

# Headache, the Patient Burden, Demographics and Disability as Experienced in Neurology OPD Clinic at Shaikh Zayed Hospital, Lahore.

Fazal Jamil Chaudry, Syed Ahmad Ali Hassan and Nadir Zafar Khan

Division of Neurology Department of Medicine, Shaikh Zayed Hospital, Lahore

## SUMMARY

This study has found high prevalence of the headache presentation in neurology clinic attendants, at Shaikh Zayed Hospital, Lahore, with 16.55% of patients presenting with complaints of headaches. The prevalence is higher in female patients as compared with male patients. The most affected age group was between 21 to 30 yrs of age. Disability assessed using MIDAS (Migraine Disability Assessment Score) questionnaire was found to be as high as 48.7%. Headache is thus a common problem in the neurology outpatient clinic causing significant distress and disability. It is therefore important to provide the best available treatment and support to headache patients in order to minimize the impact of headaches disorder.

## INTRODUCTION

**H**eadache is a common problem amongst our population causing significant burden at Neurology OPD clinics<sup>1</sup> and disability. With young being most affected and that too in their most productive age. Headache is one of the most frequent symptoms and amongst the oldest ailment of mankind and affects the majority of adult population. Suffering from a headache, though not visible overtly to observers, causes significant burden in Neurology OPD and disability by impairment of function at work and in social settings.

This study will aim to evaluate the headache burden in Neurology OPD clinic at Shaikh Zayed Hospital, Lahore, Pakistan. It will also aim to identify the disability caused by this common occurring symptom. Migraine disability assessment score (MIDAS)<sup>2</sup> questionnaire will be used to assess the level of disability due to this symptom in all patients suffering headaches for more than three months.

Migraine disability assessment score (MIDAS) refers to a period of minimum three months in its questionnaire and therefore cannot be

used to assess disability caused by headaches with a shorter duration of history. Migraine disability assessment score (MIDAS)<sup>3</sup> has not only been validated in English but in Turkish and Thai languages as well but for the purpose of this study we conducted the questionnaire in Urdu, as it is our mother language. Although Migraine disability assessment scores (MIDAS)<sup>4</sup> questionnaire was originally used to assess disability in patients suffering from migraine but we used this questionnaire because it is simple to understand and answer.

## AIMS

To study the headache burden, demographics and disability produced in patients presenting with headache at Neurology OPD at Shaikh Zayed Hospital, Lahore.

## METHODS

1. Observational study using questionnaire.
2. Disability scoring was done using migraine disability assessment score (MIDAS) questionnaire.

## RESULTS

Patients presenting with headaches to Neurology OPD clinic were 164 out of 996 (16.5%). The prevalence of headache was greater in females, 104 out of 164 patients presenting with headaches (63.41%). Unemployment has a significant relationship, 43.3% male and 61.5% female patients were unemployed. 60.7% of patients lived in urban location, indicating the stress of modern live style. Overall 48.70 % of patients had grade 4 disability according to MIDAS<sup>5</sup> with a significant impact on their lives. 64.6% had headache on daily basis. 73.1% suffered from associated features with headaches. 43.3% males and 61.5% females were unemployed. Most affected age group was between 21 yrs. to 30 yrs. of age.

### Clinical attendants by gender

Data was collected over 4 month's period<sup>6</sup>, with clinic being held twice weekly. Total patients seen during this duration were 996, approximately 31 patients per session.

Table 1 shows 164 (16.5%) patients presented with headaches. 556 female patients were seen out of which 104 (18.70%) female patients presented with headaches. On the other hand 440 male patients were seen and 60 (13.63%) male patients presented with headaches.

Table 1: Patients presented with headaches.

	Number	Percent
Female patients.	556	55.8
Female patients with headache.	104	18.7
Male patients	440	44.1
Male patients with headache.	60	13.63
Total number of patients	996	100.0

### Age distribution of patients presenting with headaches.

Figure 1 shows 50 (30.4%) patients were aged between 13 yrs and 20 yrs. 54 (32.9%) patients were aged between 21 yrs and 30 yrs. 24 (14.6%) patients were aged between 31 yrs and 40 yrs. 22 (13.4%) patients were aged between 41 yrs and 50 yrs. 14 (8.5%) patients were aged between 51 yrs

and 60 yrs.

This information is demonstrated in the following doughnut.

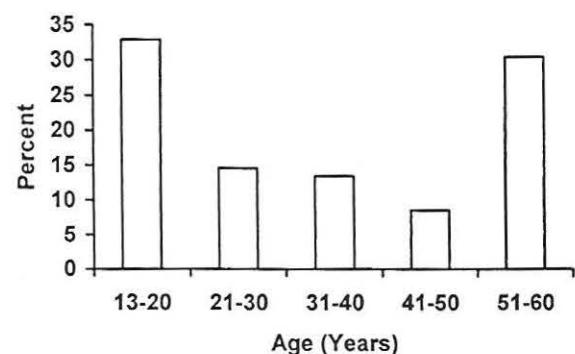


Fig. 1: Age distribution of headaches patients

The maximum number of patients that is 50 fall in the age group between 21 and 30 yrs. of age, followed by 50 patients between age group 13 yrs to 20 yrs. of age.

### Geographical distribution

Figure 2 shows 93 (57.3%) patients belonged to urban population (within Lahore municipal limits). 44 (26.5%) patients belonged to peri Lahore semi urban population. 21 (12.8%) patients belonged to rural areas further away. 6 (3.4%) patients belonged to cities other than Lahore.

57.3% patients belonged to urban areas.

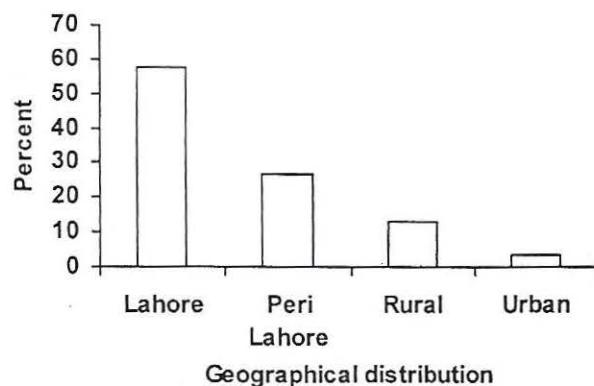


Fig. 2: Geographical distribution.

### Severity of headache

Severity of headache was assessed using a

simple pain score ranging from 1 to 10. 1 being the least severe and 10 being the most severe. This is the commonly used pain score to assess any kind of pain used in the West.

1. 90 patients allocated a score of 10 (54.8%).
2. 14 patients allocated a score of 9 (8.5%).
3. 8 patients allocated a score of 8 (4.8%).
4. 20 patients allocated a score of 7 (12.1%).
5. 12 patients allocated a score of 6 (7.3%).
6. 16 patients allocated a score of 5 (9.7%).
7. 4 patients allocated a score of 4 (2.4%).

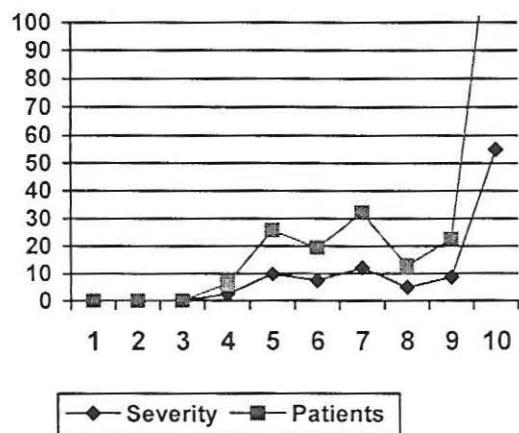


Fig. 3: Severity of headache.

Most of the patients allocated a pain score of 10 that is 54.8%. 12.1% patients allocated the score of 7, which was the next commonest allocated score. There were no patients who allocated their pain score as 1, 2 or 3 as seen in the above graph.

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#### Previous treatment

Figure 4 shows 124 patients had taken previous treatment, either from the doctor or had tried herbal remedies (75.6%). 40 patients presented for the first time to seek help for their headache (24.4%).

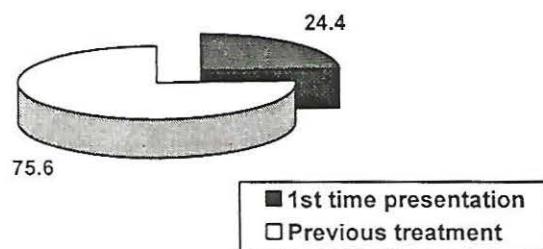


Fig. 4: Previous treatment of the patients

As shown in the above pie chart 75.6% of patients had taken previous treatment and only 24.4% of patients were seen in clinic for the first time.

#### Associated features

Figure 5 shows 120 patients complained of associated features with headaches (73.1%). 44 patients didn't complain of any associated features (26.9%). Features included nausea, vomiting, visual disturbance, motor and sensory deficits, dizziness, pallor, fever, ear ache, etc.

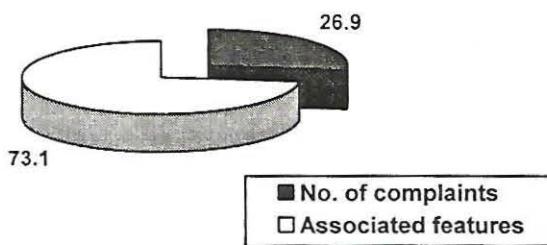


Fig. 5. Associated features

73.1% patients had associated features as shown in the above pie chart.

#### Frequency of headache

Figure 6 shows 106 patients complained of headaches on daily basis (64.6%). 14 patients complained of headache weekly (8.5%). 24 patients complained of headache twice monthly (14.6%). 10 patients complained of headaches three times a year

(6.1%). 10 patients complained of headaches less than thrice a year (6.1%).

64.6 % of patients complained of headaches on daily basis effecting their routinely chores.

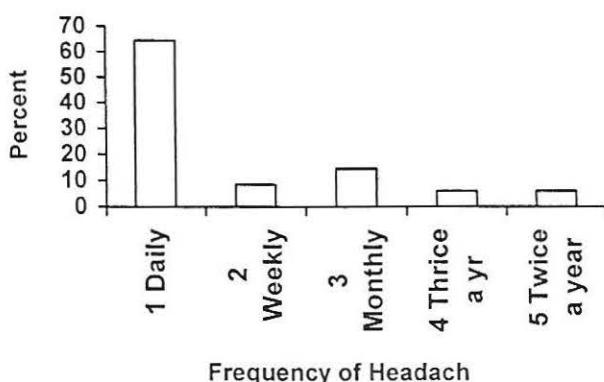


Fig. 6. Frequency of headache

#### Vocational status

Table 2 shows 28 male patients were employed (46.6%). 6 male patients were students (10%). 26 male patients were unemployed (43.3%). 64 female patients were house wives (61.5%). 33 female patients were employed (31.7%). 7 female patients were students (6.8%).

Table 2: Vocational status

	Number	Percent
Male (Employed)	28	46.6
Female (Students)	6	10.0
Male (Unemployed)	26	43.3
Female (Housewives)	64	61.5
Female (Employed)	33	31.7
Female (Students)	7	6.8
Total number of patients	?	?

Most female (61.5%) with headache were unemployed and most men patients were in a full time job.

#### Disability grade classification

According to MIDAS disability grading was done from 1 to 4.

1. Grade 1, Midas score 1 to 5.
2. Grade 2, Midas score 6 to 10.
3. Grade 3, Midas score 11 to 20.
4. Grade 4, Midas score 21 plus.

Scoring for MIDAS is done from adding the number of day's patient has suffered from the symptoms and the effect of the symptoms inflicted on patient's daily life (please refer to first five questions of the MIDAS questionnaire).

#### Disability grading using MIDAS

1. 80 patients were found to have grade 4 disability (48.7%).
2. 30 patients were found to have grade 3 disability (18.2%).
3. 40 patients were found to have grade 2 disability (24.3%).
4. 14 patients were found to have grade 1 disability (8.5%).

48.7 % patients with headache were found to have grade 4 disability (Fig. 7).

Table 3: Summary of Table

Total number of patients	996
Female patient with headache	10.4
Male patient with headache	6.0
Male to female ratio	1:1.73
Most affected age	21 to 30
Grade 4 severity	48.7%
Associated features	73.1%
Daily headache	64.6%
Unemployed (Male)	43.3%
Unemployed (Female)	61.5%
Disability	48.7%

#### DISCUSSION

The prevalence of headache presentation found in this study in an out patient clinic in Lahore was 164 out of 996 clinic attendees. A study in Tanzania showed the prevalence of headache to be 20.6% as compared to 16.5% of this study. The Tanzanian study included patients with headache presentation for the first time but this study included patients both new and follow up cases. However, 16.5 of patients presenting to the neurology clinic with headache showed this symptom to carry a significant burden of patients with headache.

In terms of age of the patient, this study found headache to be a problem predominantly of the young. The average age of the patient presenting

with headache was 32.8yrs. The most affected age group was between 21 and 30 yrs, 54 patients belonged to this group, a total of 32.9%. As compared to a study conducted in Canada where the average age of the patient with headache was 40 yrs. This study didn't categorize the cause of the headache it just took in to account the presenting symptom of headache. Our study found headache to be most prevalent in the young mostly in their third and fourth decade. This fact has a significant impact not only socially, emotionally but also financially on the patient and their families.

Subjectively the suffering caused by headache is high. This is demonstrated by the fact that when patients were asked to allocate the severity of headache on a scale of 1 to 10. The majority of the patients allocated their pain as 10, 90 patients allocated a pain score of 10, that is 54.8% out of total of 164 patients. None of the patients allocated their pain score as 1,2 or 3.

The objective disability using MIDAS was found to be high as well, 80 patients out of 164 were found to have grade 4 disability making a total of 48.7% of the total patients. There seems to be a direct relationship between subjective and objective complains of patients.

Sub analysis by sex revealed that there is greater prevalence of headaches in female than in males, 10.4% females and 6 % male patients. As mentioned previously this study did not differentiate between the different types of headache, however if a substantial proportion of the headache are migraine type, there are well established epidemiological , pathophysiological and clinical links of estrogen and thus the female sex to migraine headaches. This female preponderance of migraines may in part explain the greater prevalence of headaches in the female population attending the neurology clinic.

The majority of the patients, 75.6% attending the neurology clinics with symptoms of headaches had sought some form of medical treatment in the past. Most also tried to help themselves by self medicating with over the counter analgesics. Headache seems to be a neurological complaint that is not easy to treat and patients have to seek medical help and alter their medication time and again before eventual relief of symptoms.

A large majority of the patients, 73.1% experienced associated symptoms with their headaches like included nausea, vomiting, visual disturbance, motor and sensory deficits, dizziness, pallor , fever , ear ache, etc. On the other hand 64.6% of the patients experienced headaches on daily basis.

With regards to the gender 46.6% of male patients were employed whereas 10% were students and 43.3% were unemployed. The unemployment was not necessary due to headaches but headache had a major contribution to the employment status. On the other hand 61.5% females were house wives and 31.7% were employed, 6.8% of female patients being students. Thus indicating that patients with headaches despite their disability are able to contribute to society.

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**The Authors:**

Dr. Fazal Jamil Chaudry  
Trainee Registrar,  
Department of Medicine,  
Shaikh Zayed Hospital, Lahore.

Syed Ahmad Ali Hassan,  
Medical Officer,  
Department of Neurology,  
Shaikh Zayed Hospital, Lahore.

Nadir Zafar Khan,  
Associate Professor and Head  
Department of Neurology,  
Shaikh Zayed Hospital, Lahore.

**Address for Correspondence:**

Nadir Zafar Khan,  
Associate Professor and Head  
Department of Neurology,  
Shaikh Zayed Hospital, Lahore.