

Treatment Pattern and Awareness of Migraine in Eastern Provinces, Saudi Arabia: A Descriptive Cross Sectional Study

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ABSTRACT

Objectives: This study aimed is to identify treatment pattern and awareness of migraine in Eastern provinces of Saudi Arabia. **Methods:** The survey questionnaire used to assess the awareness and treatment pattern of migraine was adopted from previous study. The questionnaire contains three sections. The first section contained of items related to demographic information of the participants. The second section contains to assess the knowledge of participants towards migraine. The third part of questionnaire contains about different types of therapy used in treatment of migraine. **Results:** Overall awareness of migraine among participants from Eastern Provinces of Saudi Arabia is 81.81%. 98.60% participants have heard about the migraine. Nearly 40% of participants are suffering from migraine and main cause of it is stress and tension. Panadol and Brufen drugs were used by almost migraine patient. Although few migraine patient were also used Rapidus. **Conclusion:** There is higher occurrence of migraine in women

than in men by ratio of 12:1. Despite of having good knowledge of migraine (81.81%), only 39.16% participants know about the causes of migraine and only 26.80% of participants know about the preventive measures of migraine. Thus educational and preventive health campaigns are needed all over the Saudi Kingdom.

Key words: Knowledge, Practice, Migraine, Prevention, Treatment, Kingdom of Saudi Arabia.

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INTRODUCTION

A migraine is pulsating or throbbing a disorder characterized by recurrent moderate to severe pain.¹ It produces one sided intense pain of head.² Migraine is the fifth utmost important cause for women among all diseases worldwide causing disability and for men, it is one of the top twenty diseases.³ After tension headache, the 2nd general kind of primary headaches are the migraine headaches. Primary headache is the headache that are not the result of another medical condition.⁴ It is considered as persistent unilateral headache united with neurologic and gastrointestinal disturbances that can severely influence the quality of living and daily activities.⁵ Migraine can further causes physical and psychiatric problem.⁶ Worldwide, near about 15% of population are suffered from migraines.¹ According to global burden of disease (GBD) survey 2016, leading causes of disability is migraine.⁷ Diagnosis of migraine is not as easy as it depends on multiple conditions and may be inappropriately diagnosed.⁸ A study revealed that around 33% of migraine patients were appropriately diagnosed which result in distressing the quality of life.⁹ The primary step for appropriate and efficient therapy of migraine is correct diagnosis, eliminating alternative causes, educating the patient and finding better treatment for management of pain.¹⁰ The pharmacologic therapy has two options that can be taken separately or together for patients with severe migraine including acute or preventive measures.¹¹

The preventive treatment can be applied for reducing the penetrating, duration and severity of migraine attacks.¹² Enlightening the knowledge and treatment pattern among adult population can outcome in prevention of migraine episodes and its effect on quality of life. This study aimed at treatment Pattern and Awareness of Migraine in Eastern provinces of Saudi Arabia.

MATERIALS AND METHODS

Study design

A cross sectional questionnaire based study was conducted based on a self-administered questionnaire, study was conducted at Eastern province, Saudi Arabia for a period of 3 months from February to April 2018. More than 18 years of age will be included in the study and either gender can participate in study. Incomplete information given by participants will not be included in the study.

Sampling and sample size

The sample size was estimated by using Krejcie and Morgan's sample size calculator.¹³ A suitability sampling technique was used to recruit a sample of 858 participants from residents of Eastern province, Saudi Arabia.

Survey instrument

The survey questionnaire used to assess the awareness and treatment pattern of migraine was adopted from previous study.¹⁴

The questionnaire contains three sections. The first section contained of items related to demographic information of the participants. The second section contains to assess the knowledge of participants towards migraine. The third part of questionnaire contains about different types of therapy used in treatment of migraine.

Ethical approval

Before the conduction of the study, the study protocol was reviewed and approved by the scientific research Unit Mohammed Al-Mana College for Medical Sciences (SR/RP/09B), Saudi Arabia. Declaration of Helsinki guidelines is followed for the full compliance of study.¹⁵

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Data analysis

Evaluation of data was done by using the Statistical Package for the Social Sciences (SPSS, V. 22). Demonstration of demographic characteristics were done by descriptive statistics. Categorical variables were presented in terms of frequency and percentages. Chi-square test were used for the calculation of association and differences. A p value < 0.05 was considered statistically significant.

RESULTS

The questionnaire were distributed to 950 subjects and among them 852 given the response with an overall response rate of 89%. All participants surveyed were Saudis. There were 767(89.39%, $p < 0.05$) Female and 91(10.60%, $p < 0.05$) Male. Study participants were within the age group from 20 to 50 years. As shown in Table 1, 1.28 % of the subjects were from primary school, 24.4% from Secondary school, 5 % from Intermediate followed by Graduate (63.63%), Postgraduate students (4.31%) with P -value < 0.05 . The maximum percentage of participants were unemployed (49.30%, $p < 0.05$) while the least participants were Student (21.91%, $p < 0.05$). Among all the participants, maximum were from urban residents (90.64%). 32.98 % participants were the mother of less than three children and 40.90 % participants were the mother of more than three children with P -value < 0.05 .

Assessment of knowledge among participants toward migraine were shown in Table 2. It was found that 98.60 % ($p < 0.05$) candidates heard about the disease called migraine while 1.3 % ($p < 0.05$) candidates have not heard about the term "migraine."

Reason of migraine has been shown in Figure 1. It was found that the major cause or trigger of migraine was stress or tension (26.92%).

The percentage of various therapies used by participants has been shown in Figure 2. It was found that majority of participants have used medication (64.68%) while very few participants have used acupuncture (3.10%).

DISCUSSION

Migraine is a common neurological disorder affecting in Eastern region, Saudi population. This was the first study about treatment pattern and awareness of migraine in Eastern provinces, Saudi Arabia. The knowledge of migraine in Eastern province of Saudi Arabia was found to be higher than the knowledge reported in different studies. A general knowledge and attitude of migraine has been shown in Table 2. 81.81 % ($p < 0.05$) candidates were having knowledge about the migraine while 18.18 % ($p < 0.05$) candidates were having no idea about the migraine. For example, headache was reported in 33 % of individuals studied in Taif, 70 % in India and 43.2% in all over Kingdom of Saudi Arabia (KSA).^{11,14,16}

The third question was asked to find whether they know about the difference of normal headache and migraine. There were 75.05 % ($p < 0.05$) candidates who knew the difference between headache and migraine; and 24.94 % ($p < 0.05$) candidates too who did not know the difference between headache and migraine. The knowledge about the differences between normal headache and migraine headache in Eastern province of Saudi Arabia was also found to be higher than the knowledge reported in other studies. For instance, only 56 % of individuals was aware about differences between normal headache and migraine headache studied in India 2017.¹⁴

The fourth question was asked to find out the family history of migraine. 56.64 % ($p < 0.05$) candidates were those who are having family history of migraine and 43.35 % ($p < 0.05$) candidates were not having family history of migraine. This is in agreement with previous literature studies that indicated high prevalence of positive family history among migraine

patients,^{16,17} but also it is contrast to previous study where only 18% candidates were having family history of migraine.¹⁴

Out of those 56.64 % of candidates who were having family history of migraine, there were only 46.29% of candidates who are suffering from migraine and 53.70% of candidates were also those who are not suffering from migraine. From it we conclude that, it is not mandatory that if your parents have migraine, you will also suffer from migraine but then chances of developing migraine in children increases; and it is also not like that if you do not have family history of migraine, you cannot develop migraine but if you have a family history of migraine, there are more chances that you can also suffer from migraine.

The fifth question was asked to find out awareness of causes of migraine among the population. 39.16% ($p < 0.05$) candidates were those who knew about the causes of migraine and 60.83% ($p < 0.05$) candidates were those who did not aware about the causes of migraine. Similar result were shown by previous studies where 36% candidates were those who knew about the causes of migraine.¹⁴ While in other study, 62% was aware about the causes of migraine.¹⁸

The sixth question asked among population was about the awareness of the signs and symptoms of migraine there were 56.87% ($p < 0.05$) candidates who were familiar with the signs and symptoms of migraine,

Table 1: Socio-Demographic Characteristics of Participants.

Socio-demographic Characteristics	N (%)	*P-Value
Age (Years)		$p < 0.05$
20-30	447(52.09)	
30-40	287(33.44)	
40-50	124(14.45)	
Gender		$p < 0.05$
Female	767(89.39)	
Male	91(10.60)	
Number of children.		
No children	324(37.76)	$p < 0.05$
Less than 3 children	283(32.98)	
3 children or more	251(40.90)	
Education level		$p < 0.05$
Primary	11(1.28)	
Secondary	221(24.4)	
Intermediate	43(5.01)	
Graduate	546(63.63)	
Postgraduate	37(4.31)	
Employment status		$p < 0.05$
Employed	247(28.78)	
Student	188(21.91)	
Unemployed	423(49.30)	
Residence		0.36
Rural	55(6.41)	
Urban	803(93.58)	

*P-value is considered statistically significant when it is $p < 0.05$.

whereas 43.12% ($p < 0.05$) candidates were those also who did not know about the signs and symptoms of migraine. This result resemble with previous literature studies that indicated 58% candidates who were familiar with the signs and symptoms of migraine,¹⁴ but in contrast to previous study it was found that 74% participants were aware about the signs and symptoms of migraine.¹⁸

One question was asked that “what is the most common symptom of migraine they experience.” From the result, more than 49.38% of candidates experience throbbing or pulsating pain in the head as the major symptom during migraine attack.

The seventh question asked from the population was about awareness of preventive measures of migraine. From the result, it was found that only 26.80% ($p < 0.05$) candidates were completely aware about the preventive measures of migraine whereas 73.19% ($p < 0.05$) candidates were those who were not having any awareness about the preventive measures of migraine. In agreement with our results, Kaur et al. 2017, reported in their study that 19% participants were fully aware about the preventive measures of migraine while in another study awareness about the preventive measures of migraine were reported 49.8%.¹¹

The eighth question was about the awareness of the treatment of migraine, asked from population. 33.10% ($p < 0.05$) candidates were those who were aware about the treatment of migraine, whereas 66.89% ($p < 0.05$) candidates were those who did not know about the treatment of migraine. This finding exist between the two previous studies done by Safila Naveed et al. 2014 and Kaur et al. 2017 and the result were reported 46% and 23% respectively. As per our study 19.5 % of migraine

patients have used mainly paracetamol and Ibuprofen while 52 % migraine patients have used paracetamol, ibuprofen and diclofenac. While in another study it has been reported that Sumatriptan is the most commonly used medication by the patients for treatment of their migraine.¹⁴

The final question asked from the population was regarding the incidence of migraine. From the result, it was found that there were 39.86% ($p < 0.05$) candidates who are suffering from migraine while 60.13% ($p < 0.05$) candidates are not suffering from migraine. The occurrence of migraine in males was found to be 7.8% while in females, it was found to be 92.2%. Therefore, there is higher occurrence of migraine in women than in men by ratio of 12:1. This result was coincided with previous result where frequency of migraine in women was found to be more as compared to male.¹⁶

Then, one more question was also asked from the migraine sufferers, according to them what are the reason of their migraine. According to the analysis of their responses, it was found that the major cause or trigger of their migraine was stress or tension. The percentage of several causes which leads to migraine have been shown in Figure 1. Stress and tension were also reported as major cause for migraine in another study.^{14,16,18}

The migraine sufferers, who were using remedies for the treatment of their migraine, the data about those remedies, were also collected. According to the analysis of data obtained from migraine patients, medication is found to be the most used treatment for their migraine (Figure 2) and apart from the medication, Physiotherapy has also found to be effective

Table 2: Knowledge and attitude of participants about use of medication during migraine.

S.No.	Statement	Yes, N (%)	No, N (%)	*P-Value
1	Have you ever heard about the disease called migraine?	846 (98.60)	12(1.3)	$p < 0.05$
2	Do you know about migraine?	702(81.81)	156(18.18)	$p < 0.05$
3	Do you know the difference between the headache and migraine?	644(75.05)	214(24.94)	$p < 0.05$
4	Dose any member of your family suffer from migraine?	486(56.64)	372(43.35)	$p < 0.05$
5	Do you know about the causes of migraine?	336(39.16)	522(60.83)	$p < 0.05$
6	Do you know about the signs and symptoms of migraine?	488(56.87)	370(43.12)	$p < 0.05$
7	Do you know about the preventive measures of migraine?	230(26.80)	628(73.19)	$p < 0.05$
8	Do you know about the treatment that use in migraine?	284(33.10)	574(66.89)	$p < 0.05$
9	Do you have a migraine headache?	342(39.86)	516(60.13)	$p < 0.05$

*P-value is considered statistically significant when it is $p < 0.05$.

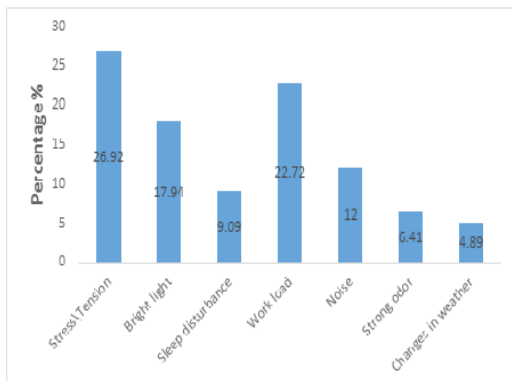


Figure 1: Percentage of various causes of migraine from the migraine sufferers.

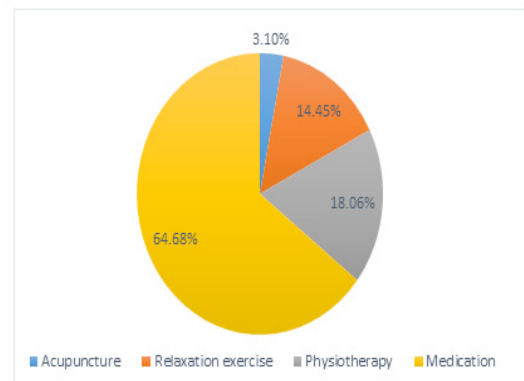


Figure 2: Various therapies used for migraine.

in treatment. But in few study it has been shown that physiotherapy was major remedies for the treatment of migraine.¹⁴

CONCLUSION

It has been observed from this study that the overall awareness of migraine among participants from Eastern Provinces of Saudi Arabia is 81.81%. 98.60% participants have heard about the migraine. Nearly 40% of participants are suffering from migraine and main cause of it is stress and tension. There is higher occurrence of migraine in women than in men by ratio of 12:1. Medication is found to be the most used treatment for their migraine followed by Physiotherapy.

It was found through this study that almost all migraine patient were using mainly paracetamol 500 mg tablet ibuprofen 400 mg tablet and few migraine patient were also using diclofenac 50 mg tablet.

Despite of having good knowledge of migraine (81.81%), only 39.16% participants know about the causes of migraine and only 26.80% of participants know about the preventive measures of migraine. Therefore proper knowledge, positive attitude and practice skills towards migraine are essential for maintain a better quality of life among migraine patients. Thus it is important for the health authorities to launch educational and preventive health campaigns all over the Saudi Kingdom.

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CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest.

ABBREVIATIONS

GBD: Global Burden of Disease; KSA: Kingdom of Saudi Arabia.

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