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PERCEPTION AND KNOWLEDGE TOWARDS MIGRAINE AMONG UNIVERSITY STUDENTS OF LAHORE, PAKISTAN

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Abstract

Background: *Migraine is a chronic neurological disorder affecting many people worldwide. Despite its prevalence, there is a lack of awareness and understanding about migraine in Lahore, Pakistan. This study aimed to assess the knowledge, perceptions, and attitudes of the public towards migraine.*

Objective: *The current study aimed to evaluate the awareness, insight and responsiveness of the University students of Lahore concerning migraine.*

Methodology: *The study used a cross-sectional design, surveying 154 participants using a 21-item self-administered questionnaire. The questionnaire covered demographic data, knowledge, attitudes, and expected behavior towards migraine.*

Results: *The findings of the present study showed that almost 88% of the participants were already aware about migraine, and 55.3% got the information from relatives and friends. The perception about the gender showed that 35.6% of the participants believed migraine affects both males and females equally. Approximately 62.3% of the students didn't know about migraine complications and around 50.6% were not aware about the treatment options. Around 70.9% of the participants agreed that the migraine harmfully impacts quality of life. Among the participants, 43.1% have shown the response that migraine is associated with depression and anxiety. 63.4% of the students in this survey believed that migraine has a major psychological and social impact. About 55 % participants had no awareness, how to deal with migraine patients.*

Conclusion: *The findings demonstrate that migraine significantly impairs students' productivity and overall well-being. Furthermore, the persistence of inadequate knowledge and prevalent misconceptions among university students underscores the need for structured educational interventions and targeted support initiatives to improve awareness, management, and academic functioning.*

Keywords: *Attitude, Awareness, Migraine, Perception, Knowledge*

INTRODUCTION

Headaches are a common and debilitating condition that can significantly impact daily life and academic performance (1). According to the World Health Organization (WHO), 50-75% of adults aged 18-65 worldwide experience headaches, including tension-type headache, migraine, and cluster headache (2). Migraine, a neurovascular disorder, affects nearly one-third of these cases, causing recurring throbbing headaches often accompanied by nausea and vision disturbances (3). Factors like stress, sleep deprivation, and physical activity can trigger or worsen migraine, while a quiet, dark environment can provide relief (4). University students are particularly vulnerable to migraine, which can lead to significant morbidity, disability, and academic struggles (5).

Migraine is a chronic neurological disorder characterized by recurrent headache attacks, frequently associated with photophobia, phonophobia, nausea, and dizziness (6). The disease has been affecting over a billion people globally; it's a major public health concern, ranking as the third most prevalent condition and second most disabling disorder worldwide (7). Prevalence of migraine in females is 1 in 5 and in men it is 1 in 16 (8).

Awareness about migraine is vital in recognizing the misperceptions that varies greatly across countries, with many misunderstandings and conflicting beliefs regarding migraine because it allows

patients and their relatives to find therapeutic assistance and get appropriate treatment (9). University students are a high-risk subcategory, liable to migraine causes like mental and physical anxiety, which can influence their academic efficiency (10).

Research has been conducted worldwide among university students to recognize the occurrence and influence of migraine, emphasizing the need for consciousness and education. Given the paucity of research on migraine in Pakistan, this study aims to assess the level of knowledge and awareness of migraine among university students in Lahore.

METHODOLOGY

STUDY DESIGN

This cross-sectional study was conducted to assess awareness and knowledge of migraine among university students in a subset of Lahore, Pakistan.

DATA COLLECTION

The data for the present study were collected from 1st October to 1st November 2025 after obtaining approval from the Institutional Review Board (IRB) of Superior University. Participants aged 18 years and above were randomly selected from different departments of Superior University, Lahore. Verbal consent was obtained from each participant before the involvement. The questionnaire used in the present study was self-developed based on the variables reported by Alshehri *et al.* (2024) in their cross-sectional study assessing public knowledge and attitudes toward migraine (11). As the original article did not publish the complete questionnaire, the key variables and thematic domains described in the study were used as a framework to construct relevant items for the current research. The questionnaire was adapted to suit the local population and study objectives. The main parameters were distributed in the three classes, including socio-demographic information, perception about migraine and knowledge of migraine.

RESULTS AND DISCUSSION

SOCIO-DEMOGRAPHIC CHARACTERISTICS

Total 154 university students took part in the present cross-sectional study. Majority of the students (45.5%) were aged 21–23 years, while 32.5% were those having age 18–20 years. Smaller percentage (13.0%) was in the age groups of 24–26 years and 9.1% participants were ≥ 27 years. Female students (61.0%) were predominated comparing male students (39.0%). In terms of education, 64.9% of participants were undergraduates and 35.1% were postgraduates. More than half of the participants (51.9%) were from MBBS department and the remaining participants from Allied Health Sciences (19.5%), Dentistry (13.0%), Computer Science (6.5%) and other departments (9.1%) (Table I).

PERCEPTION ABOUT MIGRAINE

Students' perceptions regarding the causes and consequences of migraine were varied. Many students deliberated that psychiatric diseases or mental illnesses (29.87%), head trauma (22.08%), genetic disorders (21.43%) or physical diseases (20.13%) as the causes of migraine, while others said they were unaware. In our study mental retardation (29.87%) and insomnia (40.91%) were the most frequently reported migraine complications. The majority of students (60.39%) believed that drugs were the best option to treat migraine, but some were unsure or thought there was no cure. Some students stated that the migraine affect both genders equally, nearly half of the students believed that they were more common in women (46.75%). The most frequent symptoms of a migraine attack in present study, reported to be nausea and vomiting (40.91%), followed by light sensitivity (24.03%) (Table II).

KNOWLEDGE OF MIGRAINE

Generally, most of the students demonstrated a high degree of migraine knowledge. The majority of students agreed that migraine attacks can last anywhere from four to seventy-two hours (81.2%) and they

typically affect women (70.13%). Many participants (88.3%) were aware of the emotional, cognitive, and behavioral effects of migraine. However, the majority of students (77.9%) thought that patients in Pakistan do not receive appropriate preventive care. Stress, hormonal imbalance, bright light, and noise were all correctly identified by many students as migraine triggers. Approximately 75% of the students believed that medications, non-pharmacological approaches and preventive care could be used to treat migraines.

Table I. Scio-demographic data of participants

Variables		Frequency (n=154)	Percentage (%)
Age (years)	18-20	50	32.5
	21-23	70	45.5
	24-26	20	13.0
	27 and above	14	9.1
Gender	Male	60	39.0
	Female	94	61.0
Education	Undergraduate	100	64.9
	Postgraduate	54	35.1
Departments	MBBS	80	51.9
	Dental	20	13.0
	Allied Health Sciences	30	19.5
	Computer Science	10	6.5
	Others	14	9.1

Table II. Perception of participants about migraine

Response options	Frequency (n=154)	Percentage (%)
Possible causes of migraine		
Psychiatric diseases	46	29.87%
Head Trauma	34	22.08%
Genetic diseases	33	21.43%
Physical diseases	31	20.13%
I don't know	30	19.48%
Migraine complications		
Sleeplessness	63	40.91%
Mental retardation	46	29.87%
I don't know	20	12.99%
Ischemic stroke	6	3.90%

Response options	Frequency (n=154)	Percentage (%)
Cancer	1	0.65%
Effective treatment options		
Medications	93	60.39%
Herbal Medicine	10	6.49%
Vitamins	13	8.44%
There is no treatment	15	9.74%
I don't know	20	12.99%
Electrical shocks	4	2.60%
Surgery	1	0.65
Migraine gender prevalence		
Females	72	46.75%
Males	6	3.90%
Both equally	48	31.17%
I don't know	20	12.99%
No response	8	5.19%
Common symptom during attack		
Vomiting and nausea	63	40.91%
Photophobia	37	24.03%
Vision loss	26	16.88%
I don't know	22	14.29%
Inability to control urine	5	3.25%

Our findings showed that out of 154 participants, 105 (68.4%) were suffering from migraine. The high burden among university students in this study highlights its role as a significant disruptor of academic life. Despite such high prevalence of migraine among students only 91 (59.1%) of participants demonstrated decent awareness, indicating a critical knowledge gap. Photophobia was reported as the most frequent symptom in the current study, followed by, headache, vomiting and nausea. Whereas, some other studies shown hypersensitivity to light and noise as well as nausea and vomiting, as major signs (10, 12). These findings are consistent with previous reports (6). El-Metwally *et al. reported* anxiety, depression, and hypertension as the usual cause of migraine (9) similar studies conducted among university and medical students have also reported a significant prevalence of migraine along with varying levels of awareness and perception. A study conducted among students at the University of Sharjah reported that a considerable proportion of migraine sufferers were unaware of their condition and experienced significant disability, with stress and poor sleep patterns identified as common triggers (13). Additionally, a local cross-sectional study conducted among medical students in Lahore showed clear negative impact of migraine on academic

performance (14). Another study from Riyadh reported that although students were generally aware of common migraine triggers, their detailed knowledge regarding migraine management and perception varied according to the year of study (19). These findings support that migraine awareness among students remains inconsistent despite the high disease burden. Moreover, some studies have revealed that better awareness is linked with enhanced disease-related familiarity and insights (15, 16). The observed variations in findings across studies might be due to differences in study methodology, educational background, data size, religious belief and the social behavior of the participants and demographic characteristics of the surveyed populations.

Table III. Knowledge of migraine

Questions	Response	Frequency (n=154)	Percentage (%)
Migraine usually affects 1 out of 3 females.	Yes	108	70.13%
	No	46	29.87%
Migraine headache is usually bilateral and pulsating.	Yes	97	62.99%
	No	57	37.01%
Migraine attacks last between 4–72 hours.	Yes	125	81.2 %
	No	29	18.8 %
Migraine has emotional, cognitive and behavioral features.	Yes	136	88.3 %
	No	18	11.7 %
Most patients in Pakistan receive appropriate preventive treatment.	Yes	34	22.1 %
	No	120	77.9 %
Stress and hormonal imbalance are risk factors for relapse.	Yes	129	84.0%
	No	25	16.0%
Noise and bright light can trigger migraine.	Yes	129	84.0%
	No	25	16.0%
Extreme temperatures are NOT triggers for migraine.	Yes	94	61.0%
	No	60	39.0%
Migraine can be managed with acute, preventive and non-pharmacological methods.	Yes	114	74.0%
	No	40	26.0%

Migraine greatly affects the quality of life of people who suffer from it. It causes repeated headaches that can limit daily activities, reduce work ability, and lower overall health and living standards. Because of migraine, many patients also develop mental health problems and other related illnesses, which increases the need for medical care and raises healthcare costs (17, 18). Studies show that people with migraine spend much more on healthcare than those without migraine. Migraine also affects a person's social life, physical health, emotions, and personal well-being (9). It can reduce concentration and thinking ability, making it difficult to study, work, or take part in sports and other activities. If migraine is not properly treated or managed, it becomes a heavy burden not only for the patient but also for society.

CONCLUSION

The study identified gaps in knowledge and perceptions of migraine among university students, alongside its adverse effects on productivity and well-being. Enhanced awareness and support strategies are necessary.

Study limitations:

Limitations of our study were its cross-sectional design, self-reported data, single center sample and researcher designed questionnaire.

Conflict of interest:

Authors declared no conflict of interest.

Authors' contribution:

SS Conceptualization, Data Collection, Writing original draft, Review and Editing; SA: Conceptualization, Supervision, Review and Editing; ZHS, SS & FUN Supervision, Review and Editing; SK Methodology, Supervision, Review and Editing; SAh; Data collection and Data Analysis.

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