



## Journal of Medical & Health Sciences Review



### MIGRAINE COMMON TRIGGERING FACTORS, AND ITS IMPACT ON ACADEMIC PERFORMANCE AMONG NURSING STUDENTS

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#### ARTICLE INFO:

##### Keywords:

Migraine, Nursing students, Academic performance, Daily activities, Triggers.

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##### Article History:

Published on 01 September 2025

#### ABSTRACT

**Background:** Migraine is common chronic neurological disorder. students are often exposed to various triggers that may significantly affect their daily lives and academic performance. Various factors such as stress, sleep disturbance, certain foods and environmental changes act as triggers for migraine attacks. The aim of this study to determine the migraine triggering factors, its impact on academic performance among nursing students.

**Methodology:** Nursing students of Liaquat College of Nursing (Female) Jamshoro participated in a cross-sectional study. All participants provided written informed consent. A total 141 nursing students were selected using a convenient non-probability sampling technique. Data were collected through a questionnaire, which include sections on demographic characteristics, determinants of migraine, effects of migraine on academic performance, and common migraine triggers.

**Results:** The study was conducted on a total sample of 141 participants, including 42 first-year, 35 second-year, 33 third-year, 31 fourth-year students. The study shows that 34.04% of students suffer from migraines, Common symptoms include light/noise sensitivity 80.14%

and nausea 19.85%. It negatively affects academics, with 91.48% missing lectures, 29.78% unable to do daily tasks, and around 33% facing difficulty concentrating, especially during exams. Major triggers were sleep disturbance 53.90% and caffeine intake 48.80%. Overall, the study highlights strong link between migraine, academic performance, and lifestyle-related factors.

**Conclusion:** Migraine significantly affected student's academic performance and daily activities. Common symptoms included sensitivity to light, nose and nausea. Sleep disturbance and caffeine were major triggers. Many students missed lectures and had difficulty concentrating. Managing triggers can help reduce migraine impact.

## INTRODUCTION:

A headache is a pretty frequent condition that people experience on a daily basis. Men and women of all ages are affected. Headaches come in a variety of forms. To name a few, these are tension-type headaches, migraines, and cluster headaches. People who get headaches may become seriously disabled as a result. It is now widely acknowledged that headaches are undertreated and underestimated in many cultures. A headache is categorized as primary if its underlying cause is unclear and as secondary if it has a recognized explanation, such as a brain tumor. One of the main headaches migraine. (Akour et al., 2018)

Migraine is a common chronic neurological disorder marked by a moderate to severe headache that is typically unilateral and throbbing. It is diagnosed after at least five incidents lasting four to seventy-two hours, each accompanied by nausea, vomiting, photophobia, or phonophobia.

(Alatawi et al., 2023) (Syed et al., 2020)

Migraines may or may not have an aura. A migraine with aura is defined by reversible sensory, visual, or other central nervous system symptoms. The aura usually appears before the onset of a migraine, but it can also happen concurrently or after the headache has passed. Visual auras are the most common in migraine patients, followed

by speech difficulties and sensory abnormalities. A pins-and-needles sensation may begin in one area and gradually move to one side of the body, tongue, and/or faces..(T et al., 2023) Episode migraine (EM) is defined as a headache that occurs on less than 15 days per month. Chronic migraine (CM) is defined by headaches occurring 15 or more days per month. (Jamali et al., 2020) Once it attacks, college students will experience a reduction in their studying skills and life quality, as well as physiological and psychological anguish. (Yang et al., 2022). Between episodes, the affected people are relatively normal. Certain circumstances may intensify a migraine headache. These include strenuous and repetitive physical activities. Being in a calm, dark area helps to relieve migraine attacks. is very essential, because avoidance of these events may reduce the frequency and severity of the episodes. (Akour et al., 2018)

Migraines express extreme sensitivity to light, sound, motion, scents, and other sensory cues during and after acute migraine attacks. Headaches' immediate antecedents are the stimuli that cause or worsen headaches, often known as trigger factors. The underlying trigger factors of migraine fluctuate between individuals and even between attacks in a particular patient. Recognizing the triggering factors of migraine (Kutlu et al., 2010) Various triggers can cause migraine attacks. modifications in sleeping

habits, such as sleep deprivation and sleep schedule modifications; Significant emotional shifts and psychological factors, such as stress. Vigorous exercise, food items, including milk, cheese, beer, coffee, and chocolate and external environmental changes, such as cold and hot weather fluctuations, noise, and harsh odors, can all cause migraines. (Xie et al., 2022) As well as fasting or missing meals, these can also be triggers. Medications that act as vasodilators, such as nitroglycerin, can potentially make migraines worse. (Syed et al., 2020). Hormonal variables, including pregnancy and menstruation, are also major migraine causes for women. Avoiding these causes could help prevent migraine attacks. As a result, the detrimental effects of attacks on people's health are lessened. (Xie et al., 2022) (Syed et al., 2020) Anxiety and stress are the two most common triggering factors for migraine in nursing students because of their difficult academic coursework and big life events, which may regress their academic performance. (Alharbi et al., 2021) Young adults are more likely than other age groups to experience these trigger factors, particularly educational stress and inconsistent sleep, which have rendered them more susceptible to migraines. This is especially true for university students. (Rafi et al., 2022) Their life and academic achievement may be significantly impacted by this. Numerous nations have conducted research on this subject to demonstrate the frequency of migraine headaches and examine their effects on students' lives and academic achievement. (Akour et al., 2018).

Migraine in students is linked to limited daily activities and poor academic performance. Since migraine sufferers typically miss more courses than their peers, the continual focus, tests, academic responsibilities, and effective knowledge acquisition can all have an impact on their quality of life. (Hatem et al., 2022)

Migraine affects around 11% of the general population, and it is twice or three times more common in women than in males. It is also regarded as the ninth most disabling condition worldwide. (Syed et al., 2020) Around 10–18% of college students worldwide are said to experience migraines. This high incidence of migraines lowers the quality of life for those who suffer from them and hinders their academic achievement. (Rafi et al., 2022)

Global study indicates that headache disorders are quite widespread, well-researched, and impact approximately 50% of the world's population, with migraine accounting for 30% of the burden. Asia has a lower prevalence of migraines (10.1%) compared to the USA (15.3%). Migraine prevalence among medical students in Iran, a nearby nation, was 6.9%.

In Pakistan, postgraduate medical students have been found to have a significantly greater prevalence of migraines (37.5%). (Khan et al., 2012). Focusing on Pakistani medical students, 52.3% experienced migraines, with females experiencing the condition more frequently (85.7%) than males (14.3%). (Mushtaq et al., 2022) (Khan et al., 2012) Overall, 16.1% of college students had migraines, while between 11 and 40% of medical students had the same condition. Frequent migraine attacks significantly lower people's quality of life by making it difficult for them to engage in extracurricular activities and by impairing their social and learning skills. Due to the lengthy hours required to complete several clinical practices under academic pressure, medical students are particularly vulnerable to migraines, which can lead to eating disorders and poor sleep quality. (Yang et al., 2022)

University students frequently suffer from migraines. Globally, 16.1% of college students suffer from migraines, with rates for male and female students being 11.3% and 21.7%, respectively. 13 Among medical

students, migraine is a common psychosomatic ailment, particularly for those who are regularly subjected to psychological and physical pressures from their coursework. According to a study done in Turkey on medical students who suffer from migraines, 30% of them would miss clinical practicum and classes due to migraine episodes. Regular attacks have a detrimental effect on medical students' everyday lives and academic performance, resulting in emotional distress, dissatisfaction, diminished energy and focus, and disturbed sleep.(Xie et al., 2022). Medical students are frequently working hard and require continual concentration and learning, which can generate a lot of stress and sleep difficulties.(Arabia, 2017)

The purpose of this study is to determine the, risk factors for the condition, and the impact of migraines on academic performance among nursing students.

#### **Study objectives:**

- To identify the common triggering factors of migraine among nursing students.
- To assess the impact of migraine on the academic performance of nursing students.

#### **Study purpose:**

- The purpose of this study is to identify common migraine triggers among nursing students and assess its impact on their academic performance.

#### **LITERATURE REVIEW:**

According to earlier research, medical students seem to be more vulnerable to migraines because of their busy schedules, study habits, and clinical responsibilities, which can lead to psychological and physical pressures that can make them more frequent. (Anwar et al., 2021)(Arabia, 2017)

In 2022, a study was undertaken among students on the medical campus of the University of Khartoum to investigate the

prevalence of migraine headaches and their impact on academic performance. Osman Ali MM, et al discovered that only 252 of 318 participants answered "yes" when asked if they had had two or more headache attacks in the previous three months, with 12.69% (n=32) and 87.3% (n=220) of them being males and females, respectively. This indicates that female participants experienced much more headaches than male individuals. But according to 150 respondents, their headaches made it difficult for them to work, study, or simply enjoy everyday activities. In terms of headache intensity, 30.3% reported having a strong headache, 57.8% reported having a light headache. (Eltahier & Omer, 2022)

To ascertain the occurrence of migraine among Chinese medical college students and to look into its characteristics and common causes, H. Yang et al. studied medical students at North Sichuan College in western China in 2022. Migraines are prevalent among North Sichuan Medical College students, according to the results. Lower-grade students, women, and individuals with a family history of migraines are more likely to experience headaches. Migraines may be lessened by increasing sleep quality and lowering stress.(Yang et al., 2022)

Mushtaq, H., Shazad, A., et al. conducted a study in 2022. The overall picture of research indicates that headache disorders are quite widespread, well-researched, and impact around 50% of the world's population, with migraine accounting for 30% of the total burden. Research indicates that migraine is more common in women (20.7%) than in men (9.7%). Compared to the United States (15.3%), migraine is less common in Asia (10.1%). 6.9% of medical students in Iran, a nearby nation, reported having migraines. According to one study, migraines account for 22.5% of all headaches in Pakistan, ranking second only to tension-type headaches.

Among Pakistani medical students, 52.3% experienced migraines.(Mushtaq et al., 2022)

M. Oraby, R. Soliman, M. Mahmoud, et al. conducted a descriptive cross-sectional study in 2021 that included the MIDAS test in a survey of 631 Egyptian medical students to establish the prevalence, characteristics, and level of migraine disability. 17.9% of medical students suffer from migraines. It was demonstrated that migraine caused higher handicap and was substantially more common in female students than males. It also revealed a statistically significant link between migraine frequency, intensity, and low academic performance. The study's biggest weakness was that it was conducted only at one location. Despite the large number of students in the study, it does not sufficiently represent Egyptian medical students. (Oraby et al., 2021)

F. Anwar, A. Bilal Sheikh, T. Taher, et al. conducted a study among medical students in Karachi in 2021 to find out how common migraine is among medical students and to identify the causes, risk factors, and effects of migraine on these people. The results show that the majority of medical students were female and that about 50% of them suffered from migraines. Migraine attacks may be reduced by reducing stress and obtaining better sleep.(Anwar et al., 2021)

Anwar et al. conducted a study in 2021 that found that the prevalence of migraine among medical students varies between 11% and 40% globally. The epidemiology of migraine in medical students is particularly interesting because migraine is the most common headache in young adults and becomes more common as students get older. The most common causes of migraine episodes, according to earlier research, include stress, insomnia, the menstrual cycle, eating patterns, temperature and weather fluctuations, frequent travel, oral contraceptives, foods, and physical activity. The most common migraine triggers include

sleep deprivation, exhaustion, and smoking, all of which can cause migraine attacks. The majority of migraine occurrences among medical students occur because they are. (Anwar et., al)

M. Kanjo, R. Alsaati, O. Jassomah, et al. conducted a cross-sectional survey among Fakeeh college students in 2020 to determine the prevalence of migraine headaches among students; all academic years were taken into account. Out of 800 pupils, only 313 have finished the survey. Fakeeh college students had a significant frequency of migraines, according to the study, and this prevalence rose as students' academic years increased. Sleep disturbances were the most common cause of headaches. Due to medicine being a new major at Fakeeh College, only a small number of guys answered the questionnaire, and the responses were from first to fourth years. (Kanjo M et al., 2021)

In 2019, a study was performed by Globally, between 11% and 40% of medical students suffer from migraines. Since migraine is the most common headache in young adults and its prevalence rises over a student's academic years, the epidemiology of migraine in medical students is particularly interesting. According to earlier research, the most common triggers for migraine episodes are stress, insomnia, the menstrual cycle, eating patterns, temperature and weather fluctuations, frequent travel, oral contraceptives, foods, and physical activity. The most common causes of migraine attacks include sleep deprivation, exhaustion, and smoking. The majority of migraine headaches that medical students experience occur as a result of.(Anwar et al., 2021)

In 2018, a cross-sectional study conducted at Jazan University during the 2016–2017 academic year was published by Akour, W. Shabi, A. Ageeli, et al. Their goal was to find out how often migraine headaches are among Jazan University medical students and how they impact their daily lives. 260

pupils were put to the test. The study found that 5% of students experienced migraine headaches, with the p-value showing little difference between male and female students. The amount of years spent in college varied significantly, though, and the prevalence increased. Every participant stated that the headache was interfering with their daily activities.(Akour et al., 2018)

At King Abdulaziz University, two cross-sectional investigations were also

conducted. (Ibrahim and others, 2018) (Arabia, 2017). In 2018, N. Ibrahim, M. Wakid, A. Alqarni, et al. conducted the first study at the Faculty of Applied Medical Sciences. The findings indicated that 36.5% of people had migraine headaches. A significant headache disability affects 29.7% of migraines, according to MIDAS. The most frequent causes of migraines were stress and sleep disturbances. (Ibrahim et al., 2018)

## **METHODOLOGY:**

### **Research Design:**

A Cross-Sectional Study design to assess the common triggering factors of migraine and its impact on academic performance among nursing students.

### **Study setting:**

Nursing students of liaquat college of Nursing (female) Jamshoro/Hyderabad.

### **Sample size:**

The sample size was calculated by using Raosoft. The population was taken from one college, within a 95% confidence level and a 5% margin of error. Additionally, a 10% non-response rate was include. Accordingly, the total sample size is 141 participants.

### **Sampling technique:**

Non probability convenience sampling technique was used to collect the data.

### **Data collection process:**

Permission was granted by the principle of liaquat College of Nursing (female) Jamshoro. participate were completely informed about the goals, methods, dangers, and advantages of the research. Verbal and written informed consent was obtained, guaranteeing voluntary participation and withdrawal at any time without impacting care.

### **Data Collection Tool:**

Data on the occurrence of migraines, their prevalent triggering factors, and their effects on nursing students' academic performance were gathered using a standardized questionnaire. The questionnaire has three organized tables and 19 questions, each of which focuses on a different facet of the research. The determinants of migraine in nursing students were listed in the first table. Important aspects of migraines are listed in this section, including their frequency, length, symptoms, and impact on day-to-day activities. Second table Effects of migraine on academic performance this section examines how migraine affect students class attendance, concentration, study habits, and overall academic performance. Third table triggers of migraine among study participants this section explore common migraine triggers, including stress, sleep patterns, dietary habits, prolonged screen exposure, and environmental factors. The questionnaire was designed with closed-ended questions (Yes/No).

### **Data analysis:**

Data were analyzed using SPSS version 23 Descriptive statistics, including frequency and percentage, were used to summarize the data.

### **Ethical Considerations:**

Permission was granted by Principle of Liaquat College of Nursing (female) Jamshoro.

Participants were fully informed about the study's purpose, procedure, risk and benefits. Verbal and written informed consent was obtained, ensuring that participation was voluntary and the participants could withdraw at any time when they wish to discontinue.

## RESULTS:

### Demographic analysis:

**Chart no: 01 Age-wise distribution of study participants**

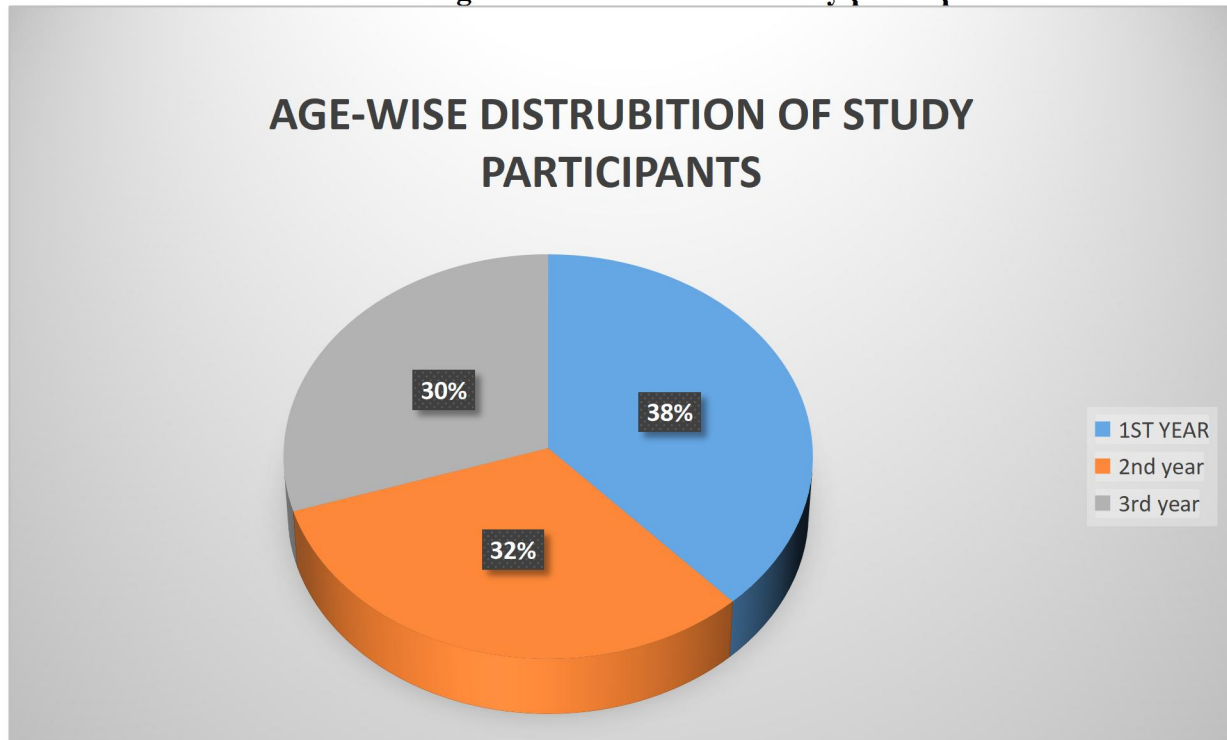


Chart no 1: A total of 141 participants were included in the study. According to the chart. The majority of them 75.17% were aged between 20 to 25 years, followed by 21.27% who were less than 20 years old, and only 3.54% were aged between 26 to 30 years.

**Chart no:02 1<sup>st</sup> year 2<sup>nd</sup> year 3<sup>rd</sup> year and 4<sup>th</sup> year distribution among participation**

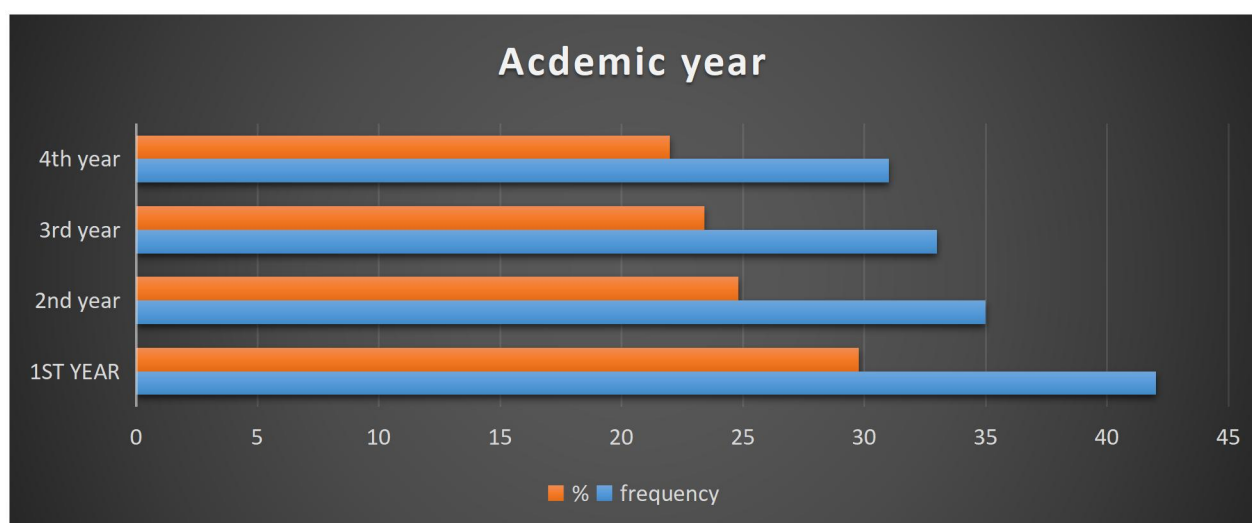


Chart no 2: Academic year illustrates both the percentage and frequency of students in each year. The highest frequency is observed in the first year ,29.78% were in the first year,24.82% in their second year,23.40% in their third year, and 21.98% were in their fourth year of study. followed by the 2<sup>nd</sup> year and 3<sup>rd</sup> years, with the 4<sup>th</sup> year having the lowest number of participants.

**Chart no:03 Migraine affect studying for tests and or exams among study participants**

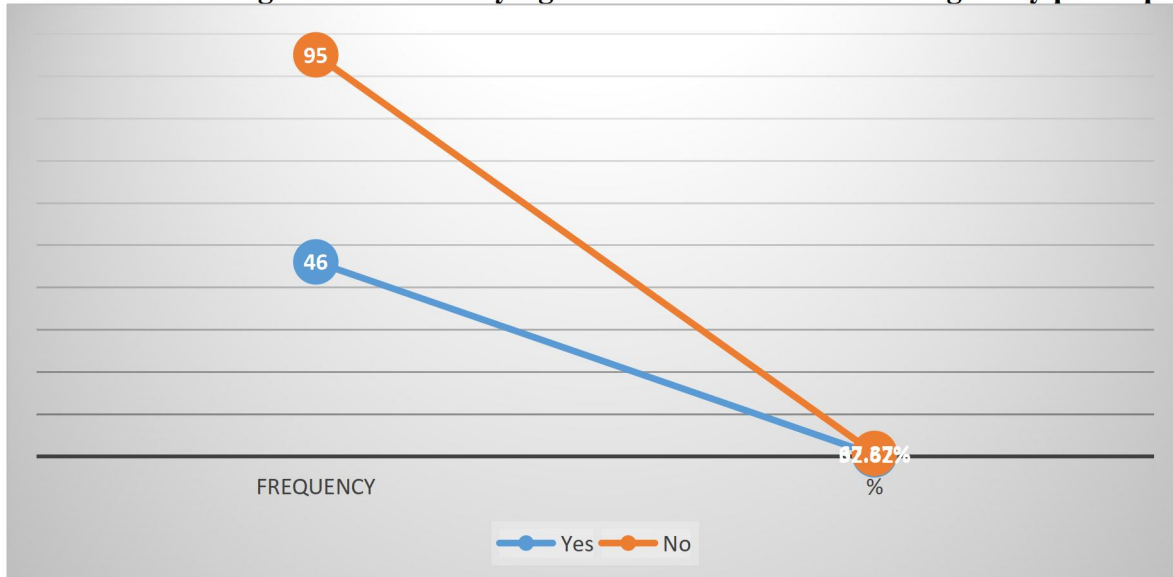


Chart no 3: Shows that 32.62% migraines affected their ability to study for tests or exams.

**Chart no:04 Migraine influence the choice of residency study participants**

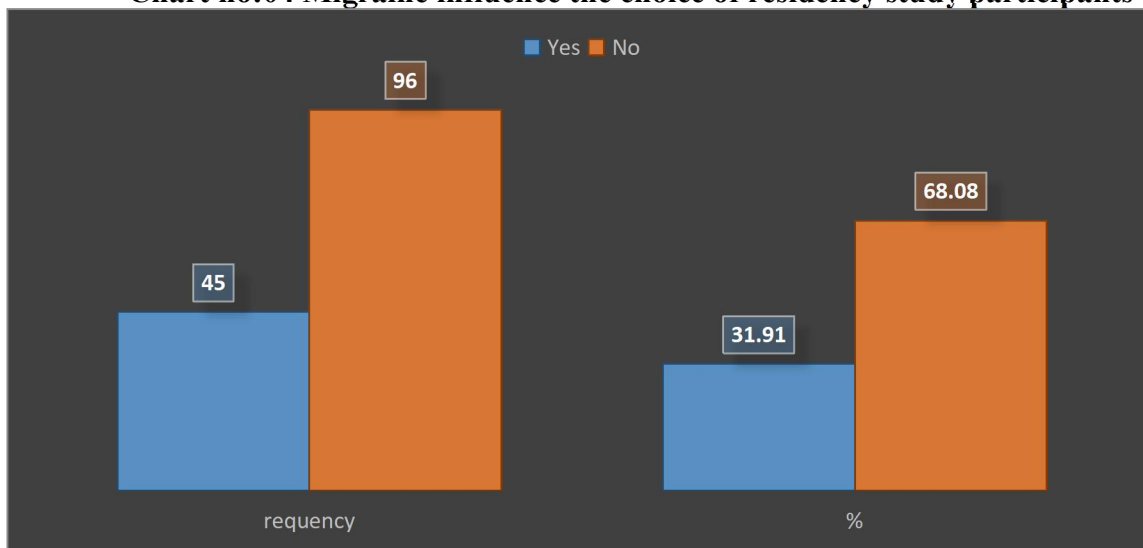


Chart no :04 Around 27.65% attended classes despite symptoms, and 31.91% said migraines influenced their choice of residency programs.



**Table 1. Determinants of migraine among study participants**

Parameter		No	%
<b>Episode frequent and /or intense</b>	Yes	48	34.04
	No	93	65.95
<b>Episode usually last more than 4 hours</b>	Yes	40	28.36
	No	101	71.63
<b>During the last 3 months, did you have any of the following with your migraines</b>			
<b>a)Felt nauseated or sick to your stomach</b>	Yes	28	19.85
	No	113	80.14
<b>b) Light or noise bothered them</b>	Yes	45	31.91
	No	96	68.08
<b>c) Migraines limit to work the ability to work, study, and do physical or intellectual activities for last one day</b>	Yes	42	29.78
	No	99	70.21

Among the participants, 34.04% reported experiencing frequent and / or intense migraine episodes, while 65.95% did not. Additionally, 28.36% stated that their migraine episodes typically lasted more than four hours, whereas 71.63 reported shorter durations. In terms of associated symptoms during the last three months, 19.85% of participants experienced nausea or stomach sickness with their migraines. A large portion, 80.14% reported being disturbed by light or noise. Moreover, 29.78% indicated that migraines affected their ability to work, study, or engage in physical or intellectual activities for last one day.

**Table 2. Effect of migraine on academic performance of participants**

Parameters		No	%
<b>Continue attending lectures while experiencing episode of migraine</b>	Yes	12	8.51
	No	129	91.48
<b>Migraine affects concentration at lectures</b>	Yes	44	31.20
	No	97	68.79
<b>Migraine affect studying for tests and or exams</b>	Yes	46	32.62
	No	95	67.37
<b>Feel too tired to continue working or studying while experiencing a migraine episode</b>	Yes	47	33.33
	No	94	66.66

Most participants 91.48% did not attend lectures during a migraine episode. About 31.20% reported difficulty concentrating in lectures, and 32.62% said migraines affected their ability to study for tests or exams. Additionally, 33.33% felt too tired to continue or working during an episode.

**Table 3. Triggers of migraine among study participants**

Parameters		No	%
<b>Experience a migraine that is more intense than usual while studying for tests or exams</b>	Yes	47	33.33
	No	94	66.66
<b>When you experience a migraine episode</b>			
<b>a)Continue studying with use of medications</b>	Yes	26	18.43
	No	115	81.56
<b>b) Continue without the use of medications</b>	Yes	5	3.54
	No	136	96.45
<b>c) Stop studying the due to the migraine</b>	Yes	25	17.73
	No	116	82.26
<b>Sleeping patterns alters during tests or exam periods</b>	Yes	76	53.90
	No	65	46.09
<b>Study for long period without taking regular breaks</b>	Yes	33	23.40
	No	108	76.59
<b>Continue beverages such as caffeinated energy drinks, chocolates, or coffee to help sustain concentration for a longer period</b>	Yes	66	46.80
	No	75	53.19
<b>Missed didactics last semester</b>	Yes	15	10.63
	No	126	89.36
<b>Missed clinical duties due to migraines</b>	Yes	7	4.94
	No	134	95.03
<b>Attendand educational activities despite symptoms because obligated to attend</b>	Yes	39	27.65
	No	102	72.34
<b>Migraine influence the choice of residency programs.</b>	Yes	45	31.91
	No	96	68.08

About one-third 33.33% of participants experienced more intense migraines during exams. only small number continued studying with medication 18.43% or without it 3.54%, while 17.73% had to stop studying due to migraines. Over half 53.90% reported disturbed sleep during exam periods, and 23.40% studied for long hours without breaks. Nearly half 46.80% used caffeinated drinks to stay focused. A small percentage missed didactics 10.63% or clinical duties 4.94% due to migraines.

Around 27.65% attended classes despite symptoms, and 31.91% said migraines influenced their choice of residency programs.

## **DISCUSSION:**

This descriptive cross-sectional research study was conducted to identify the common triggering factors of migraine and its impact on academic performance among nursing students. A total of 141 female nursing students participated in the study.

In response to the question regarding migraine occurrence, 34.04% of the participants reported having frequent and/or intense migraine episodes, indicating the prevalence of migraine in the study population. Additionally, 28.36% of participants reported that these episodes lasted more than four hours. In comparison, a study by Osman Ali MM et al. reported that 97.2% of students

experienced two or more migraine episodes within the past three months (Eltahier & Omer, 2022), a considerably higher frequency than observed in the present study.

Similarly, a study conducted at Jazan university in Saudi Arabia, the reported prevalence was only 5% (Akour et al., 2018), significantly lower than the in this study.

In Kuwait University, the prevalence was 27.9% (Ojini et al., 2009), and in a study from Nigeria, it was 24.5% (Ezeala-adikai et al., 2013), both of which are still lower than the frequency and severity reported in this research. Khan in his study showed that prevalence of migraine in of student of Peshawar 34.04% (Khan et al., 2012). According to 28.36% of participants in the current study, migraine attacks typically lasted longer than four hours.

In contrast, more than three-quarters of participants in a prior study reported having more than two headache attacks over the three months before to the study. This is consistent with findings from Saudi Arabian university students. In 2022, Rustom et al. The prior study emphasizes frequency, indicating that frequent and potentially protracted migraine episodes are typical among students, whereas the current study concentrates on episode duration.

The research study, 8.51% of participants continued to attend lectures despite a migraine episode, which was higher than in the prior study. Only 31.20% of students had trouble concentrating during lectures, compared to 92.9% in the prior research. Similarly, 36.62% reported migraines hampered their exam preparation, compared to 89.3% prior. Fatigue during migraines was reported by 33.33% in the current study, compared to 92.5% in the prior study. Overall, migraines had a less severe impact in this trial than in the prior one (Shukri et al., 2023).

The current study demonstrated that most migraineurs experienced some degree of influence on their educational performance and capacity to attend educational classes during migraine attacks. In particular, 91.48% of students reported missing class due to a migraine episode, while 31.20% of students indicated they had difficulty concentrating during lectures. Furthermore, 32.62 percent of respondents stated that migraine attacks made it impossible to study for tests or exams, and 33.33% of respondents felt too frustrated to complete their academic work during a migraine attack. These outcomes are in line with a study conducted in the US that discovered migraines negatively impacted students' academic performance and attendance. These research' coherence highlights the impact migraines have on students' academic performance over the world (Arabia, 2017).

In the current study, 53.90% of participants reported changes in sleeping patterns during test or exam times, showing irregular sleep as a strong predictor of academic stress.

In contrast, the previous study discovered numerous aggravating variables for migraine, with dehydration being the most prevalent, followed by stress and a lack of sleep. A lack of sleep was a major contributor to the aggravation of migraine attacks. In previous studies, stress and sleep disturbances were identified as important triggers (Liaquat et al., n.d.).

In the current study, 46.80% of participants reported taking beverages such as caffeinated energy drinks, chocolates, or coffee to assist them maintain concentration over time.

In a previous study, undergraduate students had significantly lower rates of stimulant substance use, with only 3.5% regularly smoking cigarettes and 10.3% regularly consuming alcohol. A previous study found that regular alcohol or cigarette use among Nigerian undergraduates was unlikely to be associated with headache frequency, despite some evidence suggesting that these behaviors are risk factors for headaches. This is in contrast to the current study, when almost half of the participants took common stimulants, which may suggest a greater dependence on these drugs to cope with cognitive or academic demands (Ojini et al., 2009). In the current study, only

male female participants were included, so it was not possible to compare migraine difference between males and females. This is a limitation, as gender can affect how migraine occur. In the previous study, migraines were found to be 1.5 times more common in females than in males, which matches other research. However, there was no major difference between males and females in when the migraines started or how they felt. This might be because both genders were exposed to similar triggers like stress, poor sleep, long reading hours, and exams.(Access, 2014) These results suggest that while gender can affect how common migraines are, the triggers may affect both males and females in similar ways. Not including females in the current study makes it harder to fully understand these difference, showing the need for more inclusive research in the future.

### **Limitations of the study:**

This study was conducted exclusively on female nursing students from a single institution, which limits the generalizability of the findings to the wider student population, including males and students from other disciplines. Data was based on self-reporting, which may involve recall bias or under/over-reporting. Additionally, no clinical evaluation was performed to confirm migraine diagnosis, and other contributing factors such as hormonal influences, lifestyle, and psychological stressors were not deeply explored.

### **CONCLUSION:**

Migraine are a frequent and serious issues among university students, often triggered by academic stress and lifestyle factors. They negatively impact student's daily activities and academic success, making prevention and early management crucial.

### **RECOMMENDATION:**

Male and female students from a range of academic fields should be included in future research to improve the results' generalizability. To increase accuracy, a medical professional's clinical confirmation of a migraine diagnosis is advised. The impact of hormonal, lifestyle, and psychological factors on the prevalence of migraines among students should also be investigated in future studies.

### **Acknowledgment:**

My sincere are extended to all the 1<sup>st</sup> year 2<sup>nd</sup> year 3<sup>rd</sup> year and 4<sup>th</sup> year students who participate in the study. Foremost, I would like to express my sincere gratitude to my respected teacher, Sir Muhammad Zakarya, for the continuous support in my study and for his patience, enthusiasm, motivation, and immense knowledge.

**Conflict of interest:** None

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