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Original Article

Prevalence of Anxiety and Depression in Medically Ill Patients Admitted in OPD of AIMS Muzaffarabad AJ&K

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ABSTRACT

Neuropsychiatric disorders, particularly high levels of anxiety and depressive symptoms, are increasing in primary health care settings because of their impact on quality of life, service satisfaction, medication adherence, patient outcomes, and functioning increase. **Objective:** To assess the prevalence of anxiety and depression disorder in patients of medical OPD and investigates its prevalence with medical illnesses. To contribute in raising awareness about the significance of medical illnesses and its relation with anxiety and depression. **Methods:** Descriptive study design was used. The study analyzed 120 male and females. Hospital anxiety and depression Scale (HADS) was used to investigate the prevalence in medically unwell patients across all age and gender categories. The study took place in Muzaffarabad October 2020 to March 2021. Performa was circulated physical availability of participants. Convenient sampling technique was used for data collection. Patients with recognized psychiatric problems were not allowed to participate in trail. Analyze data with IBM SPSS (Statistical Package for the Social Sciences) version-21.0. **Results:** Overall 91% of patients showed depression and anxiety disorders of various severities. A significant inverse correlation is found between Anxiety and depression and medical illnesses of p-value of p 0.05 as per chi-square test. **Conclusions:** Finding suggests that medical illnesses may have positive influences on mental health disorder. The occurrence of co-morbidity between anxiety and depression and medical condition is common and remain undiagnosed, thus lowering depressive scores and enhancing mental health.

INTRODUCTION

There are many interactions between the immune system, nervous system, and mental health. These interactions include communication pathways from the brain to the immune system, particularly the hypothalamic-pituitary-adrenal (HPA) axis and the autonomic nervous system, which mediate the effects of psychiatric disorders such as stress and anxiety. Emotions affect immunity and disease to resistance [1]. Neuropsychiatric disorders, particularly high levels of anxiety and depressive symptoms, are increasing in primary health care settings because of their impact on quality of life, service satisfaction, medication adherence, patient outcomes, and functioning increase [2, 3]. Anxiety is a mental condition characterized by tense sensations, anxious thoughts, and physical changes such as high blood pressure. Recurring troublesome thoughts and worries are hallmarks of anxiety disorders. They may avoid the situations because they care. Sweating, tremors, dizziness and increased heart rate are is all possible physical symptoms. Depression is characterized by depressed mood, a loss of interest and pleasure, low energy and feelings of guilt, low self-esteem, and confusion. In the future, sleep or appetite is disturbed and wakefulness is also disturbed. Anxiety symptoms are also commonly associated with depression [4]. Depression is a

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common illness. Reported rate of major depression in patients with this condition range from 5% to over 40%. However, depression in affected patients is often goes unrecognized and untreated. The prevalence reported in most studies is probably lower [5]. The high prevalence of depression in a various disorder is reflected in the specific psychiatric diagnosis 'Depression associated with general health and general medical conditions through physiological mechanisms. Several lines of evidence suggest that this mechanism is involved in the immune system [6]. That is, depression that accompanying various diseases may be directly induced by activation of the immune system, and may also appear as a response to trauma, pain, and loss related to the physical disease process [7]. Experimentally induced viral infections (e.g., colds and flu) and spontaneous upper respiratory infections or flu cause depressed mood and other depressive symptoms, as well as a variety of neuropsychiatric disorders [8]. Patients presenting to the emergency department with chest pain (CP) may exhibit symptoms associated with psychiatric disorders, such as anxiety and depression. Her two most common diagnoses were found to be mood disorders and anxiety. A review study' showed that he was diagnosed with panic disorder (PD) in 30.1% of patients presenting to the emergency room (ER) with chest pain. Of these, 22.4% showed PD without coronary artery disease (CAD). Patients with undiagnosed and therefore inadequately treated anxiety and depressive disorders tend to complain of chronic symptoms and seek regular medical attention [9, 10]. Back pain is a growing economic and health problem affecting nearly 80% of the general population. Many guidelines for the diagnosis and treatment of chronic low back pain have been published. Most of them are candid, but few emphasize the fact that general practitioners are really short on resources provided by mental illness treatment. Up to 30% of people, who later report back pain, have recurring or persistent symptoms. Chronic back pain is therefore one of the most common reasons for seeking treatment. Emotional stress has long been recognized as a factor in suffering and its perceptions [11, 12]. Like people with other chronic medical conditions, people with hypertension experience many serious emotions and are at increased risk of developing psychiatric disorder, especially anxiety and depression. Patient's adherence to pharmacological and non-pharmacologic therapies is essential for the management of hypertension, and these negative feelings can adversely affect treatment adherence [13]. Patient with diabetes mellitus, whether type I or type II, are prone to vulnerable depression. The anxiety of being diagnosed with diabetes, the constant stress of sticking to a treatment plan and the body of an advanced disease. Fear of social consequences all contribute to depression. A study conducted in Pakistan found that prevalence of diabetes mellitus in was 6% in men and 3.5% in men in rural areas. 6.5% and 2.5% women. Diabetics with long term complications have an even higher incidence of depression [14]. Recognizing depression in chronically ill patient can be difficult. This is because the symptoms of some depression are so similar to medical symptoms that they are difficult to differentiate. For instance, depression and medical conditions can cause fatigue, loss of appetite, and decreased alertness [15].

METHODS

The cross-sectional study was conducted at the Abbas Institute of Medical Sciences, Muzaffarabad Azad Jammu and Kashmir's outside patients' Medical Department from October 2020 to March 2021. Convenient sampling technique which is a non-probability sampling method was used. Data were collected randomly from the availability of the patient in medical outpatient department. This study collected data from 120 medical patients as per sample size (calculated by the WHO sample size calculator) studying in various medical hospitals. Data included both genders and all ages, regardless of marital status or educational background (capability to write and read). Patients with recognized psychiatric problems were not allowed to participate in the trial. The study covered all patients with serious medical illnesses and issues who were referred to the medical outdoor patients' department for medical disease treatment. All these patients provided written informed consent, and their demographic information was gathered using a Performa specifically prepared for this purpose in Urdu version (for the convenience of participants). This study collected data from 120 medical patients with demographic information of age, gender, diagnosed medical illness and HADS score. The patients were questioned, and clinical assessment criteria from the DSM V for depression and anxiety disorders were used. Then administered the Urdu version of HADS to the sample group. The questionnaire comprised of 14 questions aimed at determining the severity of depression and anxiety in our sample. Seven items of the measures were for assessing anxiety, while the other seven were for assessing depression. For both anxiety and sadness, the cutoff value is 7. Since its inception, HADS has been translated into other languages and used in over 25 countries. According to Herrmann's comprehensive review, HADS devices have demonstrated robust reliability and validity in evaluating medical patients [16]. Analyzed the data with IBM SPSS (Statistical Package for the Social Sciences) version-21.0.

RESULTS

Physical health illnesses mostly increase the risk of developing mental health problems. Nearly one third of

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people with long-term physical illness may also have mental health problems, in which most commonly is depression and anxiety. Medical illness frequency and severity of anxiety and depression are analyzed in the categories of gender, age, diagnosed medical illness and HADS score. In 120 participants there were 74 (62%) female patients and 46 (38%) were male respondents with an average age of 16-70 years. Cumulatively age 78% of cases were found in the age group of 26-55 years, indicating a higher incidence of anxiety and depression in medically ill patients.

Table 1: Characteristics of study participants with their demographic values

Characteristics	Demographics
Male	46(38.3%)
Female	74(61.7%)
Age	
16-25	16(13.3%)
26-35	35(29.9%)
36-45	23(19.2%)
46-55	20(16.7%)
56-65	12(10%)
Greater than 66%	14(11.7%)

Table 2 reflects that desegregation on gender basis result shows that 5 (11%) males were in case category, 2(4%) were borderline while 39 (85%) were cases having severe depression and anxiety along with other medical conditions. While, 2 (3%) females were non-cases, 2 (3%) were borderline and 70 (94%) were with severe depression and anxiety with higher level of anxiety and depression with the history of medical illness. It reflects that frequency of anxiety and depression is very high among the patients with the history of medical illness.

Table 2: Gender and grading wise cases distribution

Gender	Grading	Frequency (%)
Female	0-7	2(2.7)
	8-10	2(27)
	11+	70(94.6)
	Total	74(100)
Male	0-7	5(10.9)
	8-10	2(4.3)
	11+	39(84.8)
	Total	46(100)

Table 3 shows that association between anxiety and depression with medical illnesses. The higher percentage (28.0%) of anxiety and depression lies in low back pain patient's category. Prevalence also observed higher in Diabetes (16.0%) and cardiac problems (15.0%). Anxiety and high blood pressure can be symptoms of each other. Anxiety may lead to high blood pressure and high blood pressure can trigger feelings of anxiety. In our study patient with hypertension also reveals high percentage (11.2%). Sciatica is a panic condition which interferes in social emotional functioning and increase anxiety and depression percentage level e.g. (10.02%). Asthma is also a chronic condition which can cause anxiety and depression as in our study (8.6%). A significant relationship was found between HADS scores and medical illnesses with a p-value of 0.025.

Table 3: Association between anxiety and depression severity with medical illnesses

Diseases	Frequency (%)	Anxiety & depression subscale%
Asthma (respiratory problems)	6(5)	8.6%
Viral Infection	8(6.7)	4.2%
Cardiac problem	11(9.2)	15.0%
Diabetic	18(15)	16.0%
Gynae problem	5(4.2)	7.0%
Hyper tension	18(15)	11.2%
No case	8(6.7)	0
Low back pain	30(25)	28.0%
Sciatica	16(13.2)	10.0%
Total	120(100)	100.0%

Anxiety can lead to hypertension and hypertension can cause feelings of anxiety. Different his HADS scores were recorded for both anxiety and depression sub-scale (Table 4). Evaluation of the prevalence of depression and anxiety in the medically ill patient, using Urdu version of HADS indicated the prevalence of depression 55(45.83%) was found to be more frequently than Anxiety 38 (31.6%). 109 (91 %) patients were cases, (11+ Scale category) of both sexes suffering from anxiety and depression with medical illness. While 11 patients (9%) had neither anxiety nor depression and are in normal category. Depression was more prevalent in patients as compared anxiety among the patients with medical illness as shown in table 4.A significant relationship was found between medical illness and anxiety and depression severity.

Table 4: Frequency of anxiety and depression HADS scales scores

HADS Subscale	Anxiety Subscales patients %	Depression Subscales patients
Normal 0-7	67 (56%)	45 (37.5%)
Borderline Abnormal 8-10	15 (12.5%)	20 (16.6%)
Abnormal 11-21	38 (31.6%)	55 (45.83%)
Total	120	120

DISCUSSION

Analysis of the data of this study is significant as it was conducted at a medical out patients department which seems to be a better place to study psychiatric morbidity in patients affecting from medical illnesses. The findings of the study show anxiety and depression in patients with medical illnesses are comparable and consistent and they support the findings of recent studies in Pakistan. According to results of Misgan and Belete study the

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prevalence of anxiety and depression among patients with medical illness found to be 12.6% and 10.1% respectively as compared to the community sample where the prevalence of anxiety and depression found to be 6.8% and 5.0% respectively [17]. The research and studies of Mossie *et al.*, and Roy-Byrne *et al.*, also prove that patients with general medical illness tends to have prevalence and co morbidity of anxiety and depression two times higher than the community sample [18-20]. Therefore, this situation, which indicates that high level of anxiety and depression symptoms may occur due to medical and psychosocial problems, shows that the participants who participated in our study with the sample group were at higher risk in terms of anxiety and depressive symptoms. Castor *et al.*, study showed that the majority of patients (approximately 74%) in our study were female [21]. The table 2 shows that females (95%) are in case (sever) condition of anxiety and patients while at male side 39(85%) are in sever condition. And in all other conditions (Normal and moderate) minors' patients are existed. The Castro *et al.*, study established the fact that women are more likely (almost 1.5 to 2 times higher) to have anxiety and depression than men, that also validates our results. As seen in Waheed *et al.*, study most of the patients in our sample were elderly [21, 22]. Advanced age associated with higher of anxiety (p<.0001), but no symptoms of high depression (p=.155) and being 45 years or older doubled the risk of anxiety with more anxiety symptoms. Between 18 and 24 years old. Predictably, anxiety symptoms always increase with age; this is a finding based on an understanding of this model [23]. Many cross-sectional studies show an association between psychological factors and the presence of low back pain. Our study also found a high prevalence of anxiety and depressive symptoms, 28.0% of patients with chronic low back pain. These results were also confirmed in a study of 70 German patients with low back pain, of whom 36% reported abnormal anxiety (HADS -D>8) and 29% reported abnormal depression (HADS-D>8). 47% of patients show abnormal anxiety and depression level [24]. The current study found that depression was more prevalent in patients who had been ill for longer period, whereas anxiety was more prevalent in those who had been ill for a shorter period. As it is also showed in our study in Table 3 Sciatica (10.0%0) Hypertension (15.0%). This is understandable since long-term stress from a medical ailment is more likely to affect an individual's mood in the form of depressive symptoms, including feelings of hopelessness and vulnerability. The Katon study and Nikbakhsh *et al.*, suggests that the patients with chronic or long term medically diseases tend to have more depression as compared to the patients with minor illness [25, 26]. Short-term medical illness, on the other hand, is likely to make person apprehensive and irritable, as well as cause restlessness and discomfort (Viral Infections 4.2%). The relationship of diabetes with depression and anxiety is very complex. Because diabetic patients experience depressive symptoms and poor self-care and compliance can worsen diabetic outcomes.37% increased risk of developing type-2 diabetes. Our study also showed a higher prevalence of anxiety and depression among diabetics (15%). In a study when comparison was done in diabetics with non-diabetic controls, people with type-2 diabetes had a24% increased risk of developing depression although the underlying basis for this relationship was not clear. As also observed in our study, older women with type 2 diabetes suffer from depression and anxiety more often than their male colleagues, but data regarding this gender trend are conflicting [27]. There is also high anxiety and depression prevalence observed in cardiac patients presenting with medical illness (15.0%). A study also supported the result of previous Bringager *et al.*, study [28].

CONCLUSIONS

The occurrence of co morbidity between anxiety, depression, and medical condition is common and remains undiagnosed. Patients who are affected commonly seek medical help from general practitioners and physicians, who frequently fail to grasp and recognize anxiety and depression, even though there is a link between the two disorders. As a result, diagnosis, and therapy becomes the medical ailment. Furthermore, psychological disorders, medical illnesses and physical limits have long been recognized as helping factors in the development of anxiety and depression during period of medical illness. A common mechanism that underpins some of these co morbidities has been explored, diagnosed, and identified in the last decade. This leads us to the conclusion that these violations are so common, and that such co morbidities are a downward escalating state in which anxiety, sadness, and medical sickness all contribute to each other as risk factors, eventually worsening patient outcomes. Psychological aspects are found to be significant in the management and therapy of people with anxiety and depression who also have a medical disease. Appropriate therapy should be started for people with complicated co morbid disorders such anxiety and depression.

Authors Contribution

Conceptualization: SM
Methodology: SM
Formal analysis: SM
Writing-review and editing: SM

All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest

The authors declare no conflict of interest.

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