



Prevalence And Characteristics Features Of Migraine Among Students: A Cross Sectional Study

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Abstract

Migraine is one of the common primary headache disorders that is characterized by moderate to severe episodes and that too mostly occurring at one side of the head that is unilateral. In this study the main objective was to identify the prevalence and characteristics of migraine headache. A community based cross sectional study was carried out on 375 students studying various courses in southern parts of Kerala and it was found that among those, 161 students had migraine headache, which was more prominent in females than in male. The prevalence of migraine was more among Pharmacy students followed by Engineering, BDS, Nursing and Arts & Sciences. All the migraineurs had headache that lasted for more than 4 hours and it was characterized mostly by unilateral, throbbing or pulsating pain.

Keywords: Migraine headache, prevalence, cross sectional, unilateral

Introduction

Migraine is one of the common primary headache disorders that is characterized by episodes of moderate to severe episodes and that too mostly occurring at one side of the head that is unilateral. This could be described as throbbing or pulsating pain and they affect mostly people of all countries irrespective of their race and region^[1]. They can also be genetically influenced that is could also be inherited. WHO had its way of defining migraine as disease happening of recurring attacks and there are different types of attack that usually include such as those of headache that last for 2 to 3 days or only upto few hours and they would be characterised by nausea and vomiting. They were also have characterized by photophobia and phonophobia. Chronic migraine, a condition characterized by the experience of migrainous headache on at least 15 days per month, is highly disabling. Migraine affects

about 15% of the general population^[4] and causes substantial personal suffering and impaired quality of life with a significant socioeconomic impact. Migraine is generally presented with age dependent changes and that they would also have special paroxysmal symptoms and there would be no autonomic signs in the elderly.

Migraine is the third most common disease worldwide, with a global prevalence estimated at 14.7% in both genders in the Global Burden of Disease (GBD) Survey. Migraine is found to be affected over 20% of people at some point in their lives, but mostly it is under diagnosed^[1]. There is no a clear geographical relationship or underlying trends for its occurrence over a long period of time. Migraine is two to three times more common in females than in males. Puberty is the time when women begin to demonstrate an increase in migraine prevalence as compared with men^{[5], [2]}. Migraine

was actually more prevalent and caused more disability in females when compared to male. They is a positive correlation between migraine frequency, migraine severity and low work and academic performance. The migraine usually presents with throbbing, pulsatile pain in the fronto temporal region, usually lasting from 4 to 72 hours. The pain may vary in severity from mild to severe and may escalate during the course of the headache. Other clinical features that may be present during this phase include nausea, vomiting, autonomic symptoms, nasal congestion, and lacrimation.

Materials And Methodology:

A cross sectional study was carried during a period of 6 months (from January 2022 to June 2022) to know

the prevalence of migraine and its characteristics features among students studying different courses. There were a total of 375 students included in the study which include 75 from each profession. The sample size was calculated using the formula $n = Z^2_{1-\alpha/2} \sigma^2/d^2$. The data was collected using Google form. The subjects were intimated regarding the study before sending the questionnaire and the consent was obtained and then later the responses were recorded in Microsoft Excel. Pregnant and lactating mothers were included in the study. The data was analyzed statistically. In this study students from different professional college such as Engineering, Pharmacy, Nursing, Bachelor of Dental Science and Arts and Science courses where prevalence and characteristic were studied.

Result:

Table 1: Distribution of gender

Sl.No:	Gender	Frequency	Percentage
1	Male	92	25
2	Female	283	75
	Total	375	100

Table 2: Distribution of prevalence of migraine

Sl No	Courses	Professionally diagnosed	Not yet diagnosed	Recurrent headache	No recurrent headache	Total
1	Arts and Science	7	9	9	50	75
2	BDS	5	10	12	48	75
3	Engineering	12	19	8	36	75
4	Nursing	8	7	12	48	75
5	Pharmacy	15	20	8	32	75

Table 2 shows the response of the study population to the question have you diagnosed with migraine. Out of 75 students in arts and science course, 7 students were professionally diagnosed with migraine, 9 were not yet diagnosed but have the symptoms of migraine, 9 students have recurrent headache with symptoms of migraine and 50 students have no recurrent headache. In the case of 75 students studying Bachelor Of Dental Science, 5 students were professionally diagnosed with migraine, 10 were not yet diagnosed but have the symptoms of migraine, 12 students have recurrent headache with symptoms of migraine and 48 students have no recurrent

headache. In 75 students studying Engineering course, 12 students were professionally diagnosed with migraine, 19 were not yet diagnosed but have the symptoms of migraine, 8 students have recurrent headache with symptoms of migraine and 36 have no recurrent headache. Among 75 students studying nursing, 8 students were professionally diagnosed with migraine, 7 were not yet diagnosed but have the symptoms of migraine, 12 students have recurrent headache with symptoms of migraine and 48 students have no recurrent headache. And in the case of 75 pharmacy students, 15 students were professionally diagnosed with migraine, 20 were not yet diagnosed but have the symptoms of migraine, 8 students have recurrent headache with symptoms of migraine and 32 students have no recurrent headache

Table 3: Distribution of prevalence of migraine in different courses

Sl.No:	Courses	Migraine Headache (161)	Non-Migraine(214)
1	Arts and Science	25	50
2	BDS	27	48
3	Engineering	39	36
4	Nursing	27	48
5	Pharmacy	43	32

Figure 1: Distribution of prevalence of migraine and non-migraine in different courses

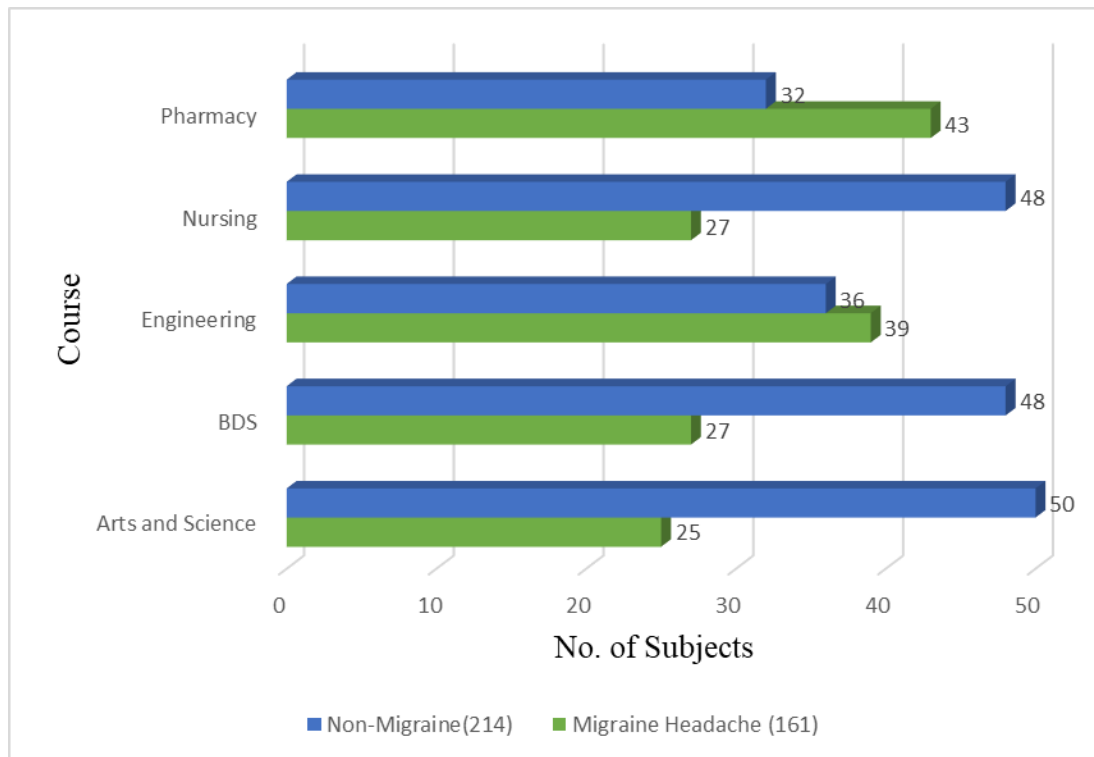


Figure 1 demonstrates the prevalence of migraine in different courses. Out of 375 students, 161 students have migraine headache and 214 do not have migraine. Among 161 students having migraine headache 25 students are studying arts and science, 27 BDS, 39 engineering, 27 nursing and 43 students were in pharmacy course.

Table 4: Distribution of duration of untreated migraine headache

Sl.no:	Duration	Frequency	Percentage
1	Less than 4 hours	0	0
2	4-8 hours	135	84
3	8-12 hours	19	12
4	More than 12 hours	7	4
	Total	161	100

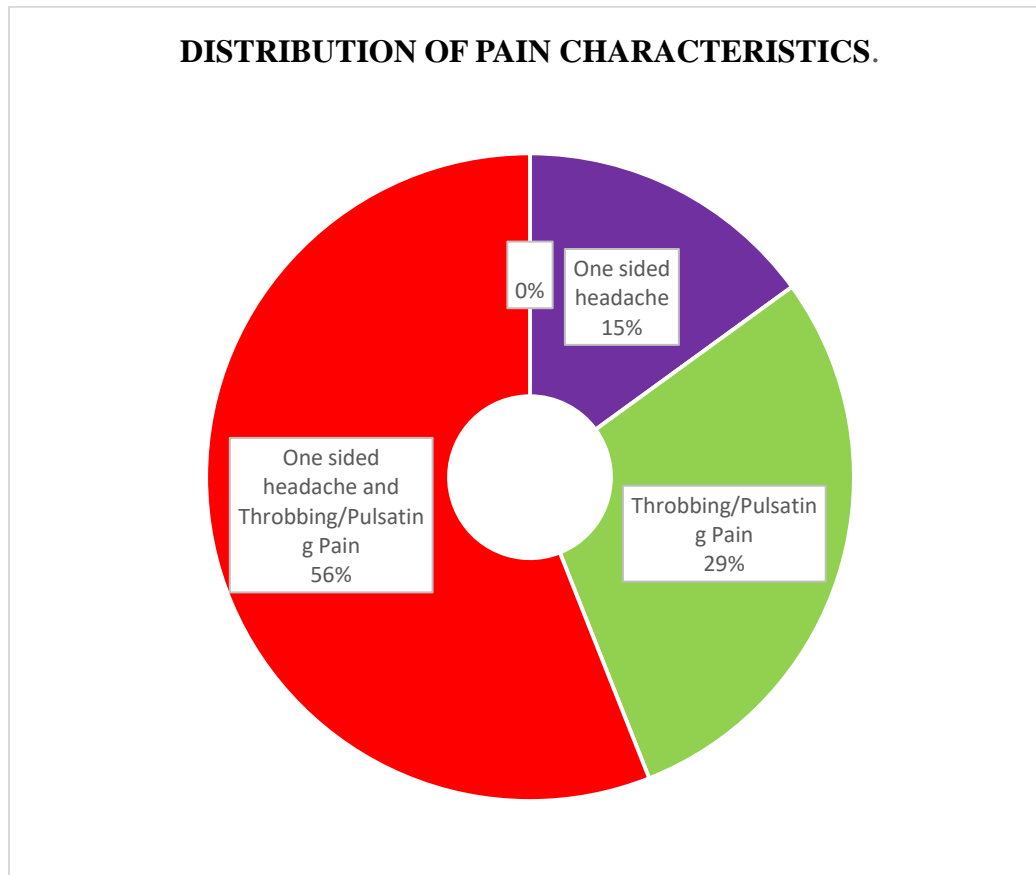
Table 4 indicates the duration of untreated migraine headache. Out of 161 migraineurs no subjects have headache less than 4 hours, 135 (84%) subjects have headache lasting between 4-8 hours, 19(12%) subjects suffer from headache lasting between 8-12 hours and 7 (4%) have headache that last more than 12 hours.

Table 5: Distribution of pain characteristics

Sl.no:	Migraine Characteristics	Number of subjects (%)
1	One sided headache	24(15)
2	Throbbing/Pulsating Pain	47(29)
3	One sided headache and Throbbing/Pulsating Pain	90(56)

Distribution of pain characteristics is demonstrated in Figure 2. The pain can be characterised as unilateral pain or throbbing /pulsating pain. The pain characteristics of migraine among migraineurs were explored. 56% of the migraineurs experienced both unilateral and throbbing/pulsating kind of headache, 29% experienced throbbing/pulsating headache and 15% experienced unilateral headache.

Figure 2: Graph of distribution of pain characteristics



Discussion:

The study reveals that regarding the prevalence of migraine among students studying different courses, out of 375 students 161 students have migraine headache. Among them migraine was more prevalent among Pharmacy students followed by Engineering, BDS, Nursing and Arts & Sciences. Considering the pain characteristics regarding the migraine it can be said as unilateral pain or throbbing /pulsating pain. The migraine headache had a duration of more than 4 hours from the study. In this study 56% of the migraineurs experienced both unilateral and throbbing/pulsating kind of headache, 29% experienced throbbing/pulsating headache and 15% experienced unilateral headache. The results are similar to the study conducted by **Renjith V, Shivananda P M, Castelino F, Pai A, George A** on clinical profile and functional disability of patients with migraine, which concluded that majority of the migraineurs, had both unilateral and throbbing/pulsating headaches.⁽⁴⁾

Conclusion:

After conducting the study we came to conclude that migraine was more prevalent among pharmacy and engineering students. The most common characteristic feature seen was unilateral pain / throbbing or pulsating pain and this lasted for about 4-6 hours. Hence knowing that there is a high prevalence rate in students in which pharmacy and nursing had the highest among other professions considered proper treatment pattern should be approached. In general lifestyle management such as stress reduction, proper exercise should be implemented and this in a way would help in prevention and management of migraine.

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