ORIGINAL RESEARCH PAPER

Psychiatry

A DESCRIPTIVE STUDY ON SOCIO-DEMOGRAPHIC AND CLINICAL PROFILE OF PATIENTS SUFFERING FROM PRIMARY HEADACHE IN HEADACHE CLINIC OF THE DEPARTMENT OF PSYCHIATRY

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ABSTRACT

Background: Headache is one of the most common symptom that we come across and interfering with everyday life but very few well-planned studies have been conducted to know its sociodemographic and clinical profile.

Aims: To study the subtypes of headache and socio-demographic profile in patients suffering from primary headache, who come in the headache clinic of the department of psychiatry.

Methodology: our study is a descriptive cross-sectional study with 200 sample size. Patients with Headache in Headache Clinic of the Department of Psychiatry, MGMMC, Indore. Patient aged between 18-65 years, either sex. Diagnosis of headache was done clinically in accordance with the International Classification of Headache disorders. Informed consent form, socio-demographic and clinical data sheet, semi-structured headache questionnaire were used as a tool for assessment of samples.

Results: Among 200 patients, there were 73(36.5%) males and 127 (63.5%) females. The mean age was 33.35 ± 10.7 years. The mean of Total duration of illness of cases was 3.67 ± 5.05 years. Tension type headache was 73.5%, Migraine was 22% and Mixed headache was 4.5%. Primary headache were more in married(75.5%), hindu religion(68.5%), in urban community(64.5%), Illiterate(24%) and housewife(56%). Tension-type headache (73.5%) was the most predominate type of headache.

Conclusion: Primary headache is a major health problem in India which significantly affect the quality of life. It was more prevalent in the female. The awareness for early diagnosis and preventive medications for primary headache may play an important role to improve the quality of life.

INTRODUCTION

Headache is the symptom of painful sensation anywhere in the head or neck region. Disorders of headache are one of the most common disorder in the central nervous system. It may manifest as migraine, tension type headache, or cluster headache. Headache may affect the social, functional & occupational-related works.[1]

There are numerous classification systems available for headaches. However, the most well-recognized is that of the International Headache Society which encompasses all probable aetiologies and is comprehensive. Currently, we utilize The International Classification of Headache disorder 3rd edition (ICHD-3) given by the International Headache Society (IHS).[2]

Worldwide it has been estimated that the prevalence among adults of current headache disorder (symptomatic at least once within the last year) is about 50%. Headache occurring every month lasting 15 or more days affect about 4% of the world's adult population. Despite regional variations, headache disorders are a global problem, affecting people of all ages, races, income levels and geographical areas.[3]

Migraine usually begins at pubertal age and mostly affects those aged between 3rd and 4th decade. It is more common in females, usually by a factor of about two is to one, because of hormonal influences. [3]

Tension type headache(TTH) is the most common primary headache disorder. TTH often starts during the teenage years, affecting three women more than men with F:M ratio being 2:1. Its mechanism although not completely understood but may be stress-related or associated with musculoskeletal problems in the neck. The quality of the headache is often described as pressure or tightness, often like a band around the head, sometimes spreading into or from the neck.[3]

Headache disorders impose a cognizable burden on patients including sometimes substantial personal suffering, impaired quality of life and economic burden. Repeated headache attacks, and often the constant fear of the next one leads to impaired family life, social life and employment significantly.[4]

In the present study, we analysed the socio-demographic profile and prevalence of different types of primary headaches.

Methodology & Procedure

This was a cross-sectional hospital-based study of 200 patients to cognize the sociodemographic profile and prevalence of primary headache. Patients aged between 18-65 years were included in the study. Patients having any other major physical, endocrinology, current scheduled use of any anti-psychotics, anti-depressants, pregnancy were excluded. Written informed consent was obtained from all participants after complete description of the study to the subjects. A detailed physical examination was done to rule out major medical or neurological illness. Evaluation of the samples was done as per procedure of methodology.

Subjects were included in the study from Headache clinic(Every Tuesday) of department of psychiatry, MGM, medical college, Indore after meeting inclusion criterion. Socio-demographic data was collected. After obtaining the written consent from subject, subject were included in study. A detailed assessment of the patients complaint was done on the basis of headache questionnaire and diagnosis was formulated clinically in accordance with International classification of headache disorders[2]. All the collected information was stored and later digitalized for interpretation.

RESULTS-

Table 1. Sociodemographic variables of the patients suffering from primary headache

Patients with primary headache (n=200)	
Age(mean) in years	33.3 years
F:M	1.73
Marital status in %:	
Married	75.5%
Unmarried	24.0%
Divorced	0.5%
Religion in %:	
Hindu	68.5%
Muslim	31.5%
Education in %:	
Illiterate	24.0%

Primary (5th)	13.0%
Middle(8th)	15.0%
High School	14.0%
Inter	14.5%
Diploma/Graduate/Post graduate Professional	19.5%
Occupation	
Housewife	56.0%
Private job	29.0%
Labour	15.0%
Community	
Urban	64.5%
Semi urban	24.5%
Rural	11.0%

Primary headache had 33.3 years as mean age of onset. And had more females, married, Hindu religion, Illiterates, housewife, urban based samples.

Table 2. Description of different Types of Headache

Types of Headache	No.	Percent
TTH	147	73.5%
Migraine	44	22.0%
TTH with Migraine	9	4.5%
Total	200	100.0%

Majority of cases were suffering from Tension type headache(73.5%) while only 22.0% & 4.5% cases met the diagnosis of Migraine & Mixed headache respectively.

Table 3. Description of age of study participants

N	200
Minimum	18
Maximum	60
Mean	33.35
Std. Deviation	10.77

The mean age of case group was 33.35 ± 10.7 years. As per the inclusion criteria for the participants the minimum age was 18 years and maximum age was 65 years.

Table 4. Description of age with Types of Headache in study participants

Types of Headache		Age
TTH	Mean	33.59
	Std. Deviation	11.472
	Minimum	18
	Maximum	60
Migraine	Mean	33.11
	Std. Deviation	8.570
	Minimum	18
	Maximum	52
TTH with Migraine (Mixed)	Mean	30.56
	Std. Deviation	8.862
	Minimum	19
	Maximum	44

The mean age of patient with TTH was found to be 33.59 ± 11.47 years, while subjects with Migraine had the mean age of 33.11 ± 8.57 years & Mixed headache was 30.56 ± 8.86 years respectively.

Table 5. Description of gender-wise distribution in different Types of headache

Sex		Types of Headache			Total
		TTH	Migraine	TTH with Migraine	
MALE	Count	59	11	3	73
	% within Types of Headache	40.1%	25.0%	33.3%	36.5%
FEMALE	Count	88	33	6	127
	% within Types of Headache	59.9%	75.0%	66.7%	63.5%
Total	Count	147	44	9	200
	% within Types of Headache	100.0%	100.0%	100.0%	100.0%

The female patients (63.5%) were higher than male patients (36.5%) Headache was found to be more prevalent in Female patients.

Female patients out number the male patients in all. There subtypes of headache, females are 1.5 times more commonly presented with TTH with male : female :: 40.1% : 59.9%, likewise female were 3 times more commonly presented for management of migraine as compare to male with the ratio of M:F :: 25% : 75%.

Total number of patients with diagnosis of both TTH with migraine also maintained the higher opd attendance of female with ratio of M:F :: 33.3% : 67.7%. there by giving the data of twice more common as compare to males.

Table 6. Description of marital status in different types of headache of study participants

Marital status		Types of Headache			Total
		TTH	Migraine	TTH with Migraine	
Married	Count	106	37	8	151
	% within Types of Headache	72.1%	84.1%	88.9%	75.5%
Unmarried	Count	40	7	1	48
	% within Types of Headache	27.2%	15.9%	11.1%	24.0%
Divorced	Count	1	0	0	1
	% within Types of Headache	0.7%	0.0%	0.0%	0.5%
Total	Count	147	44	9	200
	% within Types of Headache	100.0%	100.0%	100.0%	100.0%

Most samples were married (75.5%), about one fourth(24%) of participants were unmarried, divorced participants were the least of proportion (0.5%).

Most of TTH cases were married 72.1%, 27.2% & 0.7% cases were unmarried & divorced respectively. Most of Migraine cases were married 84.1% & 15.9% cases were unmarried. Most of Mixed headache cases were married 88.9% & 11.1% cases were Unmarried.

Table 7. Description of Religion with Types of headache in study participants

Religion		Types of Headache			Total
		TTH	Migraine	TTH with Migraine	
Muslim	Count	43	19	1	63
	% within Types of Headache	29.3%	43.2%	11.1%	31.5%
Hindu	Count	104	25	8	137
	% within Types of Headache	70.7%	56.8%	88.9%	68.5%
Total	Count	147	44	9	200
	% within Types of Headache	100.0%	100.0%	100.0%	100.0%

Most participants were Hindu(68.5%) by religion, about 31.5% of participants were Muslim.

Most of TTH cases belonged to Hindu religion(70.7%), & 29.3% cases belonged to Muslim religion.

Most of Migraine cases were belong to Hindu religion(56.8%) & 43.2% cases belong to Muslim religion.

Most of Mixed headache cases belonged to Hindu religion(88.9%) & 11.1% cases belonged to Muslim religion.

Table 8. Description of community and Types of headache in study participants

Community		Types of Headache			Total
		TTH	Migraine	TTH with Migraine	
Urban	Count	92	34	3	129
	% within Types of Headache	62.6%	77.3%	33.3%	64.5%
Semi urban	Count	38	8	3	49
	% within Types of Headache	25.9%	18.2%	33.3%	24.5%
Rural	Count	17	2	3	22
	% within Types of Headache	11.6%	4.5%	33.3%	11.0%
Total	Count	147	44	9	200
	% within Types of Headache	100.0%	100.0%	100.0%	100.0%

Majority of cases were urban (64.5%) in locality, while about 24.5% & 11% cases belonged to semi urban & rural background respectively.

Most of TTH cases were from urban community and comprising of 62.2% of total cases while 25.9% cases were from semi urban community, while only 11.6% cases were from rural locality.

Subjects suffering from migraine were also follow the same trade so comprise 77.3% cases from urban community, likewise 18.2% cases and 4.5% cases were fell into semi urban rural community respectively.

Mixed headache cases were evenly distributed among there group comprising 33.3% cases in urban, semi urban & rural community respectively.

Table 9. Description of educational level and Types of headache in study participants

Literacy		Types of Headache			Total
		TTH	Migraine	TTH with Migraine	
Illiterate	Count	34	12	2	48
	% within Types of Headache	23.1%	27.3%	22.2%	24.0%
Primary	Count	23	3	0	26
	% within Types of Headache	15.6%	6.8%	0.0%	13.0%
Middle school	Count	19	9	2	30
	% within Types of Headache	12.9%	20.5%	22.2%	15.0%
High School	Count	17	9	2	28
	% within Types of Headache	11.6%	20.5%	22.2%	14.0%
HS school	Count	22	5	2	29
	% within Types of Headache	15.0%	11.4%	22.2%	14.5%
UG	Count	32	6	1	39
	% within Types of Headache	21.8%	13.6%	11.1%	19.5%
Total	Count	147	44	9	200
	% within Types of Headache	100.0%	100.0%	100.0%	100.0%

Most participants were Illiterates at 24% while undergraduates were 19.5% & high school and secondary education participants were almost similarly distributed at 14%.

Most of TTH participants were Illiterate at 23.1% while 21.8%,15.6%,15%,12.9% & 11.6% cases were undergraduates, primary school, secondary education, middle school & high school participants respectively.

Most of Migraine participants were Illiterates at 27.3% while middle & high school education participants were similarly distributed at 20.5% respectively. And the rest 13.6%,11.4% & 6.8% cases were under graduates, high secondary school education and primary school participants respectively.

Mixed headache participants were Illiterates, middle, high school education & high secondary school education was almost similarly distributed at 22.2%.

Table 10. Occupation-wise distribution with types of headache in study participants

Occupation		Types of Headache			Total
		TTH	Migraine	TTH with Migraine	
Housewife	Count	85	22	5	112
	% within Types of Headache	57.8%	50.0%	55.6%	56.0%
Labour	Count	18	8	4	30
	% within Types of Headache	12.2%	18.2%	44.4%	15.0%
Private Job	Count	44	14	0	58
	% within Types of Headache	29.9%	31.8%	0.0%	29.0%
Total	Count	147	44	9	200
	% within Types of Headache	100.0%	100.0%	100.0%	100.0%

Majority of cases were Housewife at 56% with only 29% & 15% cases were doing Private job & Labour work respectively.

Majority of TTH cases were Housewife (57.8%), while only 29.9% & 12.2% cases doing Private job & Labour work respectively.

Majority of Migraine cases were Housewife (50%) while only 31.8% & 18.2% cases were doing Private job & Labour work respectively.

Majority of Mixed headache cases were Housewife(55.6%) while only 44.40% cases were doing Labour work.

DISCUSSION
Distribution of primary headaches-
In our study prevalence rate of tension-type headache was 73.5%, Migraine was 22% & Mixed headache was 4.5%.(Table 2). This finding is similar to the 78% and 86% reported by Rasmussen and Russell, respectively for TTH[5],[6]. However, the distribution for TTH in our study was much higher than the 47.7% documented by Quesada and Rodrıguez et al. in Zimbabwe[7], 25.5% by Quesada-V´azquez et al. In Cuba[8], and 11.2% reported in Oman by D. Deleu et al.[9]. It there has been wide variations and differences in the epidemiology of tension-type headache & migraine & mixed headache across different cultures. These variations may result from differences in study population, inclusion or exclusion of cases of infrequent episodic TTH, study design, overlap with probable migraine, cultural and environmental differences, or even genetic factors. This variation can be also link between the restriction of sample size to the hospital only and it might be possible that the subjects reporting for headache management predominantly from TTH group. These subjects of the sample may not represent the epidemiological presentation of community.

Primary headache may be due to poor self-rated health, inability to relax after work, and sleeping few hours per night Oshinaike et al.[10], Almesned et al.[11], Lampl et al.[12], shows similar distribution. In our study Mixed headache was 4.5% which is lower than previous study by Aich et al.[13] due to small sample size of our study.

Socio-demographic & clinical parameters
In our study mean age of cases was 33.35 ± 10.7 years. The mean age of patient with TTH was 33.59 ± 11.47 years, Migraine was 33.11 ± 8.57 years & Mixed headache was 30.56 ± 8.86 years respectively. (Table 3&4) Similar mean age were obtained by Lampl et al.[12], Gupta R et al.[14], Desouky et al.[15], Oshinaike et al.[10].

We found that female patients (63.5%) were higher than males (36.5%) overall, headache was more prevalent in female patients. similar distribution was seen by Gupta R et al.[14], Sharma et al.[4], Aich et al.[13].

Most of TTH cases were female (59.9%) in abundance, most of Migraine cases were Female 75% & 25% cases were Male. In settings of Mixed headache majority were Female 66.7% & 33.3% cases were Male.(Table 5), Our study findings are also supported by previous literature like Gupta R et al.[14], Sharma et al.[4], Aich et al.[13] where they demonstrated that primary headache is more prevalent in the females, which could be due to factors such as social expectations, social limitations and stress of life issues, sensitivity to the hormone, genetics, and differences in response to stress and pain perception can help to explain this difference.

In our study most participants were married (75.5%), about one fourth (24%) of participants were unmarried, divorced participants were (0.5%). similar distribution seen by Bera et al.[16] & Momayyezi et al.[17].

In short in our study, most of the cases of primary headache were married at 70 - 90%. About 72.1% of the TTH cases, while 84.1% cases of migraine and 88.9% cases of mixed headache were married.(Table 6), This difference can be caused by post marital stress factors like concerns about the economic problems, children's future, and routine disputes. And also maybe because of the age group commonly affected by primary headache. Data obtained by Bera et al.[16], Momayyezi et al.[17] and Bhatia et al.[18] corroborated our findings.

In our study majority of the participants were Hindu (68.5%) by religion, about 31.5% of participants were Muslim. In our study, most of the cases of primary headaches are Hindu about 70 – 80%. (Table 7) finding is in the concordance of the usual ethnic distribution as per geographical distribution. Similar distribution supported by Desai et al.[19] and Sharma et al.[4].

We found that most of the cases belonged to urban community(64.5%), while about 24.5% & 11% cases were belonged to semi urban & rural community respectively. In our study, most of TTH cases belonged to urban locality (62.2%), 25.9% of cases belonged to semi-urban locality & 11.6% cases belonged to rural locality respectively. Most of the Migraine cases belonged to urban locality (77.3%), 18.2% of cases belonged to semi-urban locality & 4.5% cases belonged to rural community respectively. Mixed headache cases similarly belonged to the urban locality, semi-urban locality & rural locality making up about 33.3% respectively. In our study (Table 8) The urban majority can be explained by the fact that our study centre is a tertiary healthcare institute which is based in an urban setting and most patients who visited the hospital were urban dwellers. Shoib et al.[20] shows a similar distribution of the community. Urban dominance in data can be explained by challenging hectic rapidly paced and race horse type of lifestyle.

In our study most participants were Illiterate at 24% while undergraduates were 19.5% & high school and secondary education participants were almost similarly distributed at 14%. In our study Majority of TTH, migraine and mixed headache cases are Illiterate at 25 -30%(Table 9), resembling findings were obtained by Wei CB et al.[21], Crystal et al.[22]. Our hospital is a government hospital and here mainly comes poor peoples and those belong to low socio-economical status & belong to low education level, so it may because that majority of cases in our study were illiterate. However, from our findings, it was not evident that educational status has a significant effect on headache.

We found that the majority of cases were Housewife at 56% with only 29% & 15% of cases were doing Private job & Labour work respectively. Majority of TTH, migraine and mixed headache cases were housewife (unemployed) at 50 – 60%. (Table 10) which is backed up by Sharma et al.[4], Bhachech et al.[23], Shankar et al.[24]. It is thought to be due to factors such as society expectations, social limitations and stress of marital life issues.

CONCLUSION
In conclusion, this study has demonstrated that out of all three types of primary headache, there was a very high prevalence of tension-type headache. All three types of headache tension-type headache, migraine and mixed headache show a female preponderance in all age groups and socioeconomic levels of the population. Primary headache was more prevalent in younger, married, Illiterate, housewife, Hindu and patients belonged to the urban community.

The awareness for early diagnosis and preventive medications for primary headache may play an important role to improve the quality of life.

Limitation are small sample size, samples were recruited only from a headache clinic run by department of psychiatry with, Future studies with a larger sample size, longitudinal design are warranted as per our conclusions which would shed further light on the socio-demographical profile of patients of primary headache.

Conflicts of interest
There are no conflicts of interest.

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