

To Evaluate the Prevalence of Primary Headache Disorders and Their Burden in the Rural Community: A Survey Study

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Abstract

Aim: The aim of the present study was to evaluate the prevalence of primary headache disorders and their burden in the rural community.

Methods: A survey was done over a 12-months period Department of Neurologist, Paras HMRI Hospital, Patna, Bihar, India. All persons in the age group 18-60 years were included in the study. A structured questionnaire based on ICHD 3 criteria for migraine, tension type headache migraine in local language was administered. A total of 1000 people were screened in the survey.

Results: Out of 1000 subjects; 550 (55%) were in the age group 18–30 years and 459 (45.5%) were females. 12% (165/1255) of people suffered from headaches. 300 cases were married and 500 patients were doing clerical job, shop owners and farmers. The burden of headache was assessed by HALT index. 65% (78/120) of the people with headache reported minimal or infrequent impact of headache. The HALT index showed that median days lost in the domain of vocation was 4 days, while for household and social activities were 2.

Conclusion: PHDs are prevalent in the rural communities of developing countries and need urgent attention of primary care physicians, community health departments, governmental agencies and policy makers.

Keywords: Primary Headache Disorders, Migraine, Tension Type Headache, Chronic Migraine, Rural Population, Community Study.

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Introduction

Primary headache disorders, particularly migraine and tension-type headache (TTH), are among the most common and burdensome health problems in all parts of the world [1,2] affecting both genders and all socioeconomic levels and encountered in all health-care settings. [3] The recent Global Burden of Disease Study 2010 identified TTH and migraine as the second and third most prevalent disorders worldwide [4,5] and migraine as the

seventh leading specific cause of disability.

In addition to these two disorders, which are usually episodic, there are a number of headache disorders characterized by headache occurring on 15 or more days/month. Importantly, this includes medication-overuse headache, a disorder usually developing as a consequence of mismanagement of migraine or TTH. In India, previous neuroepidemiological

surveys have identified headache disorders as among the most common neurological conditions, but estimates of prevalence have been wide-ranging: From as low as 0.2% to a high of 58%. [6-9] Methodological differences and inconsistencies between studies have contributed to this wide variation, which is so great as to be wholly uninformative.

Headache is one among the most common medical complaints. Various forms of headache, properly called headache disorders, are among the most common disorders of the nervous system. They are pandemic and, in many cases, life-long conditions. [10] As many as 90% of all primary headaches including: migraine, tension type and cluster headache, fall under few categories. Recurrent headache disorders impose a substantial burden on headache sufferers, family and society. [11] Headache disorders are in the top ten- and possibly the top five causes of disability worldwide. [12] Population-based studies in the world have mostly focused on migraine which, although the most frequently studied, is not the most common headache disorder. Other types of headaches, such as the more prevalent tension type headache and sub-types of the more disabling chronic daily headache, have received less attention. [10,12] Globally, the prevalence of the adult population with active headache disorders are 46% for headache in general, 11% for migraine, 42% for tension-type headache and 3% for chronic daily headache. [13]

The prevalence of primary headache disorders (PHDs) and their burden has been seldom studied in a rural community setting. Hospital based studies have shown that PHDs especially migraine is the

commonest reason for neurology consultation while data regarding community prevalence of these disorders are scarce. The aim of the present study was to evaluate the prevalence of primary headache disorders and their burden in the rural community.

Materials and Methods

A survey was done over a 12-months period Department of Neurologist, Paras HMRI Hospital, Patna, Bihar, India. All persons in the age group 18-60 years were included in the study. A structured questionnaire based on ICHD 3 criteria for migraine, tension type headache migraine in local language was administered. A total of 1000 people were screened in the survey.

The burden of headache was measured with Headache Attributable Lost Time index (HALT). Derived from the MIDAS (Migraine Disability Assessment Scale), the HALT index measures the number of days lost (complete and less than half the amount of work) due to headache in a three-month interval in the domains of school or workplace and doing household work. It also includes the number of days during a three-month period wherein the family member missed a social event because of headache.¹²

Data analysis

The collected data was processed with a computer with SPSS 11.0 and Epi Enfo version 3.4.1 software packages. Chi-square, Odds ratio, P value <0.05, Fisher exact test and 95% confidence intervals were used for statistical significance.

Results

Table 1: Association of Headache with demographic variables

Variable	Headache		P Value
	Present (N%)	Absent (N%)	
Gender			
Male	50 (9.10)	500 (9.90)	<0.00
Female	100 (22.22)	350 (77.78)	

Age groups in years			
18-30	55 (10)	495 (90)	0.007
31-40	30 (15)	170 (85)	
41-50	25 (14.28)	150 (85.72)	
51-59	10 (13.34)	65 (86.66)	
Marital status			
Unmarried /widows	50 (16.66)	250 (83.34)	0.009
Currently married	150 (21.42)	550 (78.58)	
Occupational status			
Profession/semi profession	10 (20)	40 (80)	<0.001
Clerical, shop owner, farmer	50 (10)	450 (90)	
Skilled/ semi-skilled	25 (14.28)	150 (85.72)	
Unskilled	8 (8)	92 (92)	
Unemployed	35 (20)	140 (80)	

550 (55%) were in the age group 18– 30 years and 459 (455%) were females. 12% (165/1255) of people suffered from headaches. 300 cases were married and 500 patients were doing clerical job, shop owners and farmers.

Table 2: Grading of impact of headache as measured by HALT index

Grade (Scores)	Impact Number	(N=120)	Percentage
Grade 1(0-5)	Minimal or infrequent	78	65
Grade 2(6-10)	Mild or infrequent	15	12.5
Grade 3(11-20)	Moderate	12	10
Grade 4 (+20)	Severe	15	12.5

The burden of headache was assessed by HALT index. 65% (78/120) of the people with headache reported minimal or infrequent impact of headache.

Table 3: The median days lost or impaired in the various domains of HALT index

HALT –Domains	Activity	Median days	Inter-quartile range
Vocational	Days last	4.0	2 – 8
	Impaired	4.0	2 - 6.50
Household work	Days last	2.0	1 – 5
	Impaired	2.0	1 - 5.25
Social events	Days last	2.0	1 – 3
	Impaired	2.0	1 – 3

The HALT index showed that median days lost in the domain of vocation was 4 days, while for household and social activities were 2.

Discussion

Migraine and tension-type headaches are reported as the most prevalent disorders of mankind by the “Atlas of Headache Disorders, WHO. The prevalence of migraine in South East Asian region as reported by WHO is 10.9%. [14] The

prevalence of PHDs in the current study was 13.1% and migraine without aura was the major headache subtype forming 8.84%. Tension type headache was seen at a much lower proportion in this rural community. Chronic Migraine was seen in 1.43%, similar to previous reports. [15] As reported in all epidemiological studies, females were more affected with PHDs. [16] This may be due to hormonal factors and also may be secondary to the stress, as in Indian households’ females have

multiple roles to perform. People who were married also reported more headaches than unmarried people again suggesting that stress of married life may be a precipitating factor for primary headache disorder.

PHDs are prevalent in the community and are one of the top neurological disorders both in urban and rural areas.⁴ The probable factors may be exposure to sunlight, physical labour, financial stress, stress of family life and lack of easily accessible medical resources and facilities. One of the limitations of the study was that it did not assess the exact incidence of menstrual migraine. We also could not assess the nutritional status of patients with primary headache disorders due to logistic reasons and time constraints. Evidence from this and other studies suggests that headache should be taken seriously as a public health problem, not only in the developed countries but also developing countries, especially in the rural population. [17]

The HALT index showed that median days lost in the domain of vocation was 4 days, while for household and social activities were 2. Another similar study showed that the proportion of days lost to headache from paid work was 1.1% while overall productivity loss (from both paid and household work) was 2.8%. [18] The above observations show that headache disorders are a major health care problem especially in rural setting and needs urgent attention of medical and governmental agencies. [19] The need of the hour is spreading awareness of the burden of PHDs among public and primary care physicians. Education of the primary care physicians and enabling them in the correct diagnosis and management of PHDs is of utmost importance, to tackle the burden of PHDs in the population. The importance of simple measures like appropriate lifestyle modifications and informed use of cost-effective pharmaceutical remedies should be

initiated in the rural areas of developing countries. [12]

Conclusion

Primary headache disorders are common in developing countries especially in the rural population. Primary headache disorders need urgent attention of primary care physicians, community health departments, governmental agencies and policy makers.

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