

**Original Article**

# CHRONIC DAILY HEADACHE – A Clinical and Psychological profile

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**Abstract :**

Headache, as one of the major symptom of psychiatric disorder, often remain undiagnosed. A cross-sectional retrospective study was done in the "Headache clinic" of BSMMU (Bangabandhu Sheikh Mujib Medical University) and Dhaka Medical College Hospital (DMCH) in the year of 2001, among a sample of 500 patients. There were 226 (45.2%) male and 274 (54.8%) female. The majority of the respondents were in between the age of 20-30 yrs, when the point prevalence of psychiatric disorder was 45%, of which the majority were suffering from major depressive disorder (38.2%) and generalized anxiety disorder (19.5%). Considering these findings and observation, it so appears that a substantial psychiatric morbidity is prevalent among the sufferers of headache and it warrants early recognition and proper assessment with the initiation of an integrated treatment modality.

**Introduction**

Headache<sup>1</sup> is one of humanity's most frequent affliction. Few of us are spared the experience of head pain during our life times; indeed, severe disabling headache is reported to occur at least annually by 40 percent of individuals worldwide. This incidence occurs whether subject lives in large urban environments or in rural village.<sup>2</sup> More than 13,00 tons of aspirin are consumed annually worldwide, a major part of it is taken

for the relief of headache. The chronic daily or near daily headaches are arbitrarily defined as headaches occurring more than 15 day/month or 180day/year.<sup>3</sup> To another author, it should persist for more than 4 hours per day in half a month.<sup>4</sup> However, headache is usually a benign symptom and only occasionally is it the manifestation of serious illness such as brain tumor, subarachnoid hemorrhage, meningitis, or giant cell arteritis.<sup>5</sup> Even in emergency settings, only 5 percent of patients who present

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with headache are found to have a serious underlying neurologic disorder. An American clinical study<sup>6</sup> done by N.L. Gittleson (1961), revealed that relatively few cases were organically based and found that only four out of a hundred cases presenting with headache could be explained on an organic basis.

In community studies of UK<sup>7</sup> reveal that, tension headache is five times more common than migraine and often three common headache syndromes, viz. migraine, migraine plus tension headache (mixed headache) and daily continuous headache (tension headache) dominate clinical practice. In a Bangladeshi study,<sup>8</sup> the tension headache (Muscle Contraction Headache) was the commonest type (69%) followed by Migraine (26%).

Since the last century a characteristic set of psychological features have been observed among the different headache patient. It has been suggested that frequent, unexplainable and intense head pain would likely lead to heightened levels of depression and anxiety. More recently the term "Psychiatric comorbidity", has been employed to name the co-occurrence of psychopathology and migraine. V. Guidetti et al,<sup>9</sup> in their 8-year follow up study in Italy found that a syndromic relationship between migraine and psychiatric disorders and the association between migraine, anxiety and depression is strong, when to

many authors, there prevails a bidirectional influence. A history of migraine is also associated with increased lifetime rates of major depression, anxiety disorders, illicit drug use disorder, nicotine dependence and suicide attempts.<sup>10</sup> Also there is significant comorbidity between chronic headache and psychological distress, when depression and anxiety were significantly greater in the subjects, having frequent headache<sup>11</sup>

About 49-84% of depressive patient complaints of headache as one of their primary symptoms, being evident by various studies, done in home and abroad.<sup>12</sup> It is also to be stated that in our culture many patients present somatic complaints that are not enlisted as the diagnostic criteria for major depressive disorder in universally accepted area.<sup>13</sup>

As such, the psychiatric approach is indispensable in the study and treatment of headache-patients, whatever its origin.<sup>14</sup> And, today for the prophylaxis non-pharmacological measures such as regulation of lifestyle, relaxation training and psychological or psychotherapeutic inventions are much more important than pharmacotherapy, which is required in a small number of patients only.<sup>15</sup> Relaxation therapy alone led to significant improvement in headache activity, particularly in reduction of the frequency of complaints.<sup>16</sup> Meanwhile CBT (Cognitive behaviour therapy),



also has earned an important place in the comprehensive treatment of patients with episodic migraine or tension type headache and severe treatment resistant chronic daily headache and even their efficacy appeared to be equivalent to propranolol.

The aim of the study was to see the psychiatric morbidity among headache patients and their possible psychiatric management, that often remain ignored and underscored in our clinical domain. Hopefully, it would then lead to the formulation of a comprehensive treatment modality and thereby alleviate our everyday miseries.

### Materials and Method

A consecutive series of 500 patients attending the "Headache clinic" of BSMMU and DMCH in January 2001 to December 2001 was considered for this cross sectional retrospective study. The patients aging 16 yrs and above, presenting in the "Headache clinic" fulfilled the "Inclusion criteria", where they had baseline investigations with fundoscopy. The paediatric groups and patients with serious general medical condition and cognitive impairment were not considered for the study, as they met the "Exclusion criteria."

Prior to the commencement of main study, 5% of total sample was pretested for finalizing the research instrument and methodology. In the

present study, after obtaining socio-demographic variables, the presence of psychiatric morbidity was diagnosed in accordance with the proposition of DSM-1V (diagnostic and statistical manual of mental disorder).

### Results

The patients were selected from the "study place" when age range was 20-50 yrs, having the mean age 28.97 (11.75) yrs (Table-1). Female respondents (n=274) were little more than the male (n=226) one (Table-11). They were mostly married (50.2%) and unmarried (41.6%) (Table-III), and the greater bulk represented their educational status in between primary and higher secondary (Table-IV). The respondents were", predominantly of rural background (Table-V). As regards to occupation (Table-VI) the greater part represented housewife (34.6%), students (33%) and service holders (15.6%). The clinical diagnosis (Table-VII) showed tension type headache (61.4%) as the most prevalent, followed by Migraine (16%) and others. However, a good number of respondents (n=225; 45%) showed presence of psychiatric morbidity (Table-VII) and it was mostly major depressive disorder (38.2%), followed by other anxiety disorder. But, the grim situation is that, the 'psychiatric morbidity' is often overlooked or underscored, when a patient presents with the symptoms of chronic daily headache.



**Table-I** : Type of psychiatric disorders by age group

Age	Presence of psychiatric disorders (n=225)		Absence of psychiatric disorders (n=275)		Total (N=500)	
	n	%	n	%	n	%
<20	56	37.4	94	62.7	150	30
21-30	76	42.5	103	57.5	179	35.8
31-40	57	58.8	40	41.2	97	19.4
41-50	26	54.3	22	45.8	48	9.6
51 above	10	38.4	16	61.5	26	5.2

**Table-II** : Sexwise distribution of psychiatric disorders

Sex	Presence of psychiatric disorders (n=225)		Absence of psychiatric disorders (n=275)		Total (N=500)	
	n	%	n	%	n	%
Male	110	48.9	116	42.18	226	45.2
Female	15	51.1	159	57.8	274	54.8

**Table-III** : Distribution of patients with headache according to their marital status

Marital status	Presence of psychiatric disorders (n=225)		Absence of psychiatric disorders (n=275)		Total (N=500)	
	n	%	n	%	n	%
Married	111	44.3	140	55.8	251	50.2
Separated	5	45.5	6	54.5	11	2.2
Widow/Widower	20	71.5	8	28.6	28	5.6
Unmarried	88	42.4	120	57.7	208	41.6
Divorced	1	50	1	50.0	2	0.4



**Table-IV** : Distribution of patients with headache according to their level of education

Education	Presence of psychiatric disorders (n=225)		Absence of psychiatric disorders (n=275)		Total (N=500)	
	n	%	n	%	n	%
Illiterate	18	8	28	10.18	46	9.2
Literate	18	8	17	6.18	35	7
Upto class V	43	19.11	27	9.81	70	14
Class VI-X	21	9.33	43	15.63	64	12.8
SSS-HSC	73	32.44	102	37	175	35
Graduate	35	15.55	40	14.54	75	15
Postgraduate	17	7.55	18	6.54	35	7

**Table-V** : Distribution of patients with headache according to social background

Habitant	Presence of psychiatric disorders (n=225)		Absence of psychiatric disorders (n=275)		Total (N=500)	
	n	%	n	%	n	%
Urban	88	39.1	101	36.72	189	37.8
Rural	137	60.88	175	63.63	311	62.2

**Table-VI** : Distribution of patients with headache according to their pattern of occupation

Occupation	Presence of psychiatric disorders (n=225)		Absence of psychiatric disorders (n=275)		Total (N=500)	
	n	%	n	%	n	%
Housewife	84	37.33	89	32.36	173	34.6
Service	39	17.33	39	14.18	78	15.6
Retired	1	0.44	1	0.36	2	0.4
Businessman	10	4.44	16	5.81	26	5.2
Student	68	30.22	97	32.27	165	33
Daily labour	1	0.44	6	2.18	7	1.4
Unemploycd	15	6.66	13	4.72	28	5.6
Others	7	3.11	14	5.09	21	4.2



**Table-VII** : Different clinical diagnosis of the patients with headache

	N	%		N	%
Migraine	80	16	Nasal Polyp	2	0.4
Tension type headache	307	61.4	Chronic suppurative otitis media	8	1.6
Mixed type of headache	1	0.2	Atrophic rhinitis	6	1.2
Headache not classifiable	21	4.2	Chronic tonsillitis	3	0.6
Chronic cough	2	0.4	Hypertrophied inferior turbinate	3	0.6
Deviated nasal septum	19	3.8	Impacted ear wax	1	0.2
Chronic sinusitis	13	2.6	Refractive error	6	1.2
Glaucoma	1	0.2	Trigeminal neuralgia	2	0.4
Hypertension	10	2	Thyrotoxicosis	1	0.2
Post traumatic headache	4	0.8	Hypothyroidism	2	0.4
Pituitary tumor	1	0.2	Leukaemia	1	0.2
Cervical spondylosis	2	0.4	CNS tuberculoma	1	0.2
Temporal arteritis	1	0.2	Post coital headache	1	0.2
Atypical facial pain	1	0.2			

**Table-VIII** : Pattern of psychiatric disorders among the clinically diagnosed patients with headache

Psychiatric disorders	Male (n=110)		Female (n=115)		Total (N=225)	
	N	%	N	%	N	%
Major depressive disorder	31	28.18	55	47.82	86	38.22
Generalized anxiety disorder	30	27.27	14	12.17	44	19.55
Obsessive compulsive disorder	17	15.45	16	13.91	33	14.66
Panic disorder	20	18.18	15	13.04	35	15.55
Bipolar mood disorder, most recent episode depressed	4	3.63	3	2.6	7	3.11
Somatoform disorder	-	-	2	1.73	2	0.88
Acute stress disorder	1	0.90	2	1.73	3	1.33
Delusional disorder	1	0.90	-	-	1	0.44
Dysthymic disorder	6	5.45	8	6.95	14	6.22



## Discussion

This study was carried out in 'Headache clinic' of Bangabandhu Sheikh Mujib Medical University and Dhaka Medical College, Hospital. Among 500 respondents, 226 (45.2%) were male and 274 (54.8%), were female, and overall psychiatric morbidity was noted 45%. But these patients were not referred for psychiatric interview and once again the necessity of consultation- liaison psychiatry was felt. The different studies<sup>18</sup> carried out abroad, were mostly concerned with Migraine and tension type of headache, but not with the symptom of 'headache' like ours one, M. Gelder et al.<sup>19</sup> in their text book, commented that many of the chronic ENT and Eye diseases, presented with the feature 'headache' were found to have psychiatric disorders, as comorbidity along with the migraine and tension type headache. As such, Our study holds the limitations and uniqueness as well as. So, most of our comparison and the search of consistency had to be concentrated on migraine and tension type of headache, like those of western schools.

Although the psychiatric morbidity among the patients with headache as the major symptoms was not studied in our country, many of the other studies reveal the findings of prevalence of psychiatric disorder among the primary care attenders or general population,<sup>20</sup> which may be also pertinent to our present study.

Karim and Mullick,<sup>21</sup> noted 'headache' as an important somatic symptom in psychiatric disorders. Similar study by Nahar et al revealed 15 patients to be with headache among 52 patients. GG Lloyd elucidated that Cobat (1907) examining a series of 500 out patients attending Massachusetts general hospital noted 6% had headache and other pains.<sup>22</sup> Water, in a survey found 65% of his sample had headache, although only 18% had sought medical aid for this complaint.<sup>23</sup>

In this regard, few of the studies among primary care attenders could be taken into account e.g. Vazquez et al. (1996, Spain) noted point prevalence of psychiatric disorder to be 31.5%, Wright et al.<sup>24</sup> (India) noted that of 25%, Patel et al. (India) noted that of 46.5% and Ricardo et al. (1988, Chile ), noted that of 53.4%. A community study done by Chowdhury et al.,<sup>25</sup> found psychiatric morbidity to be 6.5%. Lutfar<sup>26</sup> (1999), found in his study at primary health care centre, the point prevalence of psychiatric disorder to be 23.1%. In clinic and hospital based study Alam and Chowdhury noted psychiatric morbidity was 29% and 31.4% respectively. Thus that a good number of patients have psychiatric morbidity in primary care-settings, holds also an important consideration in our present study.

Now, then, as we go for the psychiatric disorders specifically among migraineurs and tension type of



headache, like the study carried out in abroad, our prevalence was 23.75% and 59.28%, respectively. A similar study was done by Kai-Dih Juang et al. (2000, Taiwan), noting psychiatric comorbidity among migraine and chronic tension type of headache as 78% and 64% respectively. G. Sandrini (Italy), in his study among the patients of chronic daily headache, found comorbidity among 46%. Again, the study of V Guidetti et al. (Italy, 2000) revealed, 43.7% migraineurs had single comorbid disorder vs 30.6% of tension type headache sufferers.

Amongst the respondents 150 (30%) were found to be below the age of 20 year, 179 (35.8%) were within the range of 21-30 years and the rest were above the age of 30 years, having only 26(5.2%) patients above 50 years. In a Bangladeshi study (Habib et al, 2001), 37% of headache patients were below the age of 18 years, 40.27% were within the range of 18-29 years and only 3.32% were above 50 years. Dewcy K. Ziegler et al. in their study at Kansas noted 8% subjects to be in 15-24 age group and 30% were in the range of 25-39 years.<sup>27</sup>

The respondents were 226 males (45.2%) and 274 females (54.8%) in the existing study, having psychiatric disorders among 110 males (48.9%) and 115 females (51.1%); but its absence among the remaining 275 patients (55%). In a clinic based study done by Habib et al, represents

33.31% male and 66.69% females showing preponderance of females in both Migraine (80%) and Tension type of headache (62.75%).

Naomi Breslau and Glenn C. Davis<sup>28</sup> in a prospective study of 1007 young adults found 61.7% females, when in our study also the females were the predominant (54.8%) one. The study of Monzon and Lainez represents migraine among 82.3% females and 17.7% males, which almost parallels the present findings viz. 80% females and 20% males respectively. In another Indian study<sup>29</sup> of headache, females represented 56% and that of male was 44%.

The respondents on reflecting their marital status, comprised 251 married (50.2%), 208 unmarried (41.6%) and the rest were separated, widowed or divorced. Study with a random sample of 1200, Breslau and Andreski, noted 45% to be married, which bears a simulation with the present study.

In the present study, the respondents mostly belong to SSC / HSC groups, comprising 175(35%), 70 respondents (14%) were from primary group, 64(12.8%) were in between primary and secondary school, 75(15%) were graduates, 35(7%) were postgraduate and the rest were almost illiterate or merely literate. In a study among migraineurs in Southeast Michigan, by Naomi Breslau and Patrica Andreski, found that 3.7% had less than high school education, 21% completed



high school, 46% had some college and 29.3% were college graduates.

The respondents, mostly represented housewives (34.6%), students (33%) and service holders (15.6%), so, far the occupation is concerned. Here the unemployed group comprised 5.6% of the total attenders. A study in the headache clinic of our country depicted 50% housewife, 25% student, 8% service holders, 10% Daily labour and 7% unemployed.

In relation to economic status, 68.4% were from Middle-income group, 26% were from low-income group and the rest (5.6%) belong to high income group. In the study of primary care attenders, although the 'low income group' represents higher risk of psychiatric disorders, here it was the middle income group.

In the study, considering our socio-cultural status stressors were usually death of spouse, divorce, marital separation, physical abuse, addiction of husband, loss of money, business readjustment, change in health of family member, sex difficulties, burden of care givings, conflicts with the family members, quarrel with stepmother and fellow wife, change in financial state and sitting for examination. Among the others, there was history of political harassment, induced abortion, imprisonment of son, hysterectomy, absence of any baby, living with single kidney, transfer, gambling by husband and there was

one soldier who was anxious after committing rape in his working place.

As, it was elucidated earlier, among 500 patients, 225 (45%) had psychiatric morbidity and the remaining 275 (55%) were free from any of the psychiatric disorders, at present. In addition, 213 headache patients (42.6%) had psychiatric illness as comorbidity and 12 (2.4%) had pure psychiatric disorder. Again among the migraineurs 23.75% had psychiatric comorbidity when the later was 59.28% among the tension type of headache patients.

Dawn A. Marcus, on evaluating 127 consecutive patients with headache attending a university headache clinic of Pittsburgh, noted 21% Migraines, 16% tension type and 32% combined one, Our study although simulates regarding Migraineurs, but differ in tension which is more (61.4%) in prevalence. However, one of our own literature, done in headache clinic confirm the tension type (69%) and possibly it represents our socio-culture variation.

On further evaluation, the psychiatric disorders, presented with headache, was found to be mostly major depressive disorder (38.22%), obsessive compulsive disorder (14.66%), panic disorder (15.55%), generalized anxiety disorder (19.55%), and dysthymic disorder (6.22%). The others included bipolar mood disorder, most recent episode



depressed (3.11%), somatoform disorder (0.88%), acute stress disorder (1.33%) and delusional disorder (0.44%).

Breslan and Davis in their study specifically among Migraineurs, found 34.4% major depression, 10.9% panic disorder, 8.6% obsessive compulsive disorder, and 10.2% generalized anxiety disorder, which is somewhat close to our observation. Kil-Dih Juan et al<sup>28</sup>, in his study in a headache clinic (1999), found 57% major depression, 11% dysthymia, 30% panic disorder and 8% generalized anxiety disorder among the patients with migraine. In the same study, among patients with chronic tension type of headache the author included major depression (51%), dysthymia (8%), panic disorder (22%) and generalized anxiety disorder (1%).

Another study by Puca et al in Italy showed 36.4% depression and 8% generalized anxiety disorder, which had some similarity with major depression (38.22%) of the present study, but differed with generalized anxiety disorder (19.55%), which possibly the socio-cultural pattern could explain.

In the present study, 38.22% patients had major depressive disorders but they manifested 'headache' as the key symptom. Poe et al.<sup>30</sup> noted, sometimes 'unexplained pain' would be a symptom of masked depression and it cover head, chest or throat

even. As regards to somatic presentation of major depressive disorder, even in our country, several studies noted headache as one of the important complaint. About 49-84% of depressive patients would complaint of headache, is made evident in various studies, done in country and abroad.

In a similar study by Garvey et al headache have been reported in 55% to 90% of summarizing depressive. A study of 100 major depressive disorder, revealed headache among 62% of the patient as their primary symptom during the episode of depression. Now then, with certain differences, ours study holds enough consistency with the findings of other studies and as such it is important in taking each patients history to ask specifically for symptoms of underlying depression.

Lastly, considering the different observation, it is rightly appraised that, headache<sup>31</sup> bears significant association with psychiatric morbidity and the present study provoked an insight into such a complaint, which we happen to encounter in our everyday life.

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