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PREVALENCE OF MIGRAINE AMONG ADULT, AND ITS ASSOCIATED RISK FACTORS AT PEOPLES MEDICAL COLLEGE HOSPITAL NAWABSHAH

Sanam Parveen[*1], Manzoor Ahmed[2]

[*1]*GBSN, College of Nursing, Female, Nawabshah, Affiliated, Peoples University of Medical & Health Sciences for Women, Nawabshah, Shahed Benazirbad.*

[2]*Nursing Instructor, College of Nursing, Female, Nawabshah, Affiliated, Peoples University of Medical & Health Sciences for Women, Nawabshah, Shahed Benazirbad.*

[*1]sanamujjan265@gmail.com

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Corresponding Author: *
Sanam Parveen

Abstract

Background: *The world prevalence of migraine is estimated at 5–10% in the general population, but it is much higher in young adults, particularly females. In men, migraine is often underdiagnosed or confused as tension-type or sinus headache and, as a consequence, treated inadequately and delayed. Headache is one of the most common neurological disorders worldwide, and migraine is one of the most disabling forms. It is characterized by a recurrent unilateral throbbing headache, usually associated with nausea, photophobia, and phonophobia.*

Objectives of study: *This study Determine the prevalence of migraine, and its associated risk factors among young adult at Peoples Medical College Nawabshah.*

Methodology: *This study was a cross-sectional descriptive, in which non-probability convenience sampling was used. The sample size of this study was 169, and conducted from September to November 2025 at Peoples Medical College Nawabshah.*

conducted to determine the prevalence of migraine among adults attending the Nawabshah People's Medical and Central Hospital (PMCH), Nawabshah.

Results: *The prevalence of migraine among male were (48.5%) and female (51.5%), Mean age of study subject 18 year, with S.D ± 4.04789, minimum 12 year and maximum 38 years, and have significant association (p = .041). The most frequent symptoms of migraine reported were nausea, and sleep deprivation, sensitivity of light. Majority of participants were female. Moreover, recurrent severe headache was reported by 130 participant (76.92%), and have significant association (p=.003)*

Conclusion: *This study concluded that prevalence of migraine, and associated risk factors at Peoples Medical College Hospital Nawabshah., further, this study also determined the its impact on daily life style*

Introduction:

Primary headache disorders, including migraine and tension-type headache, affect a substantial proportion of the global adult population, with nearly 46% of individuals experiencing these conditions (1) Among these, migraine affects

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approximately 42%, while tension-type headache is observed in around 11% (2). These disorders continue to be significant yet largely under-addressed sources of morbidity and disability worldwide (3). Research indicates that the lifetime prevalence of primary headache disorders can reach up to 90% (4). Given the global burden of over 1 billion cases, addressing both preventative strategies and patient management has become a pressing public health priority (5). The increasing burden of headache disorders has led to greater recognition within both professional and societal domains (6). Migraine, as a primary headache disorder, presents a substantial burden to individuals and society alike. It is one of the leading causes of global disability and exerts a profound negative impact on quality of life (7, 8). Unlike secondary headaches, which arise due to other underlying medical conditions, primary headaches, including migraines, do not have an identifiable aetiology (9). The majority of migraines occur in individuals between the ages of 18 and 45 years, affecting their social, personal, and economic well-being (10). A significant number of individuals suffer from frequent migraine attacks each year, contributing to absenteeism from work or school, reduced productivity, and an increased incidence of psychiatric disorders such as anxiety and depression (11). Studies conducted in Pakistan reveal a high prevalence of migraine among university students, with factors such as stress, irregular sleep patterns, and unhealthy dietary habits contributing to this burden (12). Similarly, studies in the UAE have highlighted the detrimental impact of migraine on the job performance and overall well-being of healthcare professionals (13). Although numerous studies have been conducted in Pakistan, the findings remain inconsistent across different geographic areas and demographic groups (14). Notably, data on the incidence of migraines in the Sindh province, specifically in Nawabshah, remains scarce. No dedicated studies have explored the prevalence of migraines in this region (15, 16). The absence of reliable local epidemiological data represents a significant knowledge gap. Without such data, effective healthcare planning and public education initiatives become challenging. In response, the current study seeks to investigate the prevalence of migraines among adults at the People Medical College Hospital (PMCH) in Nawabshah, Pakistan, aiming to provide essential baseline data to inform local healthcare strategies and policy development (17). University student populations are particularly susceptible to migraines, with a combination of academic pressures, poor sleep hygiene, and unhealthy lifestyle choices serving as common risk factors. The prevalence of migraine in this group ranges from 9% to 27.9%, with emotional stress and environmental changes being frequent triggers (18). These factors significantly affect students' academic performance and daily functioning. This increasing burden is reflected in global estimates, where nearly one in four adults are affected by migraines, with a particularly higher prevalence in women and individuals in mid-adulthood.

Objective of Study: This study determined the prevalence of migraine and its associated risk factors Peoples Medical College Hospital Nawabshah.

Material & Methods

Study Setting The study was conducted in people medical collage hospital Nawabshah.

Study Design: A descriptive cross- sectional descriptive study was used in this study.

Study Duration: The study was conducted from September to November 2025.

Sampling Technique: A non-probability convenience sampling method was used in this study**.**

Sample Size: A total of 169 adult patients participated in the study. This sample size was considered realistic and manageable for data collection within a three-month period.

The sample size was determined using the Rao soft sample size calculator at a 95% confidence level, 5% margin of error, and 50% of response rate. The required sample size was calculated as 169 participants.

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Inclusion Criteria

1. Patient aged 15 to 40 years.
2. Presentation of severe headache, defined by a pain intensity score of 7 or higher on the Numerical Rating Scale (0 = no pain, 10 = worst pain possible) at Nawabshah Peoples University Hospital.
3. Migraine diagnosis according to interclass correlation coefficient (ICC-3) criteria and written informed consent.

1.1 Exclusion Criteria

1. Patients with secondary headaches or chronic neurological/psychiatric disorders.
2. People taking prophylactic treatment for migraine or with a history of substance abuse.
3. Participants who refuse to participate or provide incomplete information.

1.2 Data collection tools, procedures, and Analysis:

Data were collected using a structured questionnaire developed in accordance with the study objectives and based on migraine-related literature and the International Classification of Headache Disorders (ICHD). The questionnaire consisted of multiple sections covering demographic characteristics, clinical features of headache, migraine-specific symptoms, neurological manifestations, lifestyle factors and triggers, medication use, family history, and the academic impact of migraine. Content validity of the questionnaire was ensured through expert review, and necessary modifications were made following supervisory feedback to improve clarity and relevance. The finalized questionnaire was considered appropriate for data collection.

Participants meeting the inclusion criteria were approached and informed about the purpose and procedure of the study in simple and understandable language. Eligibility of each participant was confirmed prior to inclusion. Written informed consent was obtained before administering the questionnaire, and participants were given the opportunity to ask questions to ensure complete understanding. Data collection was carried out through structured, face-to-face interviews using the questionnaire, with an average duration of approximately 15–20 minutes per participant. Interviews were conducted in a private and comfortable environment to maintain confidentiality. The questionnaire was reviewed immediately after completion to identify any missing or unclear responses, which were clarified with the participant, when necessary, Data were entered and analyzed using SPSS version 26. Descriptive statistics were used to summarize the data, including mean, standard deviation, frequencies, and percentages. Inferential statistics were applied to assess the association between migraine status and sociodemographic variables. The chi-square test was used for categorical variables, while Kendall's tau test was applied where appropriate to determine associations between ordinal variables. The level of statistical significance was set at $p < 0.05$, and results with a probability of less than 5% of occurring by chance were considered statistically significant.

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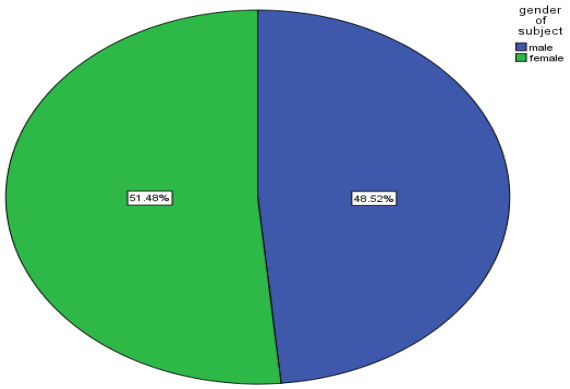
Results

Figure No.01 Distribution of gender of subject:



Gender distribution in this study was as male (48.52%) and female (51.48%).

Table no 01. Distribution of clinical information and age of subject:

S no	Item	Frequency	P value
1	**Age in which headache noticed** Minimal year Maximum year Mean S.D	 12.00 38.00 18.6805 4.04789	.041
2	**Do you get recurrence severe headache?** Yes No	 130 (76.92%) 39 (23.079%)	.003
3	**How often in the last three month** Daily Once in a month 2-3 month	 44(26.03%) 51(30.17%) 74(43.78%)	.474
4	**Usual duration of one attack.** Mean S.D Minimum Maximum	 2.1006 .87726 1.00 4.00	.073
5	**Pain location** One side Both side Front Back/neck	 55(32.54%) 47(27.81%) 53(31.36%) 14(8.28%)	.02
6	**Pain types.** Pulsating Pressing Stabbing	 27(15.97%) 81(47.92%) 61(36.09%)	.046

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7	**Pain severity.** Mean S.D Minimum Maximum	 6.2544 .81671 5.00 9.00	.122
8	**Nausea or vomiting** Yes No	 75(44.37%) 94(55.62%)	.067
9	**Sensitivity to light.** Yes No	 135(79.88%) 34(20.11%)	.437
10	**Sensitivity to sound** Yes No	 103(60.94%) 66(39.05%)	.006
11	**Routine activity is affected?** Yes No	 144(85.20%) 25(14.79%)	.004
12	**During migraine need to stop activities lie/down.** Yes No	 126(74.55%) 43(25.44%)	.092

Table no 01: Mean age of study subject 18 year, with S.D ± 4.04789, minimum 12 year and maximum 38 years, and have significant association (p = .041)

Item no 02: Recurrent severe headache was reported by 130 participant (76.92%), and have significant association (p=.003)

Item no 03: During the last three months, most participants reported experiencing headaches 2-3 times per month, 74 participants (43.78%). This was followed by headaches occurring once a month in 51 participants (30.17%). Daily headache was reported by 44 participants (26.03%).

Item no 04: Usual duration of on attack, mean age of subject 2.1006, with S. D ±.87726, minimum 1.00 and maximum 4.00.

Item no 05: Pain location, one sided headache was most commonly reported by 55 participants (32.54%), followed by frontal pain in 53 participants (31.36%), pain in both sides in 47 participants (27.81%), and pain at back or neck in 14 participant (8.28%), and significant association (p=.02)

Item no 06: Pain types, pressing pain was the most commonly reported, affecting 81 participants (47.92%). This was followed by stabbing pain in 61 participants (36.09%), pulsating pain was reported by 27 participant (15.97%).

Item no 07: regarding the pain severity, mean is the 6.2544, S.D± .81671, minimum 5.and maximum is 9.

Item no 08: Nausea or vomiting was reported by 75 participants (44.37%), and 94 participants (55.62%) did not report these symptoms. This is not statistically significant association value (p=.067)

Item no 09: sensitivity to light be reported by 135 participants (79.88%), and 34 participants (20.11%) did not experience light sensitivity to light. This is not significant value (p=.437)

Item no 10: sensitivity to sound was reported by 103 participants (60.94%), whereas 66

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participants (39.05%) did not report this symptom. A statistically significant association was observed (*p*=.006)

Item no 11: most participants reported that headache was worsened by routine physical activity, affecting 144 participants (85.20%), and 25 participants (14.79%) did not report worsening with activity, and also significant value (*p*=.004)

Item no 12: The need to stop activities and lie down during headache was reported by 126 participants (74.55%), while 43 participant (25.44%) did not require rest. This not significant value (p=.092)

Table no 02: Distribution of triggers, and life style and age of subject:

S no	Items	Frequency	*P* Value
1	**Visual change?**		.040
	Yes	100(59.17%)	
	No	69(40.82%)	
2	**Numbness or weakness?**		.268
	Yes	88(52.07%)	
	No	81(47.92%)	
3	**Speech difficulty?**		.009
	Yes	62(36.68%)	
	No	107(63.31%)	
4	**Common triggers.**		
	Lack of sleep	53(31.36%)	.016
	Noise	45(26.62%)	
	Bright light	23(13.60)	
	Certain food/drinks	16(9.36%)	
	Physical change	13(7.69%)	
	Weather	19(11.24%)	
5	**Average sleep duration in 24 hours.**		
	Mean	2.2722	.002
	S.D	.71331	
	Minimum	1.00	
	Maximum	4.00	
6	**Water intake per day.**		
	Mean	2.0592	.001
	S.D	.72952	
	Minimum	1.00	
	Maximum	4.00	
7	**Do you take painkillers? For headache.**		.610
	Yes	151(89.34%)	
	No	18(10.65%)	
8	**History of migraine?**		
	Negative	83(49.11%)	.002
	Positive	86(50.88%)	

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9	**Skipping class assignment due to headache?** Not even real Frequently	 54(31.95%) 155(68.04%)	.003

Table no 01: visual change was reported by 100 participants (59.17%), while 69 participant (40.82%) did not experience any visual change. No statistically significant association was found (p=.040)

Item no 02: numbness, tingling or weakness was reported by 88 participants (52.07%), and 81 participants (47.92%) did not report these symptoms. This not significant value (p=.268)

Item no 03: speech difficulty was reported by 62 participants (36.68%), and 107 participants (63.31%) reported normal speech. A statistically significant association was observed for speech difficulty (p=.009)

Item no 04: Among the participants, the most commonly reported triggers was lack of sleep, reported by 53 participants (31.36%). This was followed by noise in 45 participants (26.62%) and bright light in 23 participants (13.61%). Weather changes were reported by 19 participants (11.24%), while certain foods or drinks triggered headache in 16 participants (9.36%). Physical changes were the least common trigger, reported by 13 participants (7.69%). This is not significant value (p=.896)

Item no 05: Average sleep duration in 24 hours, mean in 2.2722, S.D ± .71331, minimum is 1.00 and maximum value is 4.00. This is not finding a significant value (p=.212)

Item no 06: Water intake per day, mean age of study subject, 2.0592, with S.D± .72952, minimum value is 1.00 and maximum value is 4.00. This is not significant value (p=.078)

Item no 07: large participant reported taking painkillers, with 151 participant (89.34%) responding yes, 18 participants (10.65%) reported not using painkillers, and however, no statistically significant association was observed (.610)

Item no 08: This item show family history of migraine was reported negative by 83 participant (49.11%), while 86 participants (50.88%) reported positive family history of migraine, showing almost equal distribution between the two groups, no significant association observed (.582)

Item no 09: most participant that they did not skip classes frequently due to headache. A total of 155 participants (68.04%) stated that they do not often miss classes because of headache. While 54 participants (31.95%) reported that they frequently skipped classes due to headache. This this finding was not statistically significant (p=.597)

Table no 02: Distribution of clinical information and gender of subject:

S no	Item	Frequency	*P* value
1	**Age in which headache noticed** Mean S.D Minimum Maximum	 18.6805 4.4789 12.00 38.00	.017
2	**Do you get recurrence severe headache?** Yes No	 130 (76.92%)	.694

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		39 (23.079%)	
3	**How often in the last three month** Daily Once in a month 2-3 month	 44(26.03%) 51(30.17%) 74(43.78%)	.018
4	**Usual duration of one attack.** Mean S.D Minimum Maximum	 2.1006 .87726 1.00 4.00	.001
5	**Pain location** One side Both side Front Back/neck	 55(32.54%) 47(27.81%) 53(31.36%) 14(8.28%)	.062
6	**Pain types.** Pulsating Pressing Stabbing	 27(15.97%) 81(47.92%) 61(36.09%)	.261
7	**Pain severity.** Mean S.D Minimum Maximum	 1.5148 .50127 1.00 2.00	.187
8	**Nausea or vomiting** Yes No	 75(44.37%) 94(55.62%)	.667
9	**Sensitivity to light.** Yes No	 135(79.88%) 34(20.11%)	.337
10	**Sensitivity to sound** Yes No	 103(60.94%) 66(39.05%)	.533
11	**Routine activity is affected?** Yes No	 144(85.20%) 25(14.79%)	.706
12	**During migraine need to stop activities lie/down.** Yes No	 126(74.55%) 43(25.44%)	.760

Table no 01: mean age of study subject 18 year, with S.D ± 4.04789, minimum 12 year and maximum 38 years, and also strongly association

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(*p*=.017)

Item no 02: Recurrent severe headache was reported by 130 participant (76.92%), while 39 participant (23.07%) did not report recurrent severe headache.

Item no 03: during the last three months, most participants reported experiencing headaches 2-3 times per month, 74 participants (43.78%). This was followed by headaches occurring once a month in 51 participants (30.17%). Daily headache was reported by 44 participants (26.03%), and have significant association (p=.018)

Item no 04: usual duration of on attack, mean age of subject 2.1006, with S.D ±.87726, minimum 1.00 and maximum 4.00, and have significant association (p=.001)

Item no 05: with regarding to pain location, one sided headache was most commonly reported by 55 participants (32.54%), followed by frontal pain in 53 participants (31.36%), pain in both sides in 47 participants (27.81%), and pain at back or neck in 14 participant (8.28%).

Item no 06: regarding the types of pain, pressing pain was the most commonly reported, affecting 81 participants (47.92%). This was followed by stabbing pain in 61 participants (36.09%), pulsating pain was reported by 27 participant (15.97%).

Item no 07: regarding the pain severity, mean is the 1.5148, S.D± .50127, minimum 1.and maximum is 2.

Item no 08: nausea or vomiting was reported by 75 participants (44.37%), and 94 participants (55.62%) did not report these symptoms.

Item no 09: sensitivity to light be reported by 135 participants (79.88%), and 34 participants (20.11%) did not experience light sensitivity to light.

Item no 10: sensitivity to sound was reported by 103 participants (60.94%), whereas 66 participants (39.05%) did not report this symptom.

Item no 11: most participants reported that headache was worsened by routine physical activity, affecting 144 participants (85.20%), and 25 participants (14.79%) did not report worsening with activity.

Item no 12: the need to stop activities and lie down during headache was reported by 126 participants (74.55%), while 43 participant (25.44%) did not require rest.

Table no 03: Distribution of triggers, life style and gender of subject:

S no	Items	Frequency	P Value
1	**Visual change?** Yes No	 100(59.17%) 69(40.82%)	.161
2	**Numbness or weakness?** Yes No	 88(52.07%) 81(47.92%)	.079
3	**Speech difficulty?** Yes No	 62(36.68%) 107(63.31%)	.105

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4	**Common triggers.** Lack of sleep Noise Bright light Certain food/drinks Physical change Weather	 53(31.36%) 45(26.62%) 23(13.60) 16(9.36%) 13(7.69%) 19(11.24%)	.031
5	**Average sleep duration in 24 hours.** Mean S.D Minimum Maximum	 2.2722 .71331 1.00 4.00	.033
6	**Water intake per day.** Mean S.D Minimum Maximum	 2.0592 .72952 1.00 4.00	.199
7	**Do you take painkillers? For headache.** Yes No	 151(89.34%) 18(10.65%)	.173
8	**History of migraine?** Negative Positive	 83(49.11%) 86(50.88%)	.595
9	**Skipping class assignment due to headache?** Not even real Frequently	 54(31.95%) 155(68.04%)	.947

Table no 01: visual change were reported by 100 participants (59.17%), while 69 participant (40.82%) did not experience any visual change. No statistically significant association was found (p=.040)

Item no 02: numbness, tingling or weakness was reported by 88 participants (52.07%), and 81 participants (47.92%) did not report these symptoms. This not significant value (p=.079)

Item no 03: speech difficulty was reported by 62 participants (36.68%), and 107 participants (63.31%) reported normal speech. Not statistically significant association was observed for speech difficulty (p=.105)

Item no 04: among the participants, the most commonly reported triggers was lack of sleep, reported by 53 participants (31.36%). This was followed by noise in 45 participants (26.62%) and bright light in 23 participants (13.61%). Weather

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changes were reported by 19 participants (11.24%), while certain foods or drinks triggered headache in 16 participants (9.36%). Physical changes were the least common trigger, reported by 13 participants (7.69%). This is not significant value (p=.031)

Item no 05: Average sleep duration in 24 hours, mean in 2.2722, S.D ± .71331, minimum is 1.00 and maximum value is 4.00. This is not finding a significant value (p=.033)

Item no 06: Water intake per day, mean age of study subject, 2.0592, with S.D± .72952, minimum value is 1.00 and maximum value is 4.00. This is not significant value (p=.199)

Item no 07: large participant reported taking painkillers, with 151 participant (89.34%) responding yes, 18 participants (10.65%) reported not using painkillers, and however, no statistically significant association was observed (.173)

Item no 08: This item show family history of migraine was reported negative by 83 participant (49.11%), while 86 participants (50.88%) reported positive family history of migraine, showing almost equal distribution between the two groups, no significant association observed (.595)

Item no 09: most participant that they did not skip classes frequently due to headache. A total of 155 participants (68.04%) stated that they do not often miss classes because of headache. While 54 participants (31.95%) reported that they frequently skipped classes due to headache. This this finding was not statistically significant (p=.947)

Table no 02: Distribution of clinical information and marital status of subject:

S no	Item	Frequency	P value
1	**Age in which headache noticed** Mean S.D Minimum Maximum	 1.3491 .47811 1.00 2.00	.067
2	**Do you get recurrence severe headache?** Yes No	 130 (76.92%) 39 (23.079%)	.814
3	**How often in the last three month** Daily Once in a month 2-3 month	 44(26.03%) 51(30.17%) 74(43.78%)	.220
4	**Usual duration of one attack.** Mean S.D Minimum Maximum	 1.3491 .47811 1.00 2.00	.049
5	**Pain location** One side Both side Front Back/neck	 55(32.54%) 47(27.81%) 53(31.36%) 14(8.28%)	.519

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6	**Pain types.** Pulsating Pressing Stabbing	 27(15.97%) 81(47.92%) 61(36.09%)	.234
7	**Pain severity.** Mean S.D Minimum Maximum	 6.2544 .81671 5.00 9.00	.048
8	**Nausea or vomiting** Yes No	 75(44.37%) 94(55.62%)	.791
9	**Sensitivity to light.** Yes No	 135(79.88%) 34(20.11%)	.958
10	**Sensitivity to sound** Yes No	 103(60.94%) 66(39.05%)	.500
11	**Routine activities are affected?** Yes No	 144(85.20%) 25(14.79%)	.741
12	**During migraine need to stop activities lie/down.** Yes No	 126(74.55%) 43(25.44%)	.003

Table no 01: mean age of study subject 18 year, with S.D ± 4.04789, minimum 12 year and maximum 38 years. This is not significant value (p=.067)

Item no 02: Recurrent severe headache was reported by 130 participant (76.92%), while 39 participant (23.07%) did not report recurrent severe headache. This is not significant value (p=.814)

Item no 03: during the last three months, most participants reported experiencing headaches 2-3 times per month, 74 participants (43.78%). This was followed by headaches occurring once a month in 51 participants (30.17%). Daily headache were reported by 44 participants (26.03%). This the not significant value (p=.220)

Item no 04: usual duration of on attack, mean age of subject 2.1006, with S.D ±.87726, minimum 1.00 and maximum 4.00.this is a not significant value(p=.049)

Item no 05: with regarding to pain location, one sided headache was most commonly reported by 55 participants (32.54%), followed by frontal pain in 53 participants (31.36%), pain in both sides in 47 participants (27.81%), and pain at back or neck in 14 participant (8.28%). This is not significant value (p=.519)

Item no 06: regarding the types of pain, pressing pain was the most commonly reported, affecting 81 participants (47.92%). This was followed by stabbing pain in 61 participants (36.09%), pulsating pain was reported by 27 participant (15.97%). This is not significant value (p=.234)

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Item no 07: regarding the pain severity, mean is the 1.5148, S.D± .50127, minimum 1.and maximum is 2. This is the not significant value (p=.048)

Item no 08: nausea or vomiting was reported by 75 participants (44.37%), and 94 participants (55.62%) did not report these symptoms. This is not statistically significant association value (p=.791)

Item no 09: sensitivity to light be reported by 135 participants (79.88%), and 34 participants (20.11%) did not experience light sensitivity to light. This is not significant value (p=.958)

Item no 10: sensitivity to sound was reported by 103 participants (60.94%), whereas 66 participants (39.05%) did not report this symptom. Not statistically significant association was observed (p=.500)

Item no 11: most participants reported that headache was worsened by routine physical activity, affecting 144 participants (85.20%), and 25 participants (14.79%) did not report worsening with activity. This is not significant value (p=.741)

Item no 12: the need to stop activities and lie down during headache was reported by 126 participants (74.55%), while 43 participant (25.44%) did not require rest. This is a significant value (*p*=.003).

Table no 03: Distribution of triggers, and life style and marital status of subject:

S no	Items	Frequency	P Value
1	**Visual change?** Yes No	 100(59.17%) 69(40.82%)	< .05
2	**Numbness or weakness?** Yes No	 88(52.07%) 81(47.92%)	. < .05
3	**Speech difficulty?** Yes No	 62(36.68%) 107(63.31%)	.905
4	**Common triggers.** Lack of sleep Noise Bright light Certain food/drinks Physical change Weather	 53(31.36%) 45(26.62%) 23(13.60) 16(9.36%) 13(7.69%) 19(11.24%)	. < .05
5	**Average sleep duration in 24 hours.** Mean S.D Minimum Maximum	 2.2722 .71331 1.00 4.00	.017
6	**Water intake per day.** Mean S.D Minimum Maximum	 2.0592 .72952 1.00 4.00	.019

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7	**Do you take painkillers? For headache.** Yes No	 151(89.34%) 18(10.65%)	.502
8	**History of migraine?** Negative Positive	 83(49.11%) 86(50.88%)	~~~~~
9	**Skipping class assignment due to headache?** Not even real Frequently	 54(31.95%) 155(68.04%)	< .05

Table no 01: visual change was reported by 100 participants (59.17%), while 69 participant (40.82%) did not experience any visual change, and have significant association (*p*=.< .05)

Item no 02: numbness, tingling or weakness was reported by 88 participants (52.07%), and 81 participants (47.92%) did not report these symptoms, also have significant association (*p*= < .05)

Item no 03: speech difficulty was reported by 62 participants (36.68%), and 107 participants (63.31%) reported normal speech. Not statistically significant association was observed for speech difficulty (*p*=.905)

Item no 04: among the participants, the most commonly reported triggers was lack of sleep, reported by 53 participants (31.36%). This was followed by noise in 45 participants (26.62%) and bright light in 23 participants (13.61%). Weather changes were reported by 19 participants (11.24%), while certain foods or drinks triggered headache in 16 participants (9.36%). Physical changes were the least common trigger, reported by 13 participants (7.69%) , and have significant association (*p*=.05).

Item no 05: Average sleep duration in 24 hours, mean in 2.2722, S.D± .71331, minimum is 1.00 and maximum value is 4.00 , and strongly associated (p=.017)

Item no 06: Water intake per day, mean age of study subject, 2.0592, with S.D± .72952, minimum value is 1.00 and maximum value is 4.00. This is not significant value (p=.019)

Item no 07: large participant reported taking painkillers, with 151 participant (89.34%) responding yes, 18 participants (10.65%) reported not using painkillers, and however, no statistically significant association was observed (.502)

Item no 08: This item show family history of migraine was reported negative by 83 participant (49.11%), while 86 participants (50.88%) reported positive family history of migraine, showing almost equal distribution between the two groups.

Item no 09: most participant that they did not skip classes frequently due to headache. A total of 155 participants (68.04%) stated that they do not often miss classes because of headache. While 54 participants (31.95%) reported that they frequently skipped classes due to headache.

Table no 02: Distribution of Clinical Information and Education of Subject:

S no	Item	Frequency
1	**Age in which headache noticed** Mean S.D Minimum Maximum	 1.9941 1.02060 1.00 5.00

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2	**Do you get recurrence severe headache?** Yes No	 130 (76.92%) 39 (23.079%)
3	**How often in the last three month** Daily Once in a month 2-3 month	 44(26.03%) 51(30.17%) 74(43.78%)
4	**Usual duration of one attack.** Mean S.D Minimum Maximum	 2.1006 .87726 1.00 4.00
5	**Pain location** One side Both side Front Back/neck	 55(32.54%) 47(27.81%) 53(31.36%) 14(8.28%)
6	**Pain types.** Pulsating Pressing Stabbing	 27(15.97%) 81(47.92%) 61(36.09%)
7	**Pain severity.** Mean S.D Minimum Maximum	 6.2544 .81671 5.00 9.00
8	**Nausea or vomiting** Yes No	 75(44.37%) 94(55.62%)
9	**Sensitivity to light.** Yes No	 135(79.88%) 34(20.11%)
10	**Sensitivity to sound** Yes No	 103(60.94%) 66(39.05%)
11	**Routine activity is affected?** Yes No	 144(85.20%) 25(14.79%)
12	**During migraine need to stop activities lie/down.** Yes No	 126(74.55%) 43(25.44%)

Table no 01: Mean age of study subject 18 year, with S.D ± 4.04789, minimum 12 year and

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maximum 38 years. This is not significant value (p=.060)

Item no 02: Recurrent severe headache was reported by 130 participant (76.92%), while 39 participant (23.07%) did not report recurrent severe headache.

Item no 03: during the last three months, most participants reported experiencing headaches 2-3 times per month, 74 participants (43.78%). This was followed by headaches occurring once a month in 51 participants (30.17%). Daily headache were reported by 44 participants (26.03%).

Item no 04: usual duration of on attack, mean age of subject 2.1006, with S.D ±.87726, minimum 1.00 and maximum 4.00.this is a not significant value(*p*=.031)

Item no 05: with regarding to pain location, one sided headache was most commonly reported by 55 participants (32.54%), followed by frontal pain in 53 participants (31.36%), pain in both sides in 47 participants (27.81%), and pain at back or neck in 14 participant (8.28%).

Item no 06: regarding the types of pain, pressing pain was the most commonly reported, affecting 81 participants (47.92%). This was followed by stabbing pain in 61 participants (36.09%), pulsating pain was reported by 27 participant (15.97%).

Item no 07: regarding the pain severity, mean is the 1.5148, S.D± .50127, minimum 1.and maximum is 2.

Item no 08: nausea or vomiting was reported by 75 participants (44.37%), and 94 participants (55.62%) did not report these symptoms.

Item no 09: sensitivity to light be reported by 135 participants (79.88%), and 34 participants (20.11%) did not experience light sensitivity to light.

Item no 10: sensitivity to sound was reported by 103 participants (60.94%), whereas 66 participants (39.05%) did not report this symptom.

Item no 11: most participants reported that headache was worsened by routine physical activity, affecting 144 participants (85.20%), and 25 participants (14.79%) did not report worsening with activity.

Item no 12: the need to stop activities and lie down during headache was reported by 126 participants (74.55%), while 43 participant (25.44%) did not require rest.

Discussion

This study found a prevalence of migraine among male were (48.5%) and female (51.5%), indicating a slightly higher prevalence in females. A comparable cross-sectional study by Liaquat et al. (2024) similarly reported a higher prevalence of migraine in females (60.8%) compared to males (32%). This study identified that migraines were most common among participants aged 18–25 years (58%), followed by those aged 26–32 years (29%), 33–38 years (7.7%), and 39–45 years (5.3%). This indicates that younger age group have more risk to develop the migraine. This finding aligns with a study by Nosheen Zafar et al. (2025), which reported a similar age-wise distribution, with 60% of migraines occurring in participants aged 18–25 years, 25% in those aged 26–32 years, 10% in those aged 33–38 years, and 5% in those aged 39–45 years. (19,20,23)

Moreover, a key trigger for migraines in this study was stress, reported participants (37%), and lack of sleep, (31%). Similarly, a cross-sectional study conducted by Kiruthika Salvakumar (2024) among university students in Peninsular Malaysia found that stress (70-83.7%) and lack of sleep (75-76%) were the most common migraine triggers. (24,25) In this study, lack of sleep was primarily attributed to academic stress among graduates and young adults. In contrast, a study by Maheen Asim (2023) among healthcare professionals reported sleep disturbances in 84 participants (56%), suggesting that occupational factors, such as long working

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hours and irregular sleep patterns, may increase the burden of migraine. (17,23,24)

Additionally, the current study showed that the majority of participants were single (65.1%), with 34.9% being married. The educational levels of the participants were as follows: (10.7%) had no formal education, (3.6%) had primary education, (6.5%) had matriculation, (25.4%) had intermediate education, and (53.8%) were graduates. A comparison with a study by Naeem Uddin Shaikh (2024) revealed a higher proportion of married participants (69.84%) and fewer single participants (30.15%). The educational distribution also differed, with more participants having primary education (18.51%) and fewer graduates (31.48%).(24,25)

The study revealed that 86 participants (50.88%) were positive for migraine, while 49.11% were negative, with a statistically significant association (p = 0.006), indicating an almost equal distribution of positive and negative cases. A similar cross-sectional study by Amna Liaquat et al. (2022) among undergraduate students reported 6 positive participants (42.85%) and 8 negative participants (57.14%), with a highly significant association (p = 0.000), reflecting variation in findings across different study populations. (7,13,22) Regarding visual symptoms, (63.92%) reported no changes in vision, (p=<.005), suggesting that visual symptoms were not common among migraine sufferers in this study. This finding is consistent with a study by Wahab Azmat Sheikh (2020), and (56.16%) also reported no vision changes, with a statistically significant (p=<.005), suggesting that visual stability is common among migraine patients. .(20,25,27)

Furthermore, sensory symptoms, such as numbness or weakness, were reported by (47.92%). This finding contrasts with a study by Amna Liaquat et al. (2024), reported (69.86%) no numbness or weakness, suggesting that the frequency of these symptoms was lower in their study population. (23,24,25) A significant number of participants (89.34%) in this study reported using painkillers due to a lack of awareness, while only a small number (10.65%) did not use painkillers. This contrasts with a study by May Hamda et al. (2022), which found that a majority of participants (92.4%) did not use painkillers due to high educational awareness about the side effects of painkillers, with only 7.6% using them. (13,14,25)

The impact of migraines on daily activities was substantial, (85.20%) reporting an adverse effect on their routine activities, while 25 participants (14.79%) reported no effect. In comparison, a study by Nida Razzak et al. (2022) reported that (48.24%) had their routine activities affected, with (5.71%) reporting no effect, and a highly significant (p = .001). (26,27) Moreover, certain foods and cold drinks were identified as migraine triggers (9.36%). This contrasts with a study by Nida Razzak et al. (2022), which found that 79 participants (10.67%) identified certain foods and cold drinks as migraine triggers, with a highly significant (p =< .005) , indicating a higher frequency of these triggers. (27,28) Additionally, Pulsating pain was reported by 27 participants (15.97%), indicating a low prevalence of this pain type. This contrasts with a study by Abdur Rafi et al. (2021), which reported pulsating pain (84.31%), highlighting a much higher prevalence of this symptom in their study population. (2,4,17, 28) Sensitivity to sound was reported by 103 participants (60.94%), while 66 participants (39.05%) did not experience this symptom, with a p-value of 0.005, indicating a moderate prevalence of auditory sensitivity. This is similar to a study by Pavani Varma et al. (2024), which found sensitivity to sound in (55.1%) of participants. (28,29,30,31) The prevalence of sensitivity to light was high in this study, with 135 participants (79.83%) reporting this symptom. In comparison, a study by Pavani Varma et al. (2024) reported sensitivity to light in only 51% of participants, suggesting a lower prevalence of photophobia in their study population. (32,33,34)

Finally, the impact of migraines on academic attendance was significant, (68.04%) reporting that they skipped classes due to migraines. A study by Pavani Varma et al. (2024) reported skipping classes in (34.6%) of participants, indicating a lower frequency of absenteeism due to migraines in their study population. (34,35)

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Conclusion: This study concluded that prevalence of migraine, and associated risk factors at Peoples Medical College Hospital Nawabshah., further, this study also determined the its impact on daily life style.

Recommendation: The findings of the present study highlight the high prevalence of migraine among adults, with stress and sleep disturbances being identified as significant contributing factors. To address this, it is recommended that routine screening for migraines be incorporated into outpatient settings to facilitate early identification and management. Encouraging lifestyle modifications and providing targeted interventions can significantly reduce the frequency and severity of migraine episodes, enhancing the quality of life for individuals at risk.

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