

Impact of headache and socio-demographic profile of headache patients: a hospital-based study in Dhaka

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Abstract

Background: Headache is one of the most common complaints in outpatient departments and is known to have significant impact on different areas of functioning. The co-existence of psychiatric disorders with headache is an established fact.

Objectives: This study was aimed to explore the impact of headache, estimate the psychiatric comorbidity among headache patients and to see the possible association between them.

Methods: This cross-sectional study was conducted among 51 primary headache patients at Neurology Outpatient Department of Bangabandhu Sheikh Mujib Medical University in 2015. International Classification of Headache Disorders (ICHD-3) and Mini International Neuropsychiatric Interview (MINI) were used as diagnostic tools. Age range was 16-65 years.

Results: 62.7% had at least one psychiatric disorder. Severe impact on educational or occupational life was reported by 43.1% patients but association was not found with having psychiatric disorder. Severe impact on family/personal life and social life was reported by 15.7% and 6% individuals and it was significantly associated with psychiatric comorbidity ($p=0.02$ & 0.001). There was female preponderance and all types of headache were more prevalent among women. Prevalence of headache increased with age, peaked at 26-45 years and declined after that. Tension type headache was the commonest type of headache (60.8%) and highly prevalent among all age groups.

Conclusions: This small study shows the need of larger research in this area and also points out the importance of psychiatric intervention for headache patients.

Declaration of interest: None

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Keywords: Impact; headache; Bangladesh; socio-demographic

Introduction

Headache is a common problem but often given less importance than other disorders seen in neurology outdoors. Headache may be defined as pain or any kind of discomfort in the head excluding the lower part of the face and including the upper part of the neck.¹ The classification of headache is done by using the International Classification of Headache Disorders (ICHD) provided by the International Headache Society and according to them, headache can be classified into primary and secondary headaches. Among the primary headaches, the major types are 1) tension type headache (TTH) 2) migraine 3) trigeminal auto-

nomous cephalalgias 4) other primary headache disorders. Each type has many subtypes and each category has a fixed diagnostic criteria.² Headache accounts for considerable loss in productivity and poor quality of life. There are multiple articles worldwide concluding that headache has serious impact on different areas of functioning. A systematic review of qualitative researches concluded that chronic headaches have a profound effect on people's lives, showing similarities with other pain conditions.³ A European review article commented that migraine confers a high degree of disability with more forced absence from work and leisure activities, and associated with

reduced quality of life. In addition, there is a marked impact on family life and headaches also put considerable strains on partners and children.⁴ Headache also reduces productivity. About 820 annual workdays for every 1,000 persons are lost on account of TTH (versus 270 days on account of migraine). The reduced productivity of those who remain at work despite headache has an even greater impact. Overall, TTH have a negative effect on the emotional life of affected persons, resulting in marked reductions in quality of life and frequency of social and family activities.⁵ Studies in general population and clinical settings have indicated that psychiatric disorders are common among patients with migraine, tension type headache and chronic daily headache. Study done among rural populations in India concluded that among patients with headache, 48.05% had depressive and 17.9% had anxiety and related disorders.⁶ Another study done on patients with chronic daily headache found that about 53.3% patients had psychiatric comorbidity.⁷ Despite the fact that headache has a high impact on quality of life and psychiatric morbidity being very common among headache patients, very few studies in Bangladesh was found by the researcher that estimated the impact of headache and prevalence of psychiatric disorders among headache patients. The objective of the study was to explore the impact of headache on different areas of functioning, to estimate the psychiatric comorbidity among headache patients and to see the possible association between them and also to explore the socio-demographic profile of headache patients. This study was aimed to put neurologists and psychiatrists under the same umbrella to provide a better care for headache patients.

Methods

It was a cross-sectional study conducted at the Neurology Out-Patient Department of Bangabandhu Sheikh Mujib Medical University (BSMMU) from January 2015 to June 2015 and sample was selected purposively. BSMMU is the only medical university of Bangladesh and patients from all over Bangladesh comes to this tertiary care facility for treatment. After taking informed written consent from both new and old cases of primary headache, 51 patients were taken as sample. Age range was between 16-65 years. Secondary headaches due to trauma, tumor, infection etc were excluded. Neurologist diagnosed the type of headache

clinically and provided treatment. Researcher confirmed the diagnosis according to the International Classification of Headache Disorders, 3rd edition beta version (ICHD-3 beta).² Face-to-face interviews were conducted using semi-structured questionnaire designed by the researcher. To diagnose DSM-IV psychiatric disorders Mini International Neuropsychiatric Interview (MINI) English version was used.⁸ Data analysis was performed according to the objective of the study using computer software program, Statistical Package for Social Sciences (SPSS) version 16.0. This research was done as a part of a research methodology workshop in Bangladesh Medical Research Council (BMRC) and ethical approval was taken accordingly.

Results

Among 51 respondents, 19 (37.3%) were male and 32 (62.7%) were female (Figure 1). The male:female ratio was 0.6:1; there was a female preponderance. Most of the respondents (54.9%) were from 26-45 years age group. In all three age groups, tension type headache was most prevalent and as a whole it was the commonest type of headache (60.8%). Migraine (19.6%) and mixed type of headache (19.6%) were less common and no migraine patient was found in 46-65 years age group (Fig 2). Most of the patients (47.1%) were from urban areas, 45% were from rural areas and 7.8% respondents worked abroad and came to Bangladesh to visit or for treatment. Most of the respondents studied upto high school (58.8%) and 41.2% studied above high school. The marital status of the respondents showed that 60.8% were married, 31.4% were single and 7.8% were either widowed or divorced. The occupation of most of the respondents were housewives (45.1%) and students (21.6%). Most of the patients were from moderate income family (52.9%). Among 51 people, majority (62.7%) had at least one psychiatric disorder, 39.2% had depressive illness and 17.6% had anxiety disorders (Fig 3). On the basis of subjective opinion from respondents, impact of headache on family/personal life, social life and occupational/educational life was recorded. It was observed that the highest impact was found on educational/occupational life (43.1%), no impact or mild impact on social life was mostly reported (33.3% and 41.2%) and mild to moderate impact was mostly reported

about family/personal life (41.2%, 27.5%) (Figure 4). However, impact on family/personal life and social life was found more in respondents who had a psychiatric comorbidity and the difference was statistically significant ($p < 0.05$) (Table 1, Table 2). On the contrary, impact on educational/occupational life was moderate to severe in most of the respondents irrespective of having a psychiatric diagnosis and the difference was not statistically significant (Table 3). No significant association was found between socio-demographic variables (age, sex, habitat, education, occupation, marital status, family income, etc.) and presence of psychiatric disorder. Headache was found to be more severe among respondents who had psychiatric comorbidity but the difference was not statistically significant (Table 4). Headache occurring frequently (>15 days per month) was associated with having psychiatric comorbidity and the difference was highly significant ($p = .002$) (Table 5).

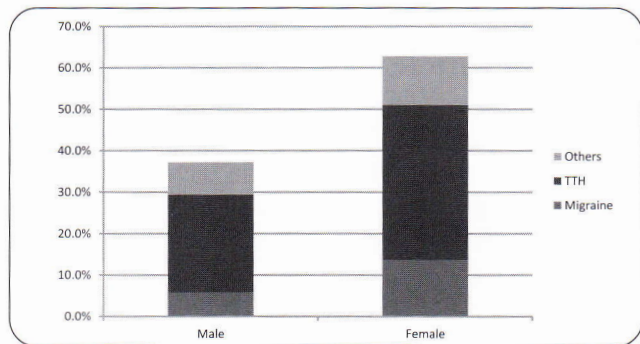


Figure 1: Component bar diagram showing the gender distribution of the respondents (N=51).

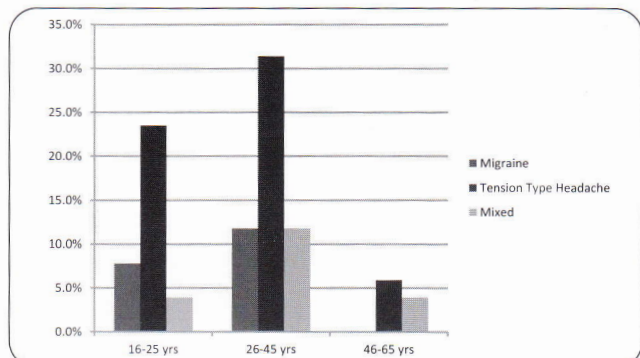


Figure 2: Complex bar diagram showing age distribution among respondents (N=51).

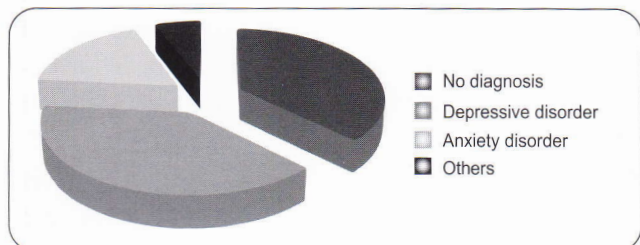


Figure 3: Pie chart showing the percentage of respondents having psychiatric disorder

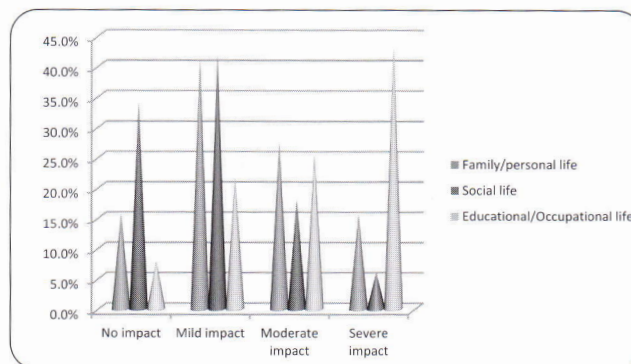


Figure 4: Impact of headache in the family/personal life, social life and educational/occupational life of respondents

Table 1: Association of psychiatric comorbidity with impact of headache on family/personal life (N=51)

Impact on family/personal life	Psychiatric diagnosis		Total	p value
	No	Yes		
No impact	6 (11.8%)	2 (3.9%)	8 (15.7%)	0.02
Mild impact	9 (17.6%)	12 (23.5%)	21 (23.5%)	
Moderate impact	4 (7.8%)	10 (19.6%)	14 (19.6%)	
Severe impact	0 (0%)	8 (15.7%)	8 (15.7%)	
Total	19 (37.3%)	32 (62.7%)	51 (100%)	

$\chi^2 = 10.4$, $df = 3$

Table 2: Association of psychiatric comorbidity with impact of headache on social life (n=50)

Impact on social life	Psychiatric diagnosis		Total	p value
	No	Yes		
No impact	13 (26%)	4 (8%)	17 (34%)	0.001
Mild impact	4 (8%)	17 (34%)	21 (42%)	
Moderate impact	2 (4%)	7 (14%)	9 (18%)	
Severe impact	0 (0%)	3 (6%)	3 (6%)	
Total	19 (38%)	31 (62%)	50 (100%)	

$\chi^2 = 16.7$, $df = 3$ * 1 missing data

Table 3: Association of psychiatric comorbidity with impact of headache on educational/occupational life (n=50)

Impact on educational/occupational life	Psychiatric diagnosis		Total	p value
	No	Yes		
No impact	3 (6%)	1 (2%)	4 (8%)	0.2
Mild impact	2 (4%)	9 (18%)	11 (22%)	
Moderate impact	4 (8%)	9 (18%)	13 (26%)	
Severe impact	9 (18%)	13 (26%)	22 (44%)	
Total	18 (36%)	32 (64%)	50 (100%)	

$\chi^2 = 4.6$, $df = 3$ * 1 missing data

Table 4: Association of psychiatric comorbidity with severity of headache (N=51)

Severity of headache	Psychiatric diagnosis		Total	p value
	No	Yes		
Mild pain	2 (3.9%)	1 (2%)	3 (5.9%)	0.3
Moderate pain	8 (15.7%)	20 (39.2%)	28 (54.9%)	
Severe pain	9 (17.6%)	11 (21.6%)	20 (39.2%)	
Total	19 (37.3%)	32 (62.7%)	51 (100%)	

$\chi^2=2.5$, $df=2$

Table 5: Association of psychiatric comorbidity with frequency of headache (N=50)

Frequency of headache	Psychiatric diagnosis		Total	p value
	No	Yes		
0-3 days/week	12 (24%)	7 (14%)	19 (38%)	0.003
4-7 days/week	6 (6%)	25 (50%)	31 (62%)	
Total	18 (18%)	32 (64%)	50 (100%)	

$\chi^2=9.8$, $df=1$ *1 missing data

Discussion

Headache is a major cause of visit in neurology out-patient departments. A hospital-based study in Bangladesh reported that about 22.98% patients of Neurology OPD were affected with headache.⁹ Review of 107 headache articles showed that the global prevalence of current headache is 47%, current migraine 10%, current TTH 38% and chronic daily headache 3%. Headache in general was most prevalent in the youngest age group whereas TTH, which should outweigh other headaches, was most prevalent in adults.¹⁰ In Bangladesh, an epidemiological study with a large sample of 3440 headache patients found that, 71.13% had tension type headache and 16.05% had migraine.¹¹ There was a female preponderance and most patients belonged to the age group of 10-30 years (65.67%). In our study, the percentage of migraine, TTH and mixed headache were 19.6%, 60.8% and 19.6% respectively among headache patients not within the general population and there was a female preponderance too. But both migraine and TTH were more common in the age group of 26-45 years than among younger adults. In a hospital-based study in Bangladesh, female patients predominated (67% female and 33% male). Most of the patients were within 21-30 years age group.¹² This finding is similar to our findings (62.7% female and 37.3% male). A population-based survey in Nepal explored that the 1-year prevalence of migraine was 34.7 % and there was a clear female preponderance. Prevalence was age

related, increasing from young adulthood (18-25 years) in both genders and peaking during 26-35 years among males and 36-45 years among females. The prevalence of TTH was 41.1 % and was lower in females than in males. Prevalence was highest in the age range 18-25 years and decreased with age in both genders, being at its lowest at 56-65 years.¹³

In our study, we also found that peak age of headache was 26-45 years, but prevalence of both TTH and migraine were more in females. In India, age and gender trends were almost similar to Nepal. But all specific types of headache showed an association with rural dwelling specifically migraine. There was no association with income in multivariate analysis.¹⁴ This finding is partly in concordance with our finding as we didn't get any association with habitat or with income. A research from Bangladesh found stress as the commonest precipitating factor for both migraine and TTH.¹² A Chinese study done on medical staffs reported that working more than 6 night-shifts per month was associated with an increased prevalence of migraine and TTH in doctors; the same was true in nurses for migraine, but not for TTH.¹⁵ Though our research did not measure stress as the precipitating factor for headache, but highly prevalent neurotic disorders among headache patients indicate that stress is an important factor for headache. A cross-sectional population-based study concluded that headache has significant effect on quality of life and chronic headache, particularly is found to be associated with poor quality of life and mental vulnerability.¹⁶ This finding is similar to our findings as we found significant association between highly frequent headache (>15 days per month) and psychiatric comorbidity. An Italian study commented that headache had negative impact on different aspects of life: education, career and earnings, family and social life. Each person with headache had lost, on average, 2.3 days from paid work, 2.4 days from household work and missed social occasions on 1.2 days in the preceding 3 months.¹⁷ Significant impact on family and social life was also found in our research and it was associated with having psychiatric comorbidity. The relationship can be bidirectional, the impact of headache precipitating the psychiatric disorders or the persons with psychiatric comorbidities were more vulnerable and had severe impact on their personal/family/social functioning. In India, lost productivity due to headache yesterday (headache on the preceding day) were reported by 83.3 % participants, 37.7 % were able to do less than

half of what they had planned and 13.0 % able to do nothing.¹⁸

In our research, significant impact was also found on education/occupation and 43.1% respondents reported severe impact on their educational/occupational functioning. Unlike the impact on family/social functioning, the impact on educational/occupational functioning was not associated with psychiatric comorbidity and it can be concluded that headache only is enough to create severe impact in these areas of functioning.

Conclusions

Recognition of impact of headache and treatment of psychiatric comorbidity is necessary to improve quality of life of headache patients. Timely referral to a psychiatric facility can make the prognosis better and reduce the risk of chronicity of the disease. This small study shows the need for larger research in this issue and also points out the importance of psychiatric intervention for headache patients.

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