

Original Research Article

A comprehensive study of headache and psychiatric comorbidities at government medical college Handwara, Kashmir

Mansoor Ahmad Dar, Rehana Amin*, Nadeem Bashir, Owais Ahmad, Sunayah Sani

Department of Psychiatry, GMC Anantnag, Jammu and Kashmir, Anantnag, Jammu and Kashmir, India

Received: 28 February 2025

Accepted: 04 April 2025

*Correspondence:

Dr. Rehana Amin,

E-mail: drrehanaamin2@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Handwara, located in the Kupwara district of Jammu and Kashmir, India, is a region profoundly impacted by prolonged conflict and socio-political instability, leading to widespread mental health challenges among its population. The newly established government medical college (GMC) in Handwara is crucial in addressing these issues, particularly through its department of psychiatry. This paper examines the pattern of psychiatric disorders in patients with headaches in a peripheral tertiary care hospital.

Methods: It was a cross-sectional structured clinical interview assessing all patients attending the psychiatry OPD with headache as the chief complaint. A total of 650 consecutive consenting patients aged more than 18 years with headaches were enrolled in the study. The diagnostic tools used were a structured questionnaire, ICHD-3, and M.I.N.I. plus. Statistical analysis was descriptive statistics and regression analysis were done to find the relation between different variables.

Results: The majority of the patients were females presented with vascular headaches in the age group of >18-55 years. The most common psychiatric morbidities found were depressive disorders and panic disorder. A statistically significant correlation was found between headaches and psychiatric disorders.

Conclusions: The high prevalence of mental health disorders such as depressive disorders, nicotine use disorders, somatic symptom disorders, and panic disorders indicate the need for enhanced evaluation of patients with headaches to improve outcomes. Longstanding untreated mental disorders can be a reason for chronic non-relieving and disabling headaches.

Keywords: Headache, Depressive disorders, Panic disorder, Somatic symptom disorder, Northern Kashmir

INTRODUCTION

Government Medical College (GMC) Handwara, Kupwara is a newly established medical college in the northern part of Kashmir, India. The foundation stone was laid in the year 2022. The said medical college caters to the whole of district Kupwara including the adjoining border areas of the state with more than 8.5 lakh population.¹ The GMC Handwara was established as part of a broader initiative by the Indian government to expand medical education and healthcare services across the union territory of Jammu and Kashmir. The establishment of the GMC Handwara is a significant development aimed at

addressing the regional disparities in healthcare access and quality, especially in remote and underserved areas like Kupwara. The department of psychiatry of GMC Handwara is located within the associated peripheral tertiary care hospital of the college. As a newly established medical institution, the GMC, Handwara aims to address some critical healthcare gaps, particularly in mental health, providing an opportunity to build awareness, reduce stigma, and offer much-needed psychiatric services to the vulnerable population.²

A psychiatrist working at the GMC Handwara has a multifaceted role involving clinical, educational, and

community-based responsibilities. The psychiatrist's daily work is shaped not only by the diverse mental health needs of the population but also by the unique social, cultural, and economic context of the region. The pattern of psychiatric consultations in OPD was of a unique presentation. The patients seek consultation from a psychiatrist for headaches as the chief complaint. They used to search psychiatrists by the name of a "kal doctor" a Kashmiri term which means a brain doctor. Before the establishment of the department of psychiatry, in GMC Handwara such patients were entertained by other specialties including homeopathy doctors. The patients usually present with headaches as a major symptom of psychiatric OPD. Keeping in view the above factors, the study was aimed to investigate patients with headaches for different psychiatric disorders. No such research has been conducted in this part of the world.

Aim

Aim of the study was to identify the pattern of different types of headaches in patients attending psychiatric OPD of peripheral tertiary care hospital and to assess the pattern of psychiatric disorders in patients with headaches.

METHODS

The study was conducted in the department of psychiatry, GMC Handwara, from October 2023 to July 2024 after getting an ethical clearance from the institutional ethical committee of GMC Anantnag. It was a cross-sectional structured clinical interview assessing all patients attending the psychiatry OPD with headache as the chief complaint. A total of 650 consecutive consenting patients aged more than 18 years with headaches were interviewed. It was a time-bound study. The diagnosis of headache was done as per ICHD-3 (International classification of headache disorders).³ The Psychiatric diagnoses were made by using mini-international neuropsychiatric interview (M.I.N.I) plus, a structured diagnostic clinical tool used to diagnose DSM-5 psychiatric diagnosis.⁴ The patients with a known history of psychiatric disorders and severe medical illness were excluded from the study.

Ethics approval and consent to participate

Ethical clearance has been sought from the institutional ethical committee of GMC Anantnag before the study commenced. The informed consent was taken from all the participants in their local understandable language in line with the declaration of Helsinki". This study was conducted in accordance with the ethical principles outlined in the declaration of Helsinki".

Statistical analysis

Descriptive statistics were calculated using SPSS software latest version and correlation was found using chi-square and Fishers exact t-test.

RESULTS

Demographic details

A total of 650 patients were enrolled in the study (480 females, 170 males). They were in the age group of >18 to 55 years (mean=28±2SD years). The majority of the headache patients were unmarried (66.64%) and students (31.23%) followed by daily wagers, homemakers, and unemployed (Table 1).

Headache distribution

Duration of headaches ranged from 1 to 10 years (mean=4 years, standard deviation=3.6) and frequency of headaches ranged from 1 to 22 episodes per month (mean=8, standard deviation=4.8). Each episode lasted for more than 1 hour to 1 day with persistent daily headaches with an average duration of 4.5 hrs±2SD. Among headache disorders, vascular headache was present in 196 (30.15%), TTH-tension type of headache was seen in 130 (20%), chronic daily headache (CDH) in 59 (9.07%), and chronic migraine (CM) in 149 (22.92%).

The mixed headache was found in 10.92% of patients. More than half of the patients had headaches for more than 1-5 years with 1-7 episodes per month and 2/3rd had headaches lasting for more than 5 years over 8-14 episodes/month in 1/3rd of patients (Table 2).

Psychiatric morbidity

Majority 30.67% of patients with headaches suffered from major depression with 5.48% having suicidality), followed by 13.96%, 13.71%, and 9.22% of patients fulfilled the criteria for somatic symptom disorder, panic disorder, and borderline personality disorder, respectively. Smoking use was found in 30.17% with dual diagnosis (Table 3).

Correlation between variables

Relation of headache type, headache duration, and headache episode duration with education and occupation. The results are suggestive that migraine type of headaches was more common in younger students and each episode usually lasted for a day while tension type of headaches was more prevalent in higher qualification students and headaches remain persistent. Similarly, vascular headaches were more seen in homemakers with persistent episodes while tension-type headaches were found more common in unemployed and daily wagers. The p value is statistically significant at <0.05 and 0.01.

However, no relation has been found between any demographic variable and with duration of headache (Table 4).

Relation of headache type, headache duration and no. of headache episodes with psychiatric morbidity, the results indicate that tension-type headaches were more associated

with depressive disorders and were of more than five years duration with >five episodes per month while vascular headaches were found more in panic disorder with less than five years duration, again with less than five episodes per month.

Chronic migraines were higher in borderline personality disorders and somatic symptom disorders but headaches in borderline appeared less chronic with fewer no. of episodes than in somatic symptom disorder. The results were statistically significant at $p < 0.0005$ (Table 5).

Table 1: Demographic details.

Demographics, N	Ratio	Percentage (%)
Sex		
Females (480)	2.82:1	73.84% females
Males (170)		
Age (in years)		
19-34 (443)	8.6:2.5:1	Mean age (28±2SD)
35-50 (130)		
Above 51 (37)		
Education		
Illiterate (54)	1:1.9:4.1:4.98	91.69% educated
Primary to high school (103)		
Higher secondary to graduation (224)		
Postgraduation or above (269)		
Occupation		
Unemployed (111)	3.7:6.7:3.9:1.7:1:4.4	31.23% students
Students (203)		
Homemakers (119)		
Employed (53)		
Business (30)		
Daily wagers (134)		
Marital status		
Unmarried (432)	25.4:11.8:1	66.46% unmarried
Married (201)		
Separated or divorced or other (17)		
Total	650	

Table 2: Headache distribution.

Headache	N	Percentage (%)
Type		
Migraine with or without aura	196	30.15
Tension type	130	20
Chronic daily	59	9.07
Chronic migraine	149	22.92
Mixed	71	10.92
Duration		
Less than 1 year	149	22.92
1-5 years	351	54
Above 5 years	306	47.07
No. of episodes per month		
1-7	331	50.92
8-14	208	32
Above 14	111	17.07
Duration of each episode		
1-3 hrs	69	10.61
3-6 hrs	128	19.69
7 hrs-1 day	203	31.23
Persistent	250	38.46

Table 3: Psychiatric morbidity.

Psychiatric disorder	N	Percentage (%)
Depressive disorders	123	30.67
Major depressive episode	44	10.97
Major depressive disorder	54	13.46
Persistent depressive disorder	03	0.74
Suicidality	22	5.48
Bipolar type II	11	2.74
Panic disorder	55	13.71
Social anxiety disorder	33	8.22
Generalized anxiety disorder	24	5.9
Obsessive compulsive disorder	23	5.7
Substance use disorder-alcohol:opioid:with smoking	06:14:121	30.17
Somatic symptom disorder	56	13.96
Borderline personality disorder	37	9.22
Others	19	4.73
Total	401	61.69

Table 4: Relation of headache type, headache duration, and headache episode duration with education and occupation.

Demographic variables	Type of headache			Duration of headache		Duration of episodes	
	Migraine, n=196	TTH, n=130	Ch. migraine, n=149	1-5 years, n=351	>5 years, n=306	7 hrs-1 day, n=203	Persistent, n=250
Education							
Higher sec. to graduation, n=224	100	42	71	150	108	121	107
Postgraduation or above, n=269	96	88	78	201	198	82	143
	Chi-square value=11.75, p value=0.006*			Chi-square value=3.48, p value=0.06		Chi-square value=11.60, p value=0.00659*	
Occupation							
Unemployed, n=111	43	53	33	109	94	71	79
Homemakers, n=119	123	28	64	165	147	48	95
Daily wagers, n=134	30	48	52	77	65	84	76
	Chi-square value=60.56, p value=0.0001*			Chi-square value=0.7773, p value=0.06		Chi-square value=11.75, p value=0.0007*	

*The p value is statistically significant at <0.05 and 0.01

Table 5: Relation of headache type, headache duration, and no. of headache episodes with psychiatric morbidity.

Psychiatric disorder	Type of headache				Duration of headache		No. of episodes/ month	
	Other headaches	Migraine, n=196	TTH, n=130	Ch. migraine, n=149	1-5 years, n=351	>5 years, n=306	1-5, n=301	>5, n=306
Major depressive episode, n=44	04	04	23	13	20	22	5	39
Major depressive disorder, n=54	06	03	29	16	31	23	13	41
Panic disorder, n=55	16	21	07	11	50	05	39	16
Somatic symptom disorder, n=56	11	02	18	25	13	43	15	41
Borderline personality disorder, n=37	5	05	11	16	31	06	31	06
	Fishers t test, p=0.001, Chi-square value=61.84, p value =0.00001*				Chi-square value=64.68, p value =0.00001*		Chi-square value=74.84 p value=0.00001*	

*The results were statistically significant at p<0.0005

DISCUSSION

As per research, headaches contribute to the highest proportion of neurological diseases.⁵ Vascular headache is among the top three disability-causing neurological diseases.⁶ Headaches are frequently associated with various psychiatric comorbidities like anxiety, depression, and trauma-related neurotic disorders higher than what is found in the general population.⁷ Treating headaches as a symptom of underlying psychopathology can be a powerful tool in improving the quality of life of patients and optimizing mental health treatment while overcoming barriers or stigma.^{8,9} Moreover, there has been a rise in headache consultations from a psychiatrist rather than a neurologist over the past few decades. Many theories show that worsening of headaches is frequently associated with recent experiences of stress, sleep changes, appetite changes, and mood changes.¹⁰ Even studies also point out that premorbid personality traits also control the subjective perception of pain in headaches.¹¹ The present study aimed to check the possible bidirectional relation between different headaches and psychiatric disorders.

The results of this study were the patients presented with headaches as chief complaint were mostly unmarried and females which is supported by other studies reporting female predominance of headaches than males.¹² The headaches were found mostly between the ages of 25-55 years with the mean age of patients with headaches being $28 \pm 2SD$ years. We observed migraine type of headache followed by chronic migraine and tension type of headache were the most prevalent headaches in psychiatric OPD however, as per global prevalence of headaches, tension-type headache is approximately 40%, migraines 10% and chronic daily headaches are 3-5%.¹³ The contrasting results may be because of socio-cultural diversities. The headaches were longstanding with a mean no. of episodes per month equal to $8 \pm 4.8SD$. Each episode lasted for an average duration of $4.5 \text{ hrs} \pm 2SD$. Since migraine and chronic migraine were the commonest headaches from our study, the possibility of being episodic can be explained by the said reason. The majority 30.67% patients with headaches suffered from Major Depression with 5.48% having suicidality, followed by 13.96%, 13.71%, and 9.22% of patients fulfilled the criteria for somatic symptom disorder, panic disorder, and borderline personality disorder, respectively. The results are supported by other studies which report that affective disorders occur three times more commonly in headache patients than in the general population followed by anxiety disorders.¹⁴ The prevalence increases in the clinical population and contributes to poorer prognostic factors in headache treatment. Smoking was found in 30.17% with dual diagnosis. In an epidemiological study, both nicotine and other substance use disorders were found commonly in vascular types of headaches.¹⁵ The results are suggestive of that migraine type of headaches were more common in younger students and homemakers and episodes usually last for more than a day. The vascular headaches were found more in panic disorder with less than 5 years

duration, again with less than 5 episodes per month. The exact nature of the relationship between migraine and psychiatric disturbance remains unclear but recent research found that there is a shared neuropathic mechanism of neuroplasticity in corticolimbic structures between migraine and underlying psychopathology.¹⁶ Another research finding suggested co-sensitization of the sensory and affective components of headache as a possible phenomenon resulting in an integrated relationship underlying migraine and comorbid anxiety disorders.¹⁴ While tension type of headaches was more prevalent in higher qualification students and unemployed cum daily wagers with headaches being persistent type. The results indicate that tension-type headaches were more associated with depressive disorders and were of more than 5 years duration with >5 episodes per month. The presence of comorbid depression may contribute to the chronicity of headaches. Moreover, there is evidence emerging that many psychological risk factors are responsible for the progression of episodic headaches to chronic daily headaches.¹⁷ Chronic migraines were higher in borderline personality disorders and somatic symptom disorders but headaches in borderline appeared less chronic with fewer no. of episodes than in somatic symptom disorder. Somatization is unaddressed in studies, however, there is some evidence that headaches can be a manifestation of somatization disorders. In two recent studies, 6% and 22% of headache patients fulfilled the diagnostic criteria for a somatic symptom disorder.¹⁸ There are no studies of headaches on borderline personality disorder, however, headache is the most common complaint of patients with personality disorder and markedly complicate headache management. The personality traits are generally stable but may worsen during times of stress like headaches.¹⁹

CONCLUSION

This study highlights the complex and bidirectional relationship between different types of headaches and psychiatric disorders. Headaches, particularly migraine and tension-type headaches, were found to be more prevalent in patients with psychiatric comorbidities, such as major depression, anxiety disorders, and somatic symptom disorders. The findings align with previous research showing a higher prevalence of affective and anxiety disorders in individuals suffering from headaches compared to the general population. Notably, the presence of comorbid psychiatric conditions often contributes to the chronicity and increased severity of headache episodes, suggesting that psychiatric disorders may play a significant role in the progression from episodic to chronic headache syndromes. In conclusion, this study reinforces the need for a holistic approach to headache management, which includes attention to underlying psychiatric disorders. Addressing both physical and psychological aspects of headaches can lead to improved treatment outcomes, better quality of life for patients, and a reduction in the stigma surrounding mental health and chronic pain conditions. Further research into the neurobiological

mechanisms linking headaches and psychiatric disorders is essential to refine treatment strategies and improve patient care.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Badam Mr TA. Valuate Jammu and Kashmir Tourism in Breadth of Media Dailies and Time Period: A Content Analysis. J Tourism Insights. 2024;14(1):23.
2. Brouwers EP. Social stigma is an underestimated contributing factor to unemployment in people with mental illness or mental health issues: position paper and future directions. BMC Psychol. 2020;8(1):1-7.
3. Olesen J. International classification of headache disorders. The Lancet Neurol. 2018;17(5):396-7.
4. Balázs J, Bitter I. Study on construct validity of the MINI PLUS interview. Psychiatria Hungarica: A Magyar Pszichiátriai Társaság tudományos folyóirata. 2000;15(2):134-44.
5. Stovner LJ, Hagen K, Jensen R, Katsarava Z, Lipton RB, Scher AI, et al. The global burden of headache: a documentation of headache prevalence and disability worldwide. Cephalalgia. 2007;27(3):193-210.
6. Steiner TJ, Birbeck GL, Jensen RH, Katsarava Z, Stovner LJ, Martelletti P. Headache disorders are third cause of disability worldwide. J Headache Pain. 2015;16:1-3.
7. Dresler T, Caratozzolo S, Guldolf K, Huhn JI, Loiacono C, Niiberg-Pikksööt T, et al. Understanding the nature of psychiatric comorbidity in migraine: a systematic review focused on interactions and treatment implications. J Headache Pain. 2019;20(1):1-7.
8. Toussaint A, Weigel A, Löwe B, Blanch J, Bogaerts K, Boye B, Burton C, Cosci F, Engelmann P, Fink P, Fischer S. The overlooked burden of persistent physical symptoms: a call for action in European healthcare. The Lancet Regional Health-Europe. 2025;48:101140.
9. Antonaci F, Voiticovschi-Iosob C, Di Stefano AL, Galli F, Ozge A, Balottin U. The evolution of headache from childhood to adulthood: a review of the literature. J Headache Pain. 2014;15(1):1-1.
10. May A, Burstein R. Hypothalamic regulation of headache and migraine. Cephalalgia. 2019;39(13):1710-9.
11. Huber D, Henrich G. Personality traits and stress sensitivity in migraine patients. Behavioral Med. 2003;29(1):4-13.
12. Mehmood K, Ansari T, Niaz A. Gender-based difference in quality of life of Migraine sufferers: A Cross-Sectional Study. Ann Abbasi Shaheed Hospital Karachi Med Dental College. 2024;29(2):136-42.
13. Stovner LJ, Nichols E, Steiner TJ, Abd-Allah F, Abdelalim A, Al-Raddadi RM, et al. Global, regional, and national burden of migraine and tension-type headache, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. The Lancet Neurol. 2018;17(11):954-76.
14. Lake III AE, Rains JC, Penzien DB, Lipchik GL. Headache and psychiatric comorbidity: historical context, clinical implications, and research relevance. Headache. 2005;45(5):493-506.
15. Taylor FR. Tobacco, nicotine, and headache. Headache. 2015;55(7):1028-44.
16. Cathcart S, Winefield AH, Lushington K, Rolan P. Stress and tension-type headache mechanisms. Cephalalgia. 2010;30(10):1250-67.
17. Cevoli S, Sancisi E, Pierangeli G, Grimaldi D, Zanigni S, Nicodemo M, et al. Chronic daily headache: risk factors and pathogenetic considerations. Neurological Sci. 2006;27:168-73.
18. Maizels M, Burchette R. Somatic symptoms in headache patients: the influence of headache diagnosis, frequency, and comorbidity. Headache. 2004;44(10):983-93.
19. Martelli MF, Zasler ND, Mancini AM, MacMillan P. Psychological assessment and applications in impairment and disability evaluations. Editors: May RV, Martelli MF, in Guide to functional capacity evaluation with impairment rating applications, Richmond: NADEP Publications. 1999;3:1-84.

Cite this article as: Dar MA, Amin R, Bashir N, Ahmad O, Sani S. A comprehensive study of headache and psychiatric comorbidities at government medical college Handwara, Kashmir. Int J Res Med Sci 2025;13:1982-7.