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PREVALENCE OF RECURRENT HEADACHE AMONG UNDERGRADUATE'S STUDENTS OF A FACULTY OF MEDICAL TECHNOLOGY IN DERNA CITY: A PILOT STUDY

ELZER ASHRAF S[1], *ELZAHAF RAGA A[1]

[1]Faculty of Medical Technology, Derna, Libya

*Corresponding author email: raga_128@yahoo.com

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ABSTRACT

Background: Headache is major common neurological disease Headache is a worldwide health problem, and is one of most common reasons for patients to seek health advice. The aim of this to determine prevalence of recurrent headache, associated risk factors and cause of headache among students at faculty of medical technology in Derna city, Libya. Methods: This is a cross-sectional survey in faculty of medical technology, Derna, Libya using a self-administration questionnaire from March to May 2013 on sample of 150 students in the faculty of medical technology. A questionnaire was given to the students who were selected by systematic random sampling. Results: 150 questionnaires were distributed to undergraduate student in the faculty of medical technology, of which 95 were returned, giving a participation rate of 63.3%, mean age=21.2± 2.2 years. There were 40 (42.1%) males and 53 (55.8%) females. The prevalence of recurrent headache was estimated to be 72.6% (69/95). The higher prevalence of headache was in females. Headache was significantly common in females than in males (X^2=17.9; P <0.001). Conclusion: The study shows high prevalence of recurrent headache among the students, which will affect the academic performance, and the life activities of the students. Provide entertainments services in the school are very important to reduce prevalence of headache among the students special during the exam period.

KEYWORDS: Prevalence, recurrent, headache, students, Libya, Derna.

INTRODUCTION

Headache is major common neurological disease [1] and it is one of the main causes of morbidity which could lead to incapacity, major excuse for absenteeism at work [2,3] and school [4], effect on the psychological well being and disturb mood and affect thinking and social aspects of patients leading to a change on the behavioral level and disturbances in social interaction [4,5]. Recent literature confirmed that headache is a worldwide health problem, and is one of most common reasons for patients to seek health advice. However, most of people do not get right diagnosis and suitable care [6]. The most common primary headache is migraine and tension-type headache [7].

Many studies have been estimate the prevalence of headache in general population and different groups worldwide. A review by Stovner et al. (2007) have estimated the global prevalence of primary headache in adult population of 47%; migraine headache, 10%; tension-type headache, 38%; and chronic daily headache, 3% [8]. A number of studies on the epidemiology of headache in Africa; have shown different rates of prevalence of headache. For example, the overall the one-year prevalence of headache in rural south Tanzania was 23.1% [9] and in Ethiopia the one-year prevalence of migraine was 3% (4.2% females and 1.7% males) [10]. Osuntokunet al[11] in Nigeria documented the crude prevalence of migraine headache to be 5.3 per 100.

In addition, there has been few research on the epidemiology of headache in Arab countries, range from 8% in Saudi Arabia [12] to 83.6% in Oman [13]. In Saudi Arabia the tension headache prevalence ranged from 3.1–9.5% [11-13] and the migraine

prevalence ranged from 2.6–5%[12]. The estimation of migraine prevalence was 7.9% and the one-year headache was 11.2% in Qatar [15]. In Oman the one-year migraine prevalence was 10.1%[13]. It is important and timely to conduct research about headache in Libya as no study has been done before. So, there is a need to obtain data on the prevalence of headache in Arabic countries and increasing understanding about headache in the population can reduce headache burden significantly. Knowledge of the prevalence and disability in this region would add to plan appropriate strategies to reduce the burden of headache worldwide.

In this study, we aimed to determine prevalence of primary headache, associated risk factors and cause of headache among students at faculty of medical technology in Derna city, Libya, using the operational diagnostic criteria of the International Headache Society (IHS) [16]. And to examine the different practical and logistic problems may arise during the survey in medical Libyan students.

To our knowledge there is no published studies assessing the epidemiology of primary headache disorders in Libya. Therefore, it is important to conducted survey of headache in Libya.

MATERIALS AND METHODS

Study design:

A cross-sectional survey using a self-administration questionnaire from March to May 2013.

Study area and population:

Study population included students from faculty of medical technology aged from 18 to 28. It is located in Derna city, Libya

Ethical approval: Approval was granted from the Research and Ethics Committee of the Faculty. Consent was gotten from all participated students.

Sample size and Sampling method: A sample of 150 students who were selected by systematic random sampling method were invited to participate in the study by filling a questionnaire.

Inclusion criteria: Students aged 18 and more were selected from all departments and educational level of years. The number of students from each department was not determined.

Methodology: The questionnaire was derived from the International Headache Society (HIS) criteria [16] to assess the prevalence of recurrent headache among the students and included a section for demographic data, description of the current features of headache as well as its characteristics, medication used, and cause of headache. Language of the questionnaire was made simple and easily understood to students.

STATISTICAL ANALYSIS

All the data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 20.0. The data were summarized using frequency tables, means, and standard deviations for continuous variables. The chi-square test was used to make comparison among categorical variables. The level of significance was considered as $P < 0.05$.

RESULTS

Demographic Characteristics of Study Population.

A total of 150 questionnaires were distributed to first, second, third and fourth years of undergraduate student in the faculty of medical technology, of which 95 were returned, giving a response rate of 63.3%. The remaining (36.7%) had any unreturned the questionnaire where should be or did not wish to participate. There were 40 (42.1%) males and 53 (55.8%) females. Their ages ranged between 18 and 28 years with mean±SD of 21.2± 2.2 years. The mean ages of males was 21.5 years and females was 20.9 years, however there is no significant difference between both of gender regarding to age variable ($P = 0.184$). Prevalence of recurrent headache among students who live Derna city was 79.4% compare to students who live outside the city (inside the host) 91.6%.

Prevalence of Headache

The prevalence of recurrent headache was estimated to be72.6%(69/95). The prevalence in males was 50% (20/40) and females 90.5% (48/53). Headache was significantly more common in females than in males ($X^2=17.9$; $P <0.001$).

The headache prevalence is more common among second year students (37.9%) compare to other education year's level (Table 1).

Table 1. Prevalence of headache by gender, age and academic year

	No (%)	Prevalence
Gender		
Female	53/95(55.8)	48/53(90.5)
Male	40/95(42.1)	20/40(50.0)
Age group		
18-20	20/95(21.1)	16/69(23.2)
21-23	58/95(61.1)	42/69(60.8)
>23	13/95(13.7)	9/69(13.0)
Academic year		
1st year	23/95(24.2)	17/69(24.6)
2nd year	36/95(37.9)	24/69(34.7)
3rd year	9/95(9.5)	7/69(10.1)
4th year	23/95(24.2)	20/69(28.9)

Characteristics of headache participants

Stress and Sleep disturbance were the main aggravating factor occurred in 27.5% (19/69), 26% (18/69) of participants respectively (Table 2).

Table 2. Cause of headache among students with headache

Causes	Number	%
Stress	19	27.5
Sleep disturbance	18	26.0
Missing meal	2	2.9
Weather change	2	2.9
Certain smell	2	2.9
More than one cause	21	30.4
Do not know the cause	5	7.2

Over-the-counter analgesics in 86.9% (60/69) of students and the most analgesics were taken was paracetamoal with 76.6 % (Table 3).

Table 3. Drug name taken by students with headache

Drug Name	No	%
Paracetamol	46	46/60(76.6)
Ibuprofen	3	3/60(05.0)
More than one	11	11/60(01.6)

DISCUSSION

To our knowledge, this is the first pilot study to gather data on the prevalence of recurrent headache among medical students in Libya. The data were gathered from medical technology student, so those students have more information about the headache than general population. Also, no major difficulties have found during the survey.

Our preliminary estimate of prevalence of recurrent headache was high 72.6%(69/95), although this study has its own limitation. Juni (2014) estimated the prevalence of headache among paramedical students in Baghdad was (82.3%) of males and (83.4%) of females, which was higher than our estimation while we used same group of population [17].The prevalence of headache among dental students 63.9% in India[18], which was slightly, lowers than ours. However, Abdoet al. (2014) reported the prevalence of primary headache among Yemeni people in general population was 76.5%[19] which slightly higher than ours. Though, both studies were estimated the prevalence among different age group of population. This finding is different to the current global prevalence of 47 %[8] this is may be due to the small number of sample size and more students were study most of the time been tension. Quesada-V´azquez and Rodr´ıguez-Santanain Zimbabwe [20] had reported an overall headache prevalence of 37.1%, which is also different to our finding. The differences in the prevalence may be due to distinction in the definition of headache, number of sample size, different culture and the differing age groups of the population studied.

In this study found that women compared with men had higher prevalent for primary headache. This has been attributed to the effect of female sex hormones specifically estrogen. We documented a prevalent rate of 90.5% for female and 50% for male in our study. This is consistent with previous surveys [21.22]. Students from outside Derna were more likely to have headache compare to the other maybe due to social factor, driving for long distance and there is no entertainments services in the hostel.

Similar to other study [23] our study showed that stress and sleep disturbances were the most common triggering factors for headache were reported by our students due to two reasons: the education system in the faculty is more tightening by exam and homework and some of participants' students were live inside the hostel.

Very high percentage (86.9%) of students was reported to take over the counter medicine without medical prescription and diagnosis by physician, which was similar to other study [18]. Paracetamol was the most over counter analgesics (76.6%) used to relive the symptoms' of headache and this selection for this analgesic particularly due to some knowledge that the students gotten from their medical studies as this drugs is more safe.

Limitation: The study include the used of small sample size and some students have difficulty to understand some English terms therefore, often need to translate the questionnaire into Arabic language and so can be used to estimate the prevalence of headache in general population. We also find not all the questions were answer by the participant's students so our advice for next study will be face-to-face interview with training of interviewer.

CONCLUSION

Our study shows high prevalence of recurrent headache among the students, which will affect the academic performance, and the life activities of the students. However this estimation should be considered with caution because of small sample size. A study of a large sample in Libya medical students is needed to confirm the prevalence estimate. Collaboration with policy-makers to plan and set up headache-related health-care services appropriate to local needs should be encouraged. Provide entertainments services in the school are very important to reduce prevalence of headache among the students special during the exam period.

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