the other hand, Kawachi et al showed an increased risk of sudden cardiovascular death among patients with panic and phobic symptoms.11 In a study done in Greece where ninety-eight medical and surgical inpatients were interviewed 24-72 hours prior to discharge. Thirty-five (36%) had clinical levels of anxiety and depression as defined by the SCL-90-R, a self-report symptom inventory. Compared with patients with normal SCL-90-R subtest scores, anxious and depressed patients more often had the following characteristics: older age, black race, lower socioeconomic class, a recent previous hospitalization, and impaired functional status prior to admission. Three to four weeks after discharge, 25 of the 35 anxious and depressed patients were again interviewed. Thirteen remained anxious and depressed, while 11 patients had returned to normative distress levels. Older, black, poor in patients with a recent prior hospitalization and impaired functional status are at high risk for clinical anxiety and depression. Half of those with anxiety and depression may remain anxious and depressed after discharge.12 In the above study, the discharged hospitalized patients were suffering more from the major depressive problem than anxiety. But our study also showed depression was more predominant than anxiety. Though that study was included both medical and surgical patients. In the present study regarding gender distributions of the study patients, both male and female were found in equal in number. As chronic disease are common in both male and female and in our study gender was kept equal so such findings were expected. Regarding patterns of different medical disorders, cardiac disease was 20%, respiratory disease was 22%, gastrointestinal diseases were 22%, endocrine disorders were 12%, neurological diseases were 12%. Regarding history of stressful life, events showed 30% had positive history of stressful life events.

Grades showed definite anxiety were found in 22% patients, definite depression where found in 36% patients. The study showed high prevalence of anxiety disorder and depressive illness in chronically ill patients. This issue is becoming even more important in developing country like Bangladesh where there is already a lack of mental health service, thus making it more important for a general practitioner and internist to understand the importance of risk of untreated anxiety and depression in medically ill patients especially cardiovascular, respiratory and malignant disorders. Complicating this picture is the prevailing social stigma associated with mental illness in Bangladesh. In our study female and widow seemed to put more at risk for developing depression and/or anxiety in this population. As there is a strong relationship between depression, anxiety and other medical illness hospitalized patients due to cardiac, respiratory or malignant diseases should be monitored closely for depression and anxiety symptoms. In addition, cardiac patients should be screened for symptoms of depression and anxiety. In our study, we used the Hospital Anxiety and Depression Scale as a screening instrument for measurement of anxiety and depression. Bjelland et al suggested that a cutoff score ≥ 8 for both the anxiety and depression subscales most frequently results in an optimal balance between sensitivity and specificity of approximately 80%. This threshold was found in the general population as well as in somatically compromised population.13 As anxiety and depression are two important comorbid conditions they may influence the outcome of the primary disorder. Lots of hospitalized patients suffering from medical disorder also may have psychiatric problem like anxiety and depression which was explored by the present study. So there should be given proper attention to treat the patient regarding anxiety and depression otherwise there may be failure of treatment of the primary disorder also.

Depressive patients with another physical disorder view themselves as more sick and visit the doctors almost four times as often as non- depressed physically ill, stay in the hospital longer, comply less with medical advice and medication and undergo more medical and surgical procedure. Depressive illness may be associated with increased mortality (excluding suicide) in patients with physical illness such as MI. Some limitations of our study need to be addressed. First present study has a cross-sectional design, thus we cannot infer causality between depressive symptoms, anxiety and chronic medical disorders. Other limitations are small sample size, lack of definite criteria for categorizing the patients with severe medical disease, gynecological and surgical patients and lack of comparison group. Authors also did not have information who did not give consent for the study. Prospective controlled studies are needed involving larger sample size, multiple sites and over longer periods of time.

Conclusion

Anxiety and depression were common conditions in chronically ill patients. This issue should be addressed properly for a better outcome.

Disclosure:

All the authors declared to no competing interest.

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Milton Barua[1], "Assessment of Anxiety and Depression by Hospital Anxiety Depression (HAD) Scale among the Chronically Ill Patients Admitted In a Tertiary Care Hospital of Bangladesh." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 18, no. 5, 2019, pp 60-64.