

Prevalence of Migraine Among Medical Students in Jazan University and Its Impact on Their Daily Activities

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Background: Headache is considered as one of the most common disorders of the central nervous system , and there are many types of it . One of them is migraine headache. Worldwide it is a common disabling primary headache syndrome. Medical students most of the time are exposed to its various triggers. This might have huge impact on their lives and their academic performance. This topic has been studied in many countries to highlight the prevalence of migraine headache and to study its impact on the students' life and academic performance. Unfortunately, no similar study was conducted neither in Jazan Area nor in Saudi Arabia as a whole

Objectives: The main goal of this study was to know the prevalence of migraine headache among medical students at Jazan University and to assess its effect on their daily activities .

Methods: A cross-sectional survey was conducted during 2016-2017 academic year in Jazan university. 260 students were examined. The data were collected by using self-administered questionnaire which included demographic data and specific questions on headache based on international Headache Society criteria for diagnosis of migraine and other headache types. The collected data were analyzed by using SPSS program .

Results: The results showed that the prevalence of migraine among medical students was 5.0%. There was no significant difference between the gender according to p-value , but regarding the years of university studying there was significant difference in which the prevalence increased in parallel with advancing academic years at the university.

Conclusion: the prevalence of migraine among medical students was found to be less than what seen in similar studies in different countries , without significant difference between the gender. All the students reported that the headache was interfering with their daily activities. Fatigue, too little sleep, and bright light were the most common triggering factors were identified in our study.

Keywords: Migraine, Daily Activities, Medical.

INTRODUCTION

A headache is an extremely common disorder encountered in everyday life. It affects both men and women of all ages. There are many types of headache. These include a migraine, cluster, and tension-type headache to mention few. Headache can lead to significant disability to the affected individuals. Now, it is well recognized that headache is both underestimated and undertreated in many societies.^{1 a} Headache is classified as primary when there is no clear underline etiology and secondary when it is due to a known cause like brain tumor^{1,2}. Among the primary headaches, migraine is a common disabling condition. Many studies confirmed that migraine has high prevalence with a huge impact on the life of affiliated individuals. Clinically, it is described as a unilateral headache that sometimes changes side. It is characterized by being a throbbing headache that lasts anywhere between 4 to 72 hours. Between attacks, the affected individuals are quite normal. It is noted that some factors might aggravate a migraine

headache. These include exertion and routine physical activity. Being in

quiet, dark room ameliorates migraine attack^{2,3}. Medical students most of the time are exposed to its various triggers. This might have huge impact on their lives and their academic performance. This topic has been studied in many countries to highlight the prevalence of a migraine headache and to study its impact on the students' life and academic performance^{4,5}. Unfortunately, no similar study was conducted neither in Jazan Area nor Saudi Arabia as a whole.

OBJECTIVE OF THE STUDY

The main goal of our study was to know the migraine headache prevalence among medical students of Jazan university and to assess its effect on their lives and medical performances.

METHODS

Study design and place

The study was observational descriptive cross-sectional design. It was conducted at the college

of medicine and applied sciences at Jazan University, which is considered a leading educational institution in the region. It was established in 1426.

Study population

The study was conducted during an academic year (May 2017 to October 2017). The targeted Medical students were from 2nd to 6th year for the age group (19-25) from both genders.

Sampling

The sample size for this study was calculated to be 260 students based on a sample size formula for cross-sectional study design. Parameters used for sample size estimate: $P=50\%$, 95% confidence interval, error not more than 5%, and nonresponse rate of 10%. The study participation selection was based on stratified random sample method.

Data collection

Data were collected using self-administered questionnaire. The questionnaire included demographic data, such as age, gender, marital status, academic grade and GPA and direct questioning in accordance to the International Headache Society guidelines and criteria for the diagnosis of migraine and other headache types. Each participant asked to read and sign a consent form, before the start of data collection.

Statistical analysis

All data were analyzed by computer program (SPSS) for display frequency, mean, percentage. Descriptive statistics were used to compare data like social information, prevalence & general categorical variable, Chi-Square test & Correlation analysis were used to detect the association between prevalence and grades. Statistical significance was drawn according to the P-value less than 0.05.

Ethical aspects

Ethical approval for this study was obtained from the college of medicine, Jazan University.

All individuals enrolled in the study were given a clear explanation of the study and its purpose. The data collected from them were used only for the scientific purpose, ensured their respects and confidentiality, and the participants were given the right to continue or discontinue the study according to their desire. They were asked to read and sign a consent form before data collection.

RESULTS

The total participants were 258 out of 260 (response rate 99.2%), 49.6% of them was male, and 50.4% was female. Most of the students (64%) were 21 to 23 year old the unmarried students constitute 86 %, other characteristics are summarized in (table 1). The prevalence of migraine was 5.0% as shown in (figure 1).

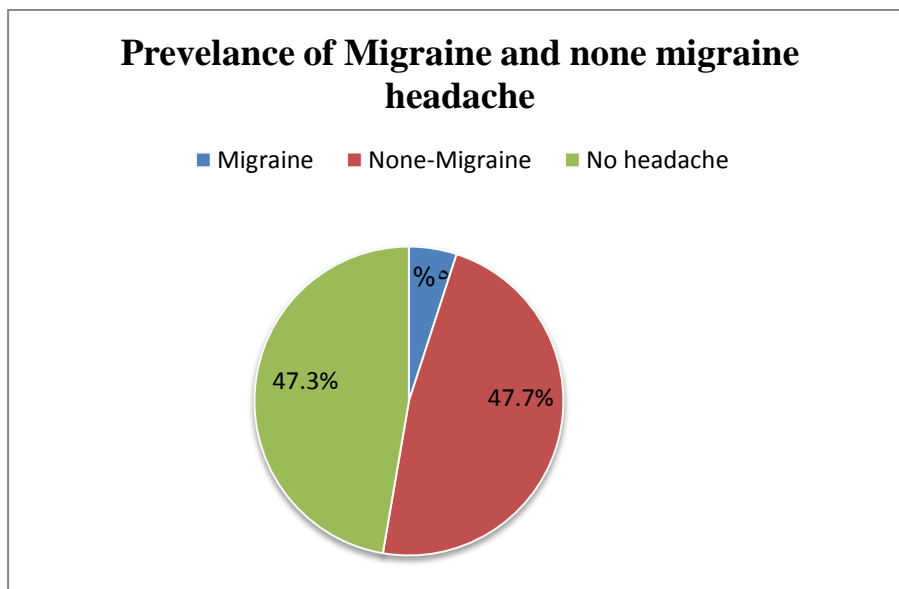
76.9% (10 students) were already diagnosed with a Migraine. Migraine without aura represents 23.1, while a migraine with aura represent 76.9. Regarding gender, the female prevalence was 61.5% and male 38.5%.

The most associated symptoms were photophobia and nausea (100% and 92.3 respectively). 61.5% of students with migraine had a positive family history. Regarding the impact on academic achievement; 33.3% of students mentioned that their achievement was severely affected due to a migraine, out of them 50% were moderately affected, and 16.7% were mildly affected. Furthermore, all the students with migraine reported that a headache was interfering with their daily activities either by leaving school or lying down undisturbed, Table 2 represents how many days per month they leave school due to headache.

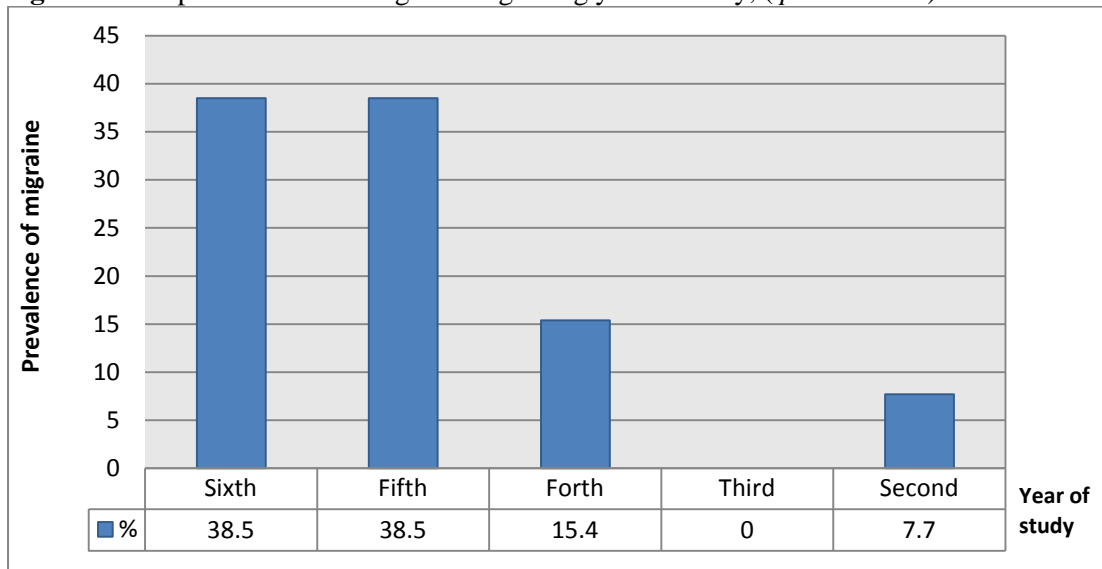
The prevalence increased by advancing in the studying years (sixth year 38.5 %, fifth-year 38.5%) as showed in (figure 2) with a p -value (0.008). The most triggers reported in this study were fatigue (84.6%), too little sleep (76.9%) and bright light (61.5%). Regarding the relieving factors of a migraine headache, our study pinpointed that lying down-sleeping 84.6% and staying in a dark, quiet room 76.9% (table 3).

TABLE 1: Background characteristics of the study participants according to their personal information such as age, year of study, marital status, and GPA.

Characteristic	GENDER		TOTAL
	MALE	FEMALE	
AGE			
18-20	22 (17.2%)	17(13.1%)	39 (15.1%)
21-23	75 (58.6%)	90 (69.2%)	165 (64%)
24 and more	31 (24.2%)	23 (17.7%)	54 (20.9%)
Year of study			
Second	26 (20.3%)	26 (20%)	52 (20.2%)
Third	26 (20.3%)	26 (20%)	52 (20.2%)
Forth	26 (20.3%)	26 (20%)	52 (20.2%)
Fifth	24 (18.8%)	26 (20%)	50 (19.4%)
Sixth	26 (20.3%)	26 (20%)	52 (20.2 %)
MARITAL STATUS			
SINGLE	118 (92.2%)	104 (80%)	222 (86%)
MARRIED	10 (7.8%)	20 (15.4%)	30 (11.6%)
DIVORCED	0	6 (4.6%)	6 (2.3%)
GPA			
4.5 -5	17 (15.65%)	19 (16.2%)	36 (15.9%)
4-4.49	29 (26.6%)	21 (17.9%)	50 (22.1%)
3.5 – 4	28 (25.7%)	30 (25.6%)	58 (25.7%)
3 -3.49	22 (20.2%)	33 (28.2%)	55 (24.3%)
Less than 3	13 (11.9%)	14 (12%)	27 (11.9%)

**Figure 1:** Prevalence of a Migraine and none migraine headache.**Table 2:** Number of days per month the students leave school\work due to a migraine

Number of days per month they leave school\work due to a migraine	(0-5)	(6-10)	(11-20)	(21 or more)
Medical students with migraine	11 (84.6%)	1(7.7%)	1(7.7)	0 (0.0%)

Figure 2: The prevalence of a migraine regarding year of study, (*p*-value .008)**Table 3:** Percentage of triggers and reliving factors.

A migraine					
Triggers				Reliving factors	
Food	2 (15.4%)	Menstruation	4 (30.8%)	Lying Down -sleeping	11(84.6%)
Too much caffeine	2 (15.4%)	Exercise	1 (7.7%)	Being in dark quite Room	10 (76.9%)
Not getting enough caffeine	0	Sexual activity	0	Keeping Physically Active	0
Hunger skipping meals	6 (46.2%)	Coughing	3 (23.1%)	Massage your head	7 (53.8%)
Fatigue	11 (84.6%)	Prolonged computer work	5 (38.5%)	Tying something around your head	5 (38.5%)
Too little sleep	10 (76.9%)	Weather changes		Cold pack on your head -neck	0
Too much sleep	6 (46.2%)	Certain odors	2 (15.4%)	Hot pack on your head -neck	0
During stressful times	5 (38.5%)	Bright light sun	8 (61.5%)	medication	7 (53.8%)
After stress	4 (30.8%)	Loud sound	5 (38.5%)	Other	0

DISCUSSION

The study indicated that the prevalence of migraine in our target population was 5%. This was in keeping with the prevalence of a migraine in many published studies. This figure was closely related to that found in the Nigeria study(6.4%)⁶. Iran- Zahedan (714%),⁷ and Brazil (6.9%)⁸. It is noteworthy to mention that the

migraine prevalence among the present participants was much lower than that found in an Indian study (28%),⁹ and in Kuwait (27.9%)¹⁰. Interestingly, this percentage increased significantly in the last academic years with *p*-value (0.008) which is closely related to that found through a similar study done in Kuwait¹¹. In our study, we observed no relation to gender as

in the study done in Iran-Zahedan, but there was female predominance in most of other studies e.g.: Riyadh,¹¹ India, USA,¹² Nigeria, Brazil and Turkey¹³. The most common triggering factor was fatigue (84.6%) followed by little sleep (76.9%). This is similar to the results seen in the USA, Kuwait, and Iran-Zahedan.

CONCLUSION

The ultimate objective of this study was to assess the prevalence of migraine among medical students at Jazan University. The prevalence was found to be less than other studies carried out in different countries, without significant difference between genders. The study also highlighted that the prevalence of migraine increases in parallel with advancing academic years. All the students reported that a headache was interfering with their daily activities. Fatigue, too little sleep, and bright light were the most common triggering factors.

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