Prevalence and Characteristics of Headache Assessed in Bangladeshi School and College Going students

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Abstract

A cross sectional study followed by interview was conducted from December 2010 to December 2011 on students of some selected schools and colleges of Mymensingh district covering all socioeconomic class. Using prospective recordings a total of 300 students aged 15 to 23 years having history of headache were included. The main outcome measures studied were prevalence of headache, its pattern, frequencies, duration, impact of family history and any provoking factors of development of headache associated symptoms. The result showed that among 1000 subjects 300had headaches with an estimated prevalence rate of 30%. There were 105 boys and 195 girls with having headaches. The highest prevalence of headache was found at 15-17 years of age group in male. 35% and female 39%. The complaints of headache were found in students mostly belonging to middle socioeconomic class (81.33%). The distribution of headache pattern and severity was found 43 % with mild,46 % moderate and 11 % severe headache. Nearly 27.33% had a frequency of 4 or less episodes per month. Most of the students under study 168 (56 %) had headaches lasting less than two hours, followed by 105 (35.33%) having headaches for 2 to 5 hours. The headache persists for more than 5 hours in 04 (1.3%) students. The most common associated feature determined was refractive error among 142 students (47.33 %). A total number of 177 (59 %) students did not know the provocation factors of the headache. Home work could not be completed or school was missed by 56 (18.6 %) subjects who had the tendency to develop headache during study. A positive family history of similar headaches was recorded in 177 (59 %) students (98.boys, 32.67 % and 79 girls, 26.3 %). In Bangladesh nothing is known about the prevalence and causes of headache in school children and local data are not available. Since headache in school and college going pupil is found to be a common complaint, it should be considered as one of the major health problems in our country. Headache attack in school children and college going adolescents should not be ignored. Keeping in mind the impact of family history development of awareness should be built among students for periodic medical, particularly ophthalmic check up and proper medical treatment.

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Introduction

Headaches are one of the most commonly reported health complaints in school-aged children[1,2] and also the most frequently reported pain in college going adolescents[3]. The prevalences of all types of a significant headache were found to ranges from 37 to 51% in 7-year olds, gradually increasing to 57-82% by 15 years of age[4,5]. Prevalence rates in school-aged children have been reported to be 23-51% for monthly headaches, 7-44% for weekly headaches, and 0.9-1.5% for daily or almost daily headaches [6]. Migraine is said to be the most common cause of primary headache in children[7,8]. The prevalence rate of headache found more or less varies in different parts of the world, because cultural and social factors may play a role in influencing the rate[9]. Much less is known in our country about the prevalence and causes of headache in non-hospital populations among school & college going students. The purpose of this study is to determine the prevalence of headache among school and college going students in Bangladesh and to demonstrate the relationship between headache and various factors, with special emphasis on the impact of headache on their attendance.

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Methods

Using prospective recordings of headache in students of some selected schools and colleges in a community population the total headache activity, number of headache days, headache intensity and duration were studied from December 2010 to December 2011. The students were asked to fill out a questionnaire on headache characteristics including ICHD2 criteria[10]. A population based, cross-sectional, comprehensive questionnaire study, followed by interviews of selected cases, visual acuity tested by Snellen's chart, external ocular examination by torch light and their ophthalmoscope examination was conducted in schools and colleges of Mymensigh to cover all socioeconomic groups. A total of 300 students aged 15 to 23 years having history of headache, was included among 1000 students. The main outcome measures studied were prevalence of headache, its pattern, frequencies, duration, impact of family history and any provoking factors of development of headache associated symptoms. The headache intensity was noted as (1) Mild headache, only noticeable when attending institution, could be ignored at times (2) Moderate headache, normal activities can be continued (3) Severe headache, difficult to concentrate, can manage undemanding tasks, sometimes incapacitated.

SPSS for window was used to tabulate data and to calculate frequencies, percentages and comparison of different variability's.

Results

It is revealed from the result as presented in table 1 that among 1000 subjects 300had headaches with an estimated prevalence rate of 30%. There were 105 boys and 195 girls with having headaches.

Table 1

Distribution of demographic characteristics of subjects by age, gender and socioeconomic class of subjects under study

Age	Male (n= 144)	Female (n = 156)	Total (n =300)
15-17	105 (35%)	117 (39%)	222 (74%)
17-19	23 (7.67%)	21 (7%)	44(14.67%)
19-21	10 (3.33)	10 (3.33%)	20 (6.67%)
21-23	06 (2%)	08 (2.67%)	14 (4.67%)
Socio-Economic group	Poor class Male: (6%) Female: (9.33%)	Middle class Male: (28%) Female: (53.33%)	Rich class Male: (1%) Female: (2.33%)
* Numbers within parenthesis indicate percentages			

The study showed that the prevalence of headache generally declines with age. The highest prevalence of headache was found at 15 -17 years of age group 74% male. 35% and female 39% (Table 1). The complaints of headache were found in students mostly belonging to middle socioeconomic class (81.33%), followed by poor (15.33%) and rich class (3.33%).

Table 2 evidences the distribution of headache pattern and severity which was found 43% with mild, 46% moderate and 11% severe headache. Nearly 27.33% had a frequency of 4 or less episodes per month. It is interesting to note that in majority of episodes there was no previous warning symptom. The result further evidences that most of the teenagers under study 168 (56%) had headaches lasting less than two hours, followed by 105 (35%) having headaches for 2 to 5 hours. The headache persists for more than 5 hours in 04 (1.33%) students.

Table 2

Distribution of frequencies, patterns and duration of headache in school and college going students.

Subjects	Headache pattern or intensity			Headache frequencies Per month		Headache Duration		
	mild	moderate	severe	5-10 times	daily	Less than 2 hours	2-5 hours	more
Male	44	40	21	83	11	87	41	02
Female	85	98	12	111	13	81	64	02

Table 3 Distribution of Problems associated with occurrence of headache

Problems associated with headache	Male	Female	Total	%
Positive family history	98	79	177	59%
During study	21	35	56	18.6%
Sinusitis	17	13	30	10%
Migraine	11	13	24	08%
Poor vision	07	11	18	06%
Trauma	02	02	04	1.33%
Cold. Cough	10	08	18	06%
Poor sleep	06	04	10	3.33%
Constipation	00	02	02	0.66%
Fever	01	01	02	0.66%
Food	01	01	02	0.66%
Don't know	108	69	177	59%
Refractive error	88	54	142	47.33%
Psychosomatic factor	03	05	08	2.67 %

Table 3 demonstrates the problems associated with the occurrence of headache. The most common associated feature determined was refractive error among 142 students (47.33%). A total number of 177 (59%) students did not know the provocation factors of the headache. Home work could not be completed or school was missed by 56 (18.6%) subjects who had the tendency to develop headache during study. A positive family history of similar headaches was recorded in 177 (59%) students (98 boys 32.66% and 79 girls, 26.33%).

Discussion

Headache is a subjective complaint without any laboratory correlation thus any prevalence assessment must be based exclusively on information given by the subjects.

The cross-section population study revealed the prevalence of headache among school & college going students in Bangladesh and determined the relationship between headache and various factors and the impact of headache on school or college attendance. Prevalent differences in regard to adolescent

sex and age received particular attention[1]. The study showed that the prevalence of headache decreased more or less with age, the highest rate being among 15-17 years age group (Male 35% and Female 39%). After this age group there was a decline in headache episode, showing that puberty being a susceptible age that may play an important role.

This is not in agreement with the observation of Siddiqui et al[7], but Bener et al[9] who found that the prevalence of headache increased with age. However similar to other studies[11], 12 our studies recorded high prevalence of headache among students where episodes were found at the age less than 15 years old.

It is noteworthy that the prevalence of headache varies greatly for different populations and places. Our study showed that prevalence of headache was quite high (30%), but comparable to other studies conducted in various parts of the world [4,7,9]. The interesting feature is that prevalence difference was found between boys and girls in comparison to other studies[6,8,11]. Girls reported more headaches than boys, in particular of the frequent type[13].

Among the associated factors studied the most commonly reported factor is family history. More than half of the children (59%) had a positive family history of headache, exhibiting that it was the principal influential factor. Other factors followed to initiate the cause. This is in agreement with other studies[7,12,13]. The present study evidenced that only 6% of the subjects under these investigations were found to possess refractive error, but according to local ophthalmic medical report 47.33% students are suffering from such problem. In view of the provocation factors responsible for generating headache episodes interesting phenomena disclosed to get different information. Antoniuk et al[14] observed that the most common provocation factors are 'flu' and nervousness. In another studies[2,7,15,16] the factors that provoked headache most often were stress, illness and noisiness in the school. More than 50% of the students could not definitely state any provocation factor that could lead to the headache episode. It was found to be the most inappropriately treated ailment in school-age children[7,15].

In Bangladesh there is no definite published data available about the causes of headache in relation to ocular problem among the school & college going students and its prevalence, frequency, different patterns and associated features. Since headache in school and college going pupil is found to be a common complaint, it should be considered as one of the major health problems in our country. Since data are not available to define a certain headache pattern and prevalence in this population, therefore more multi-centered studies are necessary to determine its prevalence, encountering different patterns, underlying causes and provide better treatment options.

Conclusion

Headache in school & college students should not be ignored as it is found to be a common ailment which is either inappropriately treated or missed. Majority of sufferers were taking medicines without any medical advice and this is a cause of serious concern. It leads to school absenteeism, hence loss of study hours of school and college going students. Keeping in mind the impact of family history, development of awareness should be built among students for periodic medical, particularly ophthalmic check up and proper medical treatment.

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