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ORIGINAL ARTICLE

Prevalence of Primary Types of Headache and Its Impact on Daily Life in Health Care Professionals in a Tertiary Care Health Institution

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ABSTRACT

Background: Headache is characterized by the painful and disabling disorder of the central nervous system CNS. The most common symptoms experienced by the person suffering from the headache are pain in head, neck and face.

Objective: This study aims to assess the prevalence of primary types of headaches, knowledge of their types, their impact on the productivity and work efficiency of the healthcare professionals in a tertiary care health institution.

Study design: This cross sectional study was conducted at Neurology Department, Fauji Foundation Hospital, Rawalpindi for duration of 1 year from December 2020 to December 2021.

Material and Methods: An estimated number of 1000 adult healthcare professionals aged above 18 were included in this research. Simple convenience sampling technique was used for sampling. According to the Inclusion criteria the individual should be an adult healthcare professional. According to the exclusion criteria Individuals below the age of 18, not a part of the tertiary care hospital were excluded. Data was collected through using a structured questionnaire comprised of three sections.

Results: To proceed with this study, 1000 healthcare professionals were selected for this survey. The participants submitted questionnaires. The respondents include 440 doctors and 560 nurses. Their age was from 20 to 60 years. The ages of the doctors were above thirty and the age of the nurses was above 25 years. Among them, 6 participants were identified with two basic types of primary headache, and 36 were suffering from other kinds of issues like CDH, neuralgia, and unknown types of headache. Only two nurses were suffering from MOH. Sleep patterns also play role in headache disorders.

Conclusion: This study predicted that the probability of primary headache issues is greater in medical care professionals as compared to the general public. Both nurses and doctors are more prevalent to headache issues. Multiple factors are linked with the prevalence of headache issues i.e. gender, age, sleep patterns, and night shifts. These factors may lead to migraine and TTH. For the welfare of health of medical professionals, there is a need for awareness related to different health issues and all the factors causing headache disorders.

Keywords: Headache disorders, neuralgia, Sleep patterns, and primary headache.

INTRODUCTION

Headache is characterized by the painful and disabling disorder of the central nervous system CNS. It is very common neurological disorder that remained untreated. The patients having this disorder most commonly visit neurologists and general physicians[1]. The most common symptoms experienced by the person suffering from the headache are pain in head, neck and face. Primary and secondary types are the two different types of headache. The cluster headache, tension type headache and migraine are included in the primary type of headache. Secondary headache can occur due to a long list of other conditions, commonly being medication-overuse headache[2-3]. Primary headache not only cause the disability but also reduced the efficiency of the patient. It significantly impair efficiency, negatively impact quality of life. Few people receive a correct diagnosis and medical care while majority don't. Primary headaches are currently the most common type of headache around the globe with 47%, followed by migraines 10%, tension-type headaches 38%, and chronic daily headaches 3%. The lifetime prevalence rates of headache are higher in men[4-5].

Headache disorders obtrude a significant burden on the affected individuals, which includes considerable personal and societal suffering, disability, afflicted quality of life and financial distress.[6] Multiple conditions can lead up to the occurrence of headaches. The International Headache Society has the most well-recognized classification system for headaches. It is the disorder of the nervous system that remained under recognized and under treated around the globe. It is adding to the financial burden of the healthcare system[7-8]. Headache disorders are a public-health concern given the associated disability and financial burden to the society as well as the healthcare system. As the headache disorders are most bothersome in the high-yielding years (late teens to 50s), estimation of their financial cost to society – mainly from lost working hours and reduced work efficiency – are huge. The treatment of headaches depends upon treating the underlying cause, but commonly involves over-the-counter pain medication like NSAIDs[9].

The purpose of this study is to determine the awareness, prevalence and knowledge of primary types of headaches and its impact on daily life in health care professionals in a tertiary care health institution[10-11].

MATERIAL AND METHODS

An estimated number of 1000 adult healthcare professionals aged above 18 were included in this research. Simple convenience sampling technique was used for sampling. According to the Inclusion criteria the individual should be an adult healthcare professional. According to the exclusion criteria Individuals below the age of 18, not part of the tertiary care hospital were excluded.

Data was collected through using a structured questionnaire comprised of three sections. The section one was of demographics that covered gender, age, profession, shift duration, sleep hours etc. The section two was named as prevalence, in which data about headache type, severity, frequency, duration etc. In the section three the data about migraine disability assessment test was collected. The questionnaire was adapted to meet the requirements of this study. Informed consent will be taken and the subjects will be asked to fill the questionnaire themselves to the best of their knowledge, thus, making it a self-administered questionnaire. All the data collected will be kept with the primary investigator.

RESULTS

To proceed with this study, 1000 healthcare professionals were selected for this survey. The participants submitted questionnaires. The respondents include 440 doctors and 560 nurses. Their age was from 20 to 60 years. The ages of the doctors were above thirty and the age of the nurses was above 25 years. Among them, 6 participants were identified with two basic types of primary headache, and 36 were suffering from other kinds of issues like CDH, neuralgia, and unknown types of headache. Only two nurses were suffering from MOH. As predicted from the results, a few number of patients are suffering from MOH and CDH, so we

neglected these issues. Here in the given table 1, the demographic distribution of healthcare professionals is given with different variables. Sleep patterns also play role in headache disorders.

Table 1: Demographic distribution of healthcare professionals.

In-constants	Profession							
	Doctors	Total headache N (%)	Migraine N (%)	TTH N (%)	Nurses	Total headache N (%)	Migraine N (%) P	TTH N (%)
Total	440	207 (47)	95 (23)	112 (25.3)	560	330 (59)	172 (32)	158 (26)
Gender								
Female	254	110(43.7)	35 (14.5)	75 (30)	530	15 (59)	164 (52.1)	151 (46)
Male	186	97(52)	60 (33)	37 (20)	30	315 (34)	0 (0.0)	15 (34)
Age								
20-30	20	4 (25)	4 (25)	0	240	57 (21)	46 (17)	11 (4)
31-40	190	95 (49)	68 (35)	27 (15)	189	156 (82)	98 (52)	58 (31)
More than 40	230	108 (46)	49 (26)	59 (26)	131	117 (87)	43 (35)	74 (56)
Day-shift	153	65 (43)	32 (22)	33 (23)	223	121 (55)	89 (39)	32 (14)
Rotating-shift	287	142 (50)	76 (27)	66 (24)	337	209 (63)	101 (31)	108 (32)
Sleep Hours			Average Sleeping hour				Average Sleeping hour	
	440	207	App. 4 hours		560	330	App. 5.5 hours	

Then the comparative analysis of the type of headache in doctors and nurses was analyzed, and it was observed that there was no relation between the type of headache and the profession of healthcare members. However, migraine and tension-type headaches were more prevalent than tension type headaches. The migraine was more prevalent in case of females, both doctors and nurses. The types of headaches in both genders are given in Table 2a.

Table 2a: Prevalence of headache.

In-Constants	Doctors	Total headache N (%)	Headache type		Nurses	Total headache N (%)	Headache type	
			Migraine N (%)	TTH N (%)			Migraine N (%) P	TTH N (%)
Total	440	207 (47)	95 (23)	112 (25.3)	560	330 (59)	172 (32)	158 (26)
Gender								
Female	254	110(43.7)	35 (14.5)	75 (30)	530	15 (59)	164 (52.1)	151 (46)
Male	186	97(52)	60 (33)	37 (20)	30	315 (34)	0 (0.0)	15 (34)

After the identification of the type of headache disorder, the severity, frequency, and duration of the average attack were estimated according to the scales and questionnaires described in different pieces of literature.

Table 2b: Prevalence of headache (severity, frequency, and duration).

Headache Type	Severity (PHQ-9) 0-27	Frequency	Duration (average)
Migraine	10-15	App. 18.2 days	16 hours
TTH	3-5	< 15 days	1-2 hour

The level of migraine was estimated by migraine disability assessment test by asking various questions mentioned in the questionnaire and on the basis of its score the mental disability level was estimated by experts.

Table 3: Migraine disability Assessment test.

Grades of MIDAS	Level of disability	Score of MIDAS
I	Minor disability	0 - 5
II	Mild level	6 - 10
III	Moderate level of disability	11 - 20
IV	Severe case	21 or above 20

DISCUSSION

Headache seems a minor issue but a continuous headache disorder may lead to disability and affect life activities. Healthcare professionals face a high risk of having such headaches disorders. During the literature survey, it was predicted that the probability of headache disorders is higher among medical care professionals as compared to the public. In a report by sokolovic, it was inferred that the rate of disease was 61 % among health care professionals, and in the survey of Onwuekwe that the prevalence rate was more than 70 %[12-13]. In this survey non-clinical staff was compared with the clinical one. In the given study, migraine was more common in medical staff as compared to CDH. While 60 % of cases of CDH are categorized under MOH. A very little population had MOH but it is more common among uneducated and low annual income people. This study was related to another study in which two common types of headache disorders were observed. Only a few people were suffering from MOH suggesting a less prevalence of CDH. In a similar pattern, our results show two basic types of headaches. Only a negligible number of people were suffering from MOH[14].

The reason behind its low prevalence in medical staff is the well-qualified medical staff and they are well aware of their medical states and took medicine and other therapies regularly. A questionnaire was created for the estimation of headache disorder parameters. This questionnaire was divided into three basic parts. The first part comprises demographic distribution, age, gender, profession, sleeping pattern wise distribution, the second part estimates the types of headache, prevalence, and severity of the diseases along with the number of other related factors, and the third part was margarine disability assessment test to predict the level of the disease. When literature survey was done to find out the prevalence of headache disease among doctors. Usually, the health of the doctors is neglected but the effect on their health is more crucial. They are more vulnerable to headaches as compared to the general population[15]. A survey of neurologist headache issues revealed that a significant difference is observed in the prevalence of migraine between neurologists and the common public.

There is a need for awareness about the cephalalgia issues in doctors for more appropriate prediction of headache issues1[16]. When the gender-wise study was done, it was observed that migraine issues are much higher in female doctors as compared to male doctors, and this fact is true with the general population. The female members are more likely to suffer from migraine. However, in this study, female nurses have a low prevalence of migraine as compared to female doctors. Usually, work pressure, stress, and fatigue play role in the prevalence of migraine. Restricted conversation between doctor and patient is responsible for it[17].

Medical staff suffers from another issue i.e. night shifts. These night shifts provoke migraine issues due to disturbance in sleeping patterns, lack of sleep, and irregular routines. A report suggested that the rate of headache issues is much higher in that healthcare workers who have to perform night shifts. The same results are observed in the given study.

The age-wise analysis revealed that migraine and other headache issues are common in the middle age people between ages 30 to 40 years. Usually, stress, responsibilities, and work pressure of this age play a major role in the initiation of such mental issues[18-19]. A number of factors play role in the initiation of such issues. As the headache issues are more observable in the staff working in the surgical area as compared to the medicine wards. They suffered from lack of meals for a long time, hectic work routine, unpleasant odors of Operation Theater, and other factors which trigger the cephalic issues. However, the surgeons and the experienced doctors facing more stress are not likely to develop such issues. Maybe the senior surgeons develop the patience to cope with stress and work pressure. The female being mother as well as a responsible doctor has to face more pressure as compared to the male ones[20].

This study is limited due to the small population size, it is not possible to give an absolute answer to every query on the basis of this small-scale study. On the other hand, there is a need to study other factors responsible for the development of migraine and other issues of cephalalgia[21].

CONCLUSION

This study predicted that the probability of primary headache issues is greater in medical care professionals as compared to the general public. Both nurses and doctors are more prevalent to headache issues. Multiple factors are linked with the prevalence of headache issues i.e. gender, age, sleep patterns, and night shifts. These factors may lead to migraine and TTH. For the welfare of health of medical professionals, there is a need for awareness related to different health issues and all the factors causing headache disorders.

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