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Research Article

**A CROSS SECTIONAL STUDY TO ASSESS THE PREVALENCE  
OF DEPRESSION AND ANXIETY AMONG MIGRAINE  
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**Abstract:**

**Objective:** Migraine is an episodic disease characterized by headache attacks and related symptoms. In Western countries, the most common chronic neurological disorder is migraine which affects 12% of population. It is a heterogeneous condition that results in a spectrum of obstacles between different subjects. The migraine disability can be serious and can be a serious burden for the patient and the community. The aim of this study was to determine the prevalence of depression and anxiety in migraine patients.

**Methods:** A cross-sectional study was conducted in the Psychiatry Department of Jinnah Hospital, Lahore from June 2019 to October 2019. The patient was diagnosed as migraine and headache was included in the analysis. According to the designed criteria by International Headache Society the migraine diagnosis was made. Patients were included regardless of gender and age. Only subjects who met the inclusion criteria were included. If necessary, routine or relevant investigations were conducted. After the subjects were selected, the Depression Scale and Hospital Anxiety was applied to the patients. All results were calculated and saved in a designed format. The data were analyzed, tabulated and compiled using the 18 version of SPSS.

**Results:** 65 women (63.8%) and 37 men (36.2%) were treated with migraine with a minimum age of 11 years and a maximum age of 71 years. Most of the patients (76%) are between 21 and 51 years of age. Psychiatric morbidity was found in 58 patients (56.8%) using the Urdu-approved version of the Depression Scale and Hospital Anxiety with a 11-21 score for depression and anxiety. Therefore, 44 subjects (42.91%) were not recommended for psychiatric treatment. From fifty eight patients with positive psychiatric cases, 23 were male and 35 (60%) were females. Of these, 25 (43%) had anxiety, 18 (31%) had depression and 15 (27%) had depression and anxiety. Of the fifty eight patients receiving psychiatric treatment, 80% were between 21 and 50 years of age.

**Conclusion:** Migraine has a strong relationship with depression and anxiety. The prevalence of this association may be affected by age and gender.

**Key words:** Migraine, HADS, depression, Anxiety.

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**INTRODUCTION:**

Migraine is an episodic disease characterized by headache attacks and related symptoms. In Western countries, the most common chronic neurological disorder is migraine which affects 12% of population. It is a heterogeneous condition that results in a spectrum of obstacles between different subjects. The migraine disability can be serious and can be a serious burden for the patient and the community. Despite a major disability, migraines are poorly recognized, poorly diagnosed and ill-treated. Migraine is the result of vascular, electrical and neurochemical changes in the nervous system. Depression and Anxiety are common in migraine affected people and largely remained unnoticed. The relationship between various psychiatric, migraine and somatic conditions has been reported in the researches. In all age groups, migraine has been observed but more frequently it is between 25 and 55 years of age. In all ethnic groups, It has been widely noticed. The relationship between migraine, anxiety and depression has been systematically reported. Women with migraine had high levels of anxiety (70%) and depression (52%). Shehbaz N et al. A high depression prevalence was reported in the selected subjects. Most studies on population-based have shown a relationship between migraine and major depression. These may show a indirect or direct etiological effect of one condition on another. Several analysis have been performed globally to know the prevalence of depression and anxiety in migraine affected patients. For this purpose, various scales can be used but the findings of the analysis may not be compared to others. This rely on the work design and the environment. In this study, we used the Urdu version of HADS (Depression Scale and Hospital Anxiety). The HADS Urdu version was also used in

other locally conducted analysis. This standardized scale facilitates the identification of psychiatric problems in our region. The aim of this analysis was to know the prevalence of depression and anxiety in migraine patients locally.

**MATERIAL AND METHODS:**

This cross-sectional study was held in the Psychiatry Department of Jinnah hospital Lahore from June 2019 to October 2019. The patient presented with headache after informed consent and the demographic information was saved in a special form designed for this purpose. A detailed date and revision were made. The migraine diagnosis is rely on the migraine criteria designed by the IHS. Necessary routine and necessary investigations were carried out when necessary. Patients were included regardless of gender and age. Patients with any other surgical or medical problems were excluded from the analysis. Patients receiving antidepressants or anxiolytic were also discarded. Only migraine patients who could complete the Urdu form on their own were selected. Hospital Anxiety and Depression Scale was applied to the patients. Based on the interpretation of the HADS score of Snaith and Zigmond, a cut-off value of 11-21 was used to detect both depression and anxiety. All results were saved in a designed format. Using SPSS 18 version data were tabulated, analyzed and compiled.

**RESULTS:**

102 total patients with migraine included in the study with 65 women (64.08%) and 37 men (35.92%). 11 years was the minimum age, the highest age was 71 years and the mean age was  $36.91 \pm 9.04$  years. Table 1 shows the differentiation of these patients according to their age.

Table: 01

Age (yr)	n	%
10-19	11	10.8
20-29	22	21.6
30-39	19	18.6
40-49	34	33.3
50-59	11	10.8
60-69	04	3.9
>70	01	0.9
total	102	100%

The maximum number of patients (34) (33.3%) was between 40-49 years of age. Most of the patients (76%) may be between 21 and 51 years of age. Psychiatric morbidity, psychiatric dependence, Urdu Anxiety Scale and Hospital Depression were used in

anxiety and depression in 58 patients (56.8%) with a cut-off value of 11-21. The remaining 44 patients (43.1%) had no psychiatric problems. Of the 58 patients with positive psychiatric evaluation, 23 (40%) and 35 (60%) were male (Table II).

Table: 02

Male-Female ratio	Patients with psychiatric morbidity	Patients without psychiatric morbidity	Total number of patients
Male	23 (62.1%)	14 (37.8%)	37
Female	35 (53.8%)	30 (46.1%)	65
Total	58 (56.8%)	44 (43.1%)	102

Of these, 25 (43%) had anxiety, 18 (31%) had depression and 15 (26%) had anxiety and depression. There were 65 patients with migraine, 35 (53.85%) comorbidity, 37 male migraine, and 23 (62.16%) comorbidity. Among the migraine patients suffering

from anxiety, 60% (15/25) and 40% (10/25) were female. Of the patients with depression, 12/18 (66.6%) had 6/18 men and 32.93% women. Of the patients with depression and anxiety, 7-15 were men (46.6%), and 8 women (15.3%) (52.93%) (Table III).

Table 03:

Sex	patient with anxiety alone	patient with depression alone	Patient with anxiety, depression	Patient without anxiety, depression	Total
Female	15	12	08	30	65
Male	10	06	07	14	37

It can be seen that 81% (57) of patients with positive psychiatric disease are between 21 and 51 years of age.

Table: 05. Age distribution with positive psychiatric cases

Age (yr)	n	%
10-19	3	5.2
20-29	13	22.4
30-39	11	19
40-49	22	38
50-59	2	10.3
60-69	6	3.4
>70	1	1.7
Toatal	58	100

## DISCUSSION:

Clinical findings of migraine are variable in a wide range of presentations. Migraine is the result of and vascular, electrical and neurochemical changes in the nervous system. Depression and Anxiety are common in people with migraine and largely remained unnoticed. The relationship between migraine and various psychiatric and somatic conditions has been reported in the literature. Several studies have been performed globally to know the prevalence of depression and anxiety in migraine patients. In this study, we used the Urdu version of HADS. The HADS benefit as a diagnostic tool in a local psychiatric setting has been confirmed. 102 total patients with migraine included in the study with 64 women (64.08%) and 38 men (35.92%). 11 years was the minimum age, the highest age was 71 years and the

mean age was  $36.91 \pm 9.04$  years. Table 1 shows the differentiation of these patients according to their age. The maximum number of patients (34) (33.3%) was between 40-49 years of age. Most of the patients (76%) may be between 21 and 51 years of age. Therefore, the prevalence of psychiatric comorbidity was higher in males than in others. Other employees reported higher prevalence in women. but; The results may differ from one analysis to another depending on the study design, clinical setting, population studied and sample size. The prevalence of psychiatric morbidity, reported as panic disorder, is higher in men than in women suffering from migraine. Therefore, the increase in the frequency of psychiatric morbidity in men supports our study results. Therefore, any sexual superiority may not be known. Most of the migraine patients (76%) were between 20 and 51 years. In the

25-50 age group, Migraine was commonly observed. In this study, approximately 80% of patients with anxiety and depression were between 20 and 50 years of age. On the other hand, these data appear to be close to previous studies. It is easy to understand that depression and anxiety have a strong relationship with migraine. The prevalence of depression and anxiety in our analysis was 57%. Of these, 25 (43%) had anxiety, 18 (31%) had depression and 15 (26%) had anxiety and depression. Workers from around the world gave information to the association in a systematic way. Breslau et al found that in addition, migraine patients were found to be more prone to affective disorders such as major depression. Shehbaz N and colleagues also reported high depression rates in patients of migraine, because 41% of patients reported depression in their studies. Therefore, affective disorders are often found as comorbidity in migraine patients. As reflected in the results of our study, this situation is similar in this part of the world.

### CONCLUSION:

From the study, it can be suggested that migraine has a strong relationship with depression and anxiety. The prevalence of this relationship may be affected by age and gender. In this context, it is necessary to study in larger samples. Common headache may cause anxiety, impaired quality of life and depression. Therefore, such subjects should be checked for the psychological disorders presence.

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