

EVALUATION OF MIGRAINE AWARENESS AND ITS IMPACT ON STUDENTS OF NISHTAR MEDICAL UNIVERSITY

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Abstract: *The cross-sectional study was conducted in Nishtar Medical Hospital from January 2022 to January 2023 to assess the prevalence, impact, and triggers of migraine in medical students. The study included both male and female students from all the years. The data was collected using a questionnaire containing questions regarding demographics, knowledge about migraine, character of pain, triggers, and accompanying factors. The questionnaire was standardised according to Migraine Disability Assessment Score (MIDAS) and International Headache Society (IHS) criteria. A total of 500 students were invited, of whom 470 (94%) completed the survey. The prevalence of migraine was 25.9% (122/470), and 50% (61/122) had more than five episodes in the last three months. Over one-third, 36% (44/122) of participants experienced severe pain. Moreover, 41% (50/122) sought medical advice, and 19.6% (24/122) were hospitalised. The most common symptoms experienced during an episode were unilateral headache (81.9%), pulsating headache (65.5%), photophobia (60%), and phonophobia (55.7%). The most common triggers were sleep deprivation (73.7%), stress (57.3%), loud sounds (55.7%), hunger (53.2%), and fatigue (51.6%). Of 122, 77 (63.1%) participants reported moderate to severe disability due to migraine attacks. It is concluded that migraine is prevalent among medical students and hurt the well-being and productivity of the students.*

Keywords: Migraine, MIDAS, Headaches, HIS

Introduction

Headaches are common disabling conditions that affect academic requirements and lower quality of life. There are different types, including cluster headaches, migraines, and tension-type headaches. One-third of headaches in adults are migraines. It's a neurovascular disorder that affects one side and is associated with disturbed vision and nausea. (Aurora et al., 2021) Migraine headaches may be aggravated by some factors like stress, routine physical activity, and stress, while quiet and darkness may reduce the severity of the episode (Shabi et al., 2018).

Despite the high prevalence, it remains under-treated in many countries. It is the seventh most common disabling disorder globally and is twice as common in women than men (Shukri et al., 2023). It is significantly prevalent among university students and is associated with disability and morbidity. A study conducted on medical students showed that stress and sleep deprivation were common triggers (Gu and Xie, 2018). Studies show that medical students are at high risk because of clinical obligations, study style, and hectic schedules, resulting in physical and psychological stressors. It is essential to analyse the prevalence of migraine, its effects and triggers to prevent attacks and prompt early treatment. This study assessed the prevalence, impact, and triggers of migraine in medical students.

Methodology

The cross-sectional study was conducted in Nishtar Medical Hospital from January 2022 to January 2023. The study

included both male and female students from all the years. They have excluded students with head injuries, flu or colds for the past six months. All patients provided their Informed consent. The ethical board of the hospital approved the study.

The data was collected using a questionnaire containing questions regarding demographics, knowledge about migraine, character of pain, triggers, and accompanying factors. The questionnaire was standardised according to Migraine Disability Assessment Score (MIDAS) and International Headache Society (IHS) criteria. HIS criteria were used to diagnose migraine (Arnold, 2018). Migraine was diagnosed if the respondent had at least five episodes lasting 4 to 72 hours and reported at least any 2 of these characteristics: pulsating quality, moderate or severe intensity, unilateral and triggered by routine activity, along with any one of the following symptoms: nausea, vomiting, and photophobia with phonophobia. The impact of migraine on quality of life was assessed in the MIDAS survey, which contains questions regarding days off from school or work, missed leisure activities, and loss of productivity at work due to migraine in the last three months (Rustom et al., 2022).

SPSS version 23.0 was used for data analysis. Continuous variables were presented as mean and standard deviation. Categorical variables were presented in frequency and percentages. Binary logistic regression analysis was used to find predictors of migraine. P value <0.05 was considered statistically significant.

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Results

A total of 500 students were invited, of whom 470 (94%) completed the survey. The mean age of the participants was 20.7 ± 1.5 years. Three eighty (80.8%) participants experienced headaches unrelated to head injury or flu. Two twenty-eight (48%) participants were female. The prevalence of migraine was 25.9% (122/470), and 50% (61/122) had more than five episodes in the last three months. Over one-third, 36% (44/122) of participants experienced severe pain. Moreover, 41% (50/122) sought medical advice and 19.6% (24/122) were hospitalised (Table I).

The most common symptoms experienced during an episode were unilateral headache (81.9%), pulsating headache (65.5%), photophobia (60%), and phonophobia (55.7%). The most common triggers were sleep deprivation (73.7%), stress (57.3%), loud sounds (55.7%), hunger (53.2%), and fatigue (51.6%). Migraine was relieved by sleeping in 89.3%, being in a dark and quiet room in 69%, and by head massage in 64% of participants.

Table 1: Demographic and clinical data of the participants

Variable	Frequency (%)
Gender	
Male	228 (48%)
Female	242 (51.4%)
Age	
>20	240 (51%)
<20	230 (48.9%)
Year of Study	
>2	259 (55.1%)
<2	211 (44.8%)
Headache status	
Yes	380 (80.8%)
No	90 (19.1%)
Migraine status	
Yes	122 (24.4%)
No	348 (70.4%)
Family history of migraine	
Yes	180 (38.2%)
No	290 (61.7%)
Migraine episodes in 90 days	
1	27 (22.1%)
2-4	34 (27.8%)
>5	61 (50%)
Duration of migraine episode (hours)	
< 4	47 (38.5%)
4-6	50 (40.9%)
> 6	26 (21%)
Migraine severity score	
Mild (1-3)	13 (10.6%)
Moderate (4-6)	65 (53.2%)
Severe (7-10)	44 (36%)
Medical consultation acquired	
Yes	50 (41%)
No	72 (59%)
Hospital admission	
Yes	24 (19.6%)
No	98 (80.3%)

MIDAS questionnaire was used to assess the impact of migraine on quality of life. Of 122, 77 (63.1%) participants reported moderate to severe disability due to migraine attacks (Table II). According to bivariate analysis, migraine headache was significantly associated with age, family history, and academic year. However, adjusted binary logistic regression analysis found that family history was the only predictor of migraine.

Table 2: MIDAS score representing the impact of migraine on quality of life

Score	Frequency (%)
0-5	0
6-10	45 (36.8%)
11-20	37 (30.5%)
≥ 21	40 (32.7%)

Discussion

In this cross-sectional study, we estimated the prevalence of migraine and headaches among medical university students. In the current study, 80.5% of participants had headaches in the last 12 months. A previous study reported the prevalence of headaches to be 83.5% (El-Metwally et al., 2020), which is close to our research findings. Most migraine headaches among our study population were 25.9%, consistent with previous studies, which reported 26.4% (Qutub et al., 2020) and 27.8% (Mohamedosman et al., 2021) prevalence. However, other studies conducted in Asia and Europe reported a lower prevalence of 10.2% (Woldeamanuel and Cowan, 2017) and 11.5% (Woldeamanuel and Cowan, 2017), respectively.

In the current study, sleep deprivation and stress were the primary triggers of migraines. A previous study also showed that sleep deprivation, academic stress during exams, and missing meals were the triggers of migraine (Gu and Xie, 2018). Half of the migraine sufferers had more than five episodes in the previous three months, in contrast to an earlier study which reported more than two episodes in the last three months. (Anwar et al., 2021). Relieving factors in our study were similar to those reported by a previous study, with the most common elements being sleeping and being in a dark room (Lobo et al., 2022). Most participants reported moderate to severe pain, which accompanied symptoms. Another study also said that most patients had moderate to severe pain accompanied by nausea, vomiting, and photophobia (Panigrahi et al., 2020).

According to the MIDAS score, about 60% of participants experienced moderate to severe disability. A systematic review stated that 8 of 13 studies reported that more than half of the participants had moderate to severe disability due to migraine (El-Metwally et al., 2020). In our study, 41% of students sought medical consultation, higher than the 13% reported in a previous study (Abtahi et al., 2023). Research shows that many students use over-the-counter analgesics and do not go for medical consultations. These are simple painkillers and do not target migraines specifically. In severe pain, students might take excessive doses, which can cause harmful effects. Thus, raising awareness and urging students to seek medical consultation for proper management is essential.

This study has a few limitations. First, self-administered questionnaires might be associated with recall bias. Second, the neurologist did not interview participants for

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confirmation of diagnosis. Moreover, the use of analgesics for relieving migraine was not analysed in our study. More studies focusing on migraine subtypes should be conducted. Screening programs need to be implemented for the diagnosis and management of episodes. Additionally, educational and support programs are required to promote awareness of the condition.

Conclusion

It is found that migraine is prevalent among medical students and hurt the well-being and productivity of the students. Sleep deprivation and stress are the most common triggers of migraine.

Declarations

Data Availability statement

All data generated or analysed during the study are included in the manuscript.

Ethics approval and consent to participate

Approved by the department concerned.

Consent for publication

Approved

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Not applicable

Conflict of interest

The authors declared the absence of a conflict of interest.

Author Contribution

MUHAMMAD NOMAN (Student 4th Year MBBS)

Manuscript revisions, critical input.

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Coordination of collaborative efforts.

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Coordination of collaborative efforts.

Conception of Study, Development of Research Methodology Design, Study Design, Review of manuscript, final approval of manuscript

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Data acquisition and analysis.

Data entry and Data analysis, drafting article

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