



A STUDY ON TRIGGERS OF MIGRAINE AND QUALITY OF LIFE OF MIGRAINE PATIENTS

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Abstract

Our study delved into the complex realm of migraine, an extensive and disabling neurological condition, with a dual focus on uncovering its triggers and evaluating the quality of life (QoL) experienced by patients. We recruited migraine patients aged 16 years and above, excluding individuals with co-morbidities or undergoing cancer-related treatments, resulting in a cohort of 200 participants, among whom 78.5% were female and 21.5% were male, primarily concentrated (32.5%) in the 26-35 age group. A notable 56.6% had a familial history of migraine. Of the 190 patients encountering pain, 61.05% reported severe headache intensification triggered by noise, and 56.84% by exposure to light. The study identified several significant triggers, including emotional stress (97.5%), physical exertion (64.5%), traveling (55.5%), sleep deprivation (55%), missed meals (63.5%), and weather change (69%). Assessment via the MIDAS questionnaire highlighted that over 69.5% of patients experienced moderate to severe disability due to migraine, while WHOQOL-Bref data indicated a notably poor QoL among these individuals. Our findings underscore the substantial impact of migraine on the lives of sufferers, emphasizing the pressing need for tailored counseling and robust psychological support to augment treatment efficacy. This comprehensive understanding of triggers and their consequent effects underscores the importance of personalized care to alleviate the considerable burden endured by individuals grappling with migraine.

Keywords: Triggers, Quality of life Migraine.

Introduction

Migraine headache is a persistent, complex headache illness that is one of the most common complaints among the general public. The word migraine comes from the Greek word hemikrania, which means "headache." Then it was translated into Latin as hemigranea, which was translated into French as migraine.^[1] Which includes the symptoms such as headache, nausea, vomiting, and photophobia.^[1] Migraine attacks can be triggered or precipitated by a variety of intrinsic or external circumstances. Stress, changing weather, weariness, meals, beverages, insomnia, hunger, and menstruation are all major triggers.^[2] Diverse regions have different social and cultural characteristics, which can influence the significance of triggering elements.^[3] According to the Global Burden of Disease Study, the global standardised prevalence of migraine was 14.4% in 2016, with 1.04 billion people affected.^[4] It is critical to understand migraine triggers in order to

treat patients properly.^[3] Migraine is ranked 19th among diseases in terms of years lived with disability by the World Health Organization (WHO).^[5] Migraine is a widespread, incapacitating condition that significantly reduces the sufferer's quality of life by interfering with daily activities.^[6] Migraine-related functional impairment can include a decreased ability to operate at work or at home, in education, or in social/leisure activities.^[7]

The interracial burden of migraine refers to the fact that migraine can induce functional impairment and concern between attacks.^[8] Headache is seen as a very mild medical concern by doctors and other healthcare experts. Failure to recognize migraine functional impairment could result in missed opportunities for effective acute or preventative therapy.^[9]

Material and methods:

A prospective observational study of six months was carried out from September 15, 2019 to March 15, 2020 at tertiary care hospital Erode in Tamil Nadu, India. A printed form of WHOQOL-BREF questionnaire MIDAS questionnaire were distributed to the each patients, and were asked to complete and submit it. The questionnaire form was given to 200 patients of the hospital. and data were collected and recorded . The sample size obtained is 300 that is calculated by using Raosoft software. The patients who are affected with migraine, age of 16 years and above, patients willing to participate in the study of both genders were included and People who are diagnosed with comorbid conditions were excluded. The questionnaire consists of the following: (I) Demographic characters: age sex, profession and Work Experience.

(II) The knowledge section: consisted of 10 knowledge questions. Each question was answered by either yes or No. Yes was the correct answer to few questions and no for remaining. (III) The attitude section; included 10 questions assessing HCWs' attitudes of COVID-19. Yes or No was the only option for each question. Some questions required a yes response, while others required a no response. (IV) There were 9 questions in the Attitude section. Yes or No was the only option for each question. Only a few questions required a yes response, while the rest required a no one. (V) In order to interpret their well-being, 7 questions pertaining to their social, physical, and mental well-being were also included in this study. The Institutional Ethical Committee approved the study protocol. The study's primary objective was described to them, and their agreement was requested. The subjects of the study were interviewed using a semi-structured questionnaire. They were given information on the study, its goals, and confidentiality assurances, and those who satisfied the inclusion criteria were asked to participate. Those who decided to participate voluntarily signed an informed consent form and were interviewed.

Ethical Clearance:

This study was approved by J.K.K. Nattraja ethics committee (J.K.K Nattraja College of Pharmacy). Ethical Reference Number: JKKNCP/ETHICS_PRACTICE/020PDS06.

Result and Discussion

Out of 200 patients the total number of female was 157(78.5%) and total number of male was 43(21.5%)^[10]. The majority of the patients were age group of 26-35 years of age 48 (30.57%) female and 17(39.53%) male patients who experienced migraine^[11]. It is also known that 60.4% (n=26) of males and 75.79% (n=119) of females suffering from migraine were married as shown in the table no.1.^[12] And Out of 200 patients total number of patients where 190(95%) experienced headache on the day of hospital visit^[13]. In our study out of 190 patients, who experienced pain in the right side of the head was 94(49.47%) , while those who experienced pain on the left side of the head was 84(44.21%) and on both side of the head was 12(6.31%)^[14].

Table.1: Baseline Demographic Characteristics

Demographic	N=200	Percentage (%)
Gender		
Male	43	21.5
Female	157	78.5
Age		
16-25	56	28
26-35	65	32.5
36-45	50	25
46-55	24	12
56 Above	5	2.5
Marital status		
Married	145	72.5
Unmarried	55	27.5

And patients experiencing pressing type of pain was 69(36.31%), pulsating type of pain was 54(28.42%) , throbbing type of pain was 43(22.63%) and patients experiencing tightening type of pain was 24(12.61%)^[15], among the 190 patients the patients experiencing severe headache was 153(80.53%), and the patients experiencing moderate headache was 37(19.47%), while patients experiencing no headache was 0^[16], 151(79.47%) patients were not able to perform their planned activities completely, while 39(20.53%) patients were able to perform their planned activities^[17]. Out of 39 patients who had worsening of the headache due to physical activities performed by them 26(66.66%), and patients who did not experience worsening of the headache was 13(33.33%)^[17]. In this study we found that patients were able to do less than half of their work 75(49.66%), More than half 69(45.69%), and 7(4.63%) of the patients were not able to complete their work^[18]. Out of 190 patients, 108(56.84%) patients were experiencing severe worsening of headache due to light, 78(41.05%) patients were experiencing mild-moderate worsening headache due to light, and 4(2.10%) patients were experiencing no worsening effect due to light^[19]. And 116(61.05%) patients were experiencing severe worsening of headache due to noise, 70(36.84%) patients were experiencing mild-moderate worsening headache due to noise, and 4(2.10%) patients were experiencing no worsening effect due to noise were shown in Table 2^[20].

Table.2: Clinical Characteristics:

Clinical	N=190	Percentage (%)
Headache on the day of hospital visit		
Yes	90	95
No	10	90
Area of pain		
Left	84	44.21
Right	94	49.47
Both	12	6.31
Types of pain		
Pulsating	54	28.42
Throbbing	43	22.63
Pressing	69	36.31
Tightening	24	12.61
Severity of headache		
Not bad	0	0
Quite bad	37	19.47
Very bad	153	80.53
Effect of Light		
Lot	108	56.84
Little bit	98	41.05
No	7	2.10
Effect of Noise		
Lot	116	61.85
Little Bit	70	36.84
No	4	2.10

Table NO. 3: Shows the triggers, that cause migraine in the patients were found in 195(97.5%) of patients with migraine which included emotional stress in 129(64.5%), physical exertion and traveling in 111(55.5%), sleep deprivation in 110(55%), missing meal in 127(63.5%), menstruation in 108(54%), and weather change in 137(68.5%)^[21]. we found that migraine caused due to noise, light was found to be 103(51.5%),144(65.3%). The odour induced migraine is known to be 54.5%^[21]. This was also represented as graph in Fig: 3.

Table 3: - Various triggers of migraine.

Triggers	No. of male patients (n=43)	Percentage (%)	No. of female patients (n=157)	Percentage (%)
Emotional stress	18	41.86	111	70.70
Missed meals	22	51.16	105	66.87
Exertion	23	53.49	88	56.05
Sleep deprivation	17	39.53	93	59.23
weather change	16	37.21	121	77.07
No triggers	2	4.65	3	1.91
Menstrual cycle	NA	NA	108	68.78
Noise	14	32.56	89	56.68
Odour	13	30.23	96	61.14

NA – Not Applicable

Figure3: - Various triggers of migraine.

Intensity of the headache based on the MIDAS [Migraine disability assessment test] was found to be moderate disability of 35.5%, severe disability was found to be 34%, mild disability was found to be 28.5%, and little or no disability was 2%^[22]. was represented in the table no.4 and figure no.4.

Table 4: - Distribution of patients based on Migraine Disability Assessment (MIDAS) score.

MIDAS Score	Male	Percentage (%)	Female	Percentage (%)
0 to 5	2	1	2	1
6 to 10	13	6.5	44	22
11 to 20	13	6.5	58	29
21+	15	7.5	53	26.5

Figure 4: - Distribution of patients based on Migraine Disability Assessment (MIDAS) score.

Table 5: - Distribution of WHO-BREF QOL Scores of the patients

WHQOL-BREF	No. of males (n=43)		No. of females (n=157)	
	<50	>50	<50	>50
Domain 1	38	5	138	19
Domain 2	34	9	126	31
Domain 3	18	25	49	108
Domain 4	10	33	22	135

Figure 5: - Distribution of WHO-BREF QOL Scores of the patients

In this study we found that Quality of life of the patients with migraine was affected where male patients based on the domain [I,II,III,IV] were reported as domain-I (38,5), domain-II (34,9), domain- III(18,25) and domain-IV(10,33)^[23].as shown in table no.5 and figure no.5.

Conclusion:

This study strongly suggests a significant reduction in physical, psychological, social, and environmental quality of life (QOL) among female migraine patients compared to their male counterparts. It underscores the importance of healthcare professionals routinely assessing QOL and related disability to ensure patients receive effective treatments aimed at enhancing their quality of

life. Environmental factors were identified as precipitants of migraines in this study, providing evidence to support this relationship. The WHOQOL-Bref questionnaire consistently reported poor QOL among migraine patients. Overall, our research concludes that migraines exert disabling effects on sufferers, profoundly affecting their QOL. As a result, this study emphasizes the critical need for comprehensive counseling and psychological support to augment treatment outcomes.

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Conflict of interest:

The author's declare that there is no conflict of interest.

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Nil

Reference:

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