

ASSESSMENT THE LEVELS OF KNOWLEDGE OF THE PREVALENCE MIGRAINE HEADACHE AMONG HEALTHCARE PROVIDERS IN PHC CENTERS IN MAKKAH CITY, SAUDI ARABIA, 2019

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Abstract

1. Background

Migraine poses a significant burden for patients, and it has multiple diagnostic and management challenges, particularly among primary health-care workers (physicians, nurse, administrative). Migraine is a public health problem and it is the third most common cause of disability among individuals below the age of 50. In spite of the multiplicity of the studies concerned with exploring the disease epidemiology and nature worldwide, data from Saudi Arabia are lacking. Migraine is one of the most critical concerns among healthcare providers and other relevant stakeholders in the health sector. It is one of the significant causes of disability among older patients (aged 50-years and above). Saudi Arabia has had its share of the health issue with the ever-increasing prevalence of migraine in the country. Despite the concerted and collaborative efforts among major stakeholders on the provision of the assessment of the identified health problem, data from Saudi Arabia mostly lack, especially on the epidemiology of the health condition. According to the recent reports from the Global Burden Disease (GBD), migraine ranks third among the leading cause of disability globally. The prevalence rate varies significantly within the Arabian countries; Saudi Arabia (12%), Qatar (72%), and Oman (83%).

Aim of the study: To assessment the levels of knowledge of the prevalence Migraine headache among healthcare providers in PHC centers in Makkah City, Saudi Arabia, 201

Method: Across-sectional study among healthcare providers who works in primary health care center in Makkah Al-Mukarramah 2019, the study has been conducted healthcare providers who works in PHC centers in Makkah city KSA. Was conducted using questionnaire designed during August 2019. The questionnaire collected the socio-demographic factors, a migraine screen questionnaire (MS-Q) Migraine Disability Assessment questionnaire (MIDAS), our total participants were (200)

Result: Conclusion: Knowledge regarding migraines diagnosis and treatment was inadequate among healthcare providers, which could detrimentally influence the patterns of referral to secondary health-care facilities, severity of symptoms was accompanied by poor quality of life in terms of social and professional aspects. There was a lack of awareness in majority of subjects about migraine leading to underdiagnosed, under treatment and with high use of over the counter medications. There is a need for proper awareness campaigns in Saudi population and also healthcare providers.

Keywords: Assessment, knowledge, prevalence, Migraineheadache, healthcare providers.

1. Introduction

Common migraine triggers include long fasting, hypoglycemia, sleep disturbance, psychological stress, hormonal changes such as oral contraceptive pills, menstruation, and ovulation), and some medications (such as nitroglycerin, reserpine, and estrogen). Migraine can occur with aura (typical migraine) or without aura (classical migraine) [1]. Migraines are incredibly common yet disregarded medical issue, and can be characterized as a crippling condition that might bring about a lower personal satisfaction and upset job performance, eventually making a critical economic burden on societies and it is one of the commonest detailed neurological issues found in primary care settings [2]. Migraine, in general, is considered the second most disabling condition worldwide, which contributes to more than 7% of the global burden of the neurological disorders.[3] Focusing on CM, the prevalence of the disease has been estimated as 1–5% of the general population, worldwide.[4] However, given the heterogeneity across

studies and lack of data from certain regions, the epidemiological picture of CM is incomplete. It accounts for about 8% of all migraine cases, and each year, 2.5% of EM transforms to a CM.[5]

Repeating headache issues are a typical clinical issue, remaining among the top reasons for disability and sufferings. There is an absence of data about its circulation, disease characteristics and related co morbidities in KSA .[6]

On the other hand, investigated that migraine prevalent among medical students in the University of Lagos, Nigeria was 6.4 % and its frequency has been increased during the studying education.[7,8]. In another study investigated that prevalence of migraine in medical students is lower comparing with that of general population[10] but reported that headache is highly prevalent among medical students at Sultan Qaboos University in Oman. Since medical students are subjected to Stress and also the implicit responsibility of courses, this survey was carried out to evaluate the prevalence of migraine and other kinds of headache in medical students in Zahedan University of Medical Sciences (southeast Iran) in academic years (February, 2005 to December 2006).[11]

Headache is perhaps the most basic worries among medical services suppliers and other important partners in the health sector. It is one of the significant reasons for disability among older patients (aged 50-years and more). Saudi Arabia has had a lot of the medical problem with the always expanding prevalence of migraine in the country.[12] Work-related pressure is viewed as a significant natural reason for migraine[13]. Healthcare workers have an upsetting workplace, are often presented to emotional pressure, and are frequently on pivoting work shifts in view of their work requests[14] . Practically half (45%) of Healthcare workers, especially doctors and nurses, reported highly stressful workdays [15]

Migraine affects over 20% of world population at some point in their lives. Epidemiological studies have shown that 4.5% of the Western European population has headache at least 15 days per month [16] whereas prevalence is 14.2% in USA adults [17], 1-22% in Asian countries [18] and 12.1% in Saudi Arabia [19]. Moreover, prevalence is strikingly higher among females compared to males (17.3%: 5.7%) [20].

Treatment of migraine falls into two main classes; thwarting the progression and those that prevent the health condition from happening . The utilization of headache related medications during the beginning phases of the assaults is basic in increasing the adequacy of the treatment process.[21]

The majority widely recognized over-the-counter (OTC) prescriptions for tending to the scenes of pain incorporate analgesics, caffeine items just as NSAIDs.[22] However, abuse of NSAIDs and analgesics is related with adverse events. Other OTC medications incorporate naproxen, acetaminophen and ibuprofen. Trigeminal-vascular hypothesis gives a valuable hypothetical system to the improvement of migraine. In such manner, the trigeminal nerve fibers get animated to deliver vaso-inhibitory peptide (VIP), calcitonin gene-linked peptide (CGRP) just as substance P[23], notwithstanding the purposeful and community oriented endeavors among significant partners on the arrangement of the appraisal of the recognized medical issue, information from Saudi Arabia generally need, especially on the epidemiology of the health condition.[24]

Literature review

Migraine headache is a common neurological disorder affecting Saudi population. The prevalence of headache in Taif city was found to be higher than prevalence reported in different studies. For instance, headache was reported in 53.2% of individuals studied in Brazil in 2005 [25], 33.8% in Nairobi [26], and 27.9% in Kuwait [27]. Females seemed to be significantly more affected than males ($P = 0.002$), with an odds ratio of 0.28 for the gender difference. This finding is consistent with previous literature studies that stated that migraine headache was more prevalent among females [11, 15, 16]. Migraine headache was also found to be more prevalent among city habitants than countryside habitants. The stressful life in the city, and the lack of meditation and relaxing country nature can be the reasons behind the high prevalence of migraine among city inhabitants.

Ibrahim NK, et al.(2017) reported in their study that migraine, despite having a higher prevalence in young adult Saudi population , is frequently underdiagnosed and undertreated.[13]. In the previous studies, prevalence of migraine Aura consisting of visual, sensory, or speech symptoms was reported by two out of five participants reporting migraine.[28]

Studies have concluded that though biological factors may explain some of the differences, but the main explanation is presumably gender disparities in work, economy, daily living, social life and expectations between women and men and deeper societal changes are needed to reduce the inequities in pain experiences between women and men.[29] Many researchers agree that the health problem can cause throbbing pain in the affected area, which varies in intensity.6 More than 70% of the patients diagnosed with the condition report nausea and sensitivity to light as well as sounds.[30] Migraine was significantly associated with high rates of unemployment ($P < 0.001$). Up to one half of males and two thirds of females were either unemployed or non-working students. In agreement with our results, Stewart et al [31] reported in their study that migraine, especially chronic migraine, had a negative impact on employment, and that 19% of chronic migraineurs were less likely to be working for pay compared with episodic migraineurs. The severity of migraine attack can explain such negative impact on occupational aspects. Marital status, educational level, and tobacco smoking were not significantly correlated with migraine prevalence when logistic regression was performed. Migraine was significantly associated with high rates of Unemployment ($P < 0.001$).

Significant association of headache with other socio-demographic and personal characteristics like job type, working hours, sleeping hours was also revealed. Civil workers, those with more working hours and less sleeping hours suffered more with migraine than non-migraine headache. Migraine has previously shown to be significantly associated with unemployment in other studies,[23]

In the previous literature studies that stated that migraine headache was more prevalent among females [27]. High prevalence of migraine among females can be attributed not only to hormonal changes, but also to central cortical excitability [28]. Fillingim et al [32] reported in their review article stated the Migraine headache was also found to be more prevalent among city habitants than countryside habitants. The stressful life in the city, and the lack of meditation and relaxing country nature can be the reasons behind the high prevalence of migraine among city inhabitants. Migraine was significantly associated with high rates of unemployment.[29]

2.1 Rationale

migraine ranks third among the leading cause of disability globally and effect the lifestyle and the enjoyment by life. Migraine headache can severely impact work, family, social, and leisure activities, the majority of the healthcare providers who works in PHC centers who usually complain of having headache for more than 1 year, It is recommended that awareness related to knowledge of symptoms and triggers of migraine among general Saudi population be raised by print and electronic media as well as printed brochures should be placed in every health care center.

2.2 Aim of the Study

To assessment the levels of knowledge of the prevalence Migraine headache among healthcare providers in PHC centers in Makkah City, Saudi Arabia, 2019

2.3 Objectives:

- To measure the prevalence of migraine among healthcare providers who works in PHC centers by using valid and reliable questionnaire in Makkah city , Saudi Arabia, 2019
- To assessment the levels of knowledge of the prevalence Migraine headache among healthcare providers in PHC centers in Makkah City, Saudi Arabia, 2019.

3. SUBJECTS AND METHODS

3.1 Study design:

A cross sectional study has been carried out among healthcare providers who works in PHC centers in Makkah city, Saudi Arabia, 2019.

3.2 Study setting

The study has been carried out among healthcare providers who works in (Al-Zahir) PHC centers in Makkah Al-mukarramah at Saudi Arabia, 2019. Makkah is the holy city of every Muslim in the world. It is the main place of the pilgrims to perform Umrah and Hajj. Makkah is a modern city and there is a continuous working to improve the infrastructure of Makkah for the sake of both Makkah citizens and pilgrims. Also, it has 85 PHC centers under supervision of Directorate of Health Affairs of Makkah Al-Mukarramah. These centers distributed under 7 health care sectors and each sector contains around 10 – 14 primary health care centers. Three health care sectors inside Makkah Al-Mukarramah city (urban) with 37 primary health care centers underneath and four sectors are outside Makkah (rural) with 48 primary health care centers. The three healthcare sectors inside Makkah Al-Mukarramah are Al-Ka'akya with 11 primary healthcare centers, Al-Adl with 12 primary healthcare centers and Al-Zahir with 14 primary healthcare centers.

3.3 study area:

The study has been conducted in Al-Zahir PHC in Makkah, Saudi Arabia in 2019, under supervision of Directorate of Health Affairs. They are distinguished by their environment and the large number of healthcare providers who works in them, which is characterized good environment.

3.4 Study population:

The study population has been all healthcare providers who works in Al-Zahir PHC centers in Makkah city, Saudi Arabia, 2019, and agreed to fill the questionnaire.

3.5 Eligibility Criteria

a. Inclusion criteria:

All Saudi healthcare providers who works in Al-ZahirPHC centers available on the duration of the study.

b.Exclusion criteria

Healthcare providers who are not available on the duration of the study.

3.6Study Sample :

The sample size has been calculated by epiInfo, <http://www.raosoft.com/samplesize.html> (The margin of error: 5%, Confidence level: 95%, and the response distribution of the prevalence counted for 50% for the lack of local studies) accordingly the Sample size is (200) of healthcare providers in Al-ZahirPHC and adding 10 more to decrease margin of error. After adding 5% oversampling, the minimum calculated sample has been the total population is 200 healthcare providers. Computer generated simple random sampling technique was used to select the study participants.

3.7 Sampling technique:

The participants has be randomly chosen by using systematic sampling technique by dividing the total population by sample size 200has be decided randomly.

3.8 Data collection tools and instruments :

Pretested, a questionnaire has been used in data collection. The study questionnaire package has been provided to all participants. The package has been in English language and has been include questions about socio-demographic factors, a migraine screen questionnaire (MS-Q) Migraine Disability Assessment questionnaire (MIDAS)

Migraine screen questionnaire

The migraine screen questionnaire (MS-Q) is a five-item migraine screening questionnaire developed for use in clinical practice and research settings both in the general population and occupational medicine. The questionnaire is based on the international headache society criteria (IHS) on migraine diagnosis⁵. Each of the five items in this structured questionnaire has a dichotomous response option of yes/no. A score of 0 is assigned for each "NO" response and of 1 for each "YES" response. The total score is 5, where a cut-off point of ≥ 4 was used to indicate a case of migraine [33].

Disability Assessment questionnaire MIDAS

Measuring the burden of migraine should be a prelude to effective treatment designed to reduce that burden. The most frequently used disability instrument in migraine research is the MIDAS questionnaire. The MIDAS questionnaire consists of five questions that focus on lost time in three domains: schoolwork or work for pay; household work or chores; and family, social, and leisure activities. All questions ask about either days of missed activity or days where productivity was reduced by at least half. If productivity is decreased to 50% or below, the day is considered missed. The MIDAS score is derived as the sum of missed days due to a headache over a 3-month period in the three domains. Two additional questions on the MIDAS questionnaire are not included in MIDAS score, assessing frequency and intensity of pain. The four-point grading system for the MIDAS questionnaire is as follows:

- Grade 1 (scores ranging from 0 to 5): little or no disability
- Grade 2 (scores ranging from 6 to 10): mild disability
- Grade 3 (scores ranging from 11 to 20): moderate disability
- Grade 4 (21 or greater): severe disability.(17)

3.9 Data analysis :

For the Data entry and statistical analysis, SPSS 24.0 statistical software package was used. Quality control performed at the stages of coding and data entry. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations, medians, and inter-quartile range for quantitative variables. Chi square test and unpaired t test will used at the level of data analysis and association

3.10 Ethical concern :

Approval for research data collection of required authorities and institutions has been obtained. These data has been confidential and used just for research purposes.

3.11 Budget : Self-funded**4. Results**

Table 1 distribution of the participants socio-demographic factors .

Age		
<35		
35-50		
>50		
Gender		
Female	8	
Male		
Marital status		
Single		

Married.		
Divorced.		
Widow		
Occupation		
A doctor		
Nurse		
Administrative		
Years of work		
<5		
5-15.		
>15.		

Table 1 shows that most of the participants (45.0%) were in the age group(35-50) years follow by the age <35.0% were (33.0%) , the majority of them females was higher compared to male(59.0% and 41.0%) , regarding the marital status most of participants married were(39.0%)while widow were(25.0%), regarding occupation the majority of participant are nurse were(49.0%) while administrative practitioner were(31.0%), regarding the years of work majority of participant from 5-15 were (49.0%)

Table 2: Distribution of the migraine screen questionnaire(MS-Q) of the participants

S-Q	Responses				Chi-square	
	No	Yes	χ ²	P	df	value
Do you have frequent or intense headaches	60	35	18.000	0.000	1	000
Do your headaches usually last more than 4hours?	74	23	58.320	0.000	1	000
Do you usually suffer from nausea when you have headache?	66	29	25.920	0.000	1	000
Does light or noise bother you when have a headache?	60	35	2.000	0.157	1	157
Does headache limit any of your physical or intellectual activities?	60	35	2.000	0.157	1	157

Table 2 shows that the score of migraine screen questionnaire (MS-Q) of the participants regarding the frequent or intense headaches have a significant differences relation were P=0.000 and $\chi^2(18.000)$ the majority of participants answer No were(65.0%),while Yes were(35.0%), regarding headaches usually for last more than 4 hours have a significant differences relation P=0.000 and $\chi^2(58.320)$ the majority of participants answer No were(77.53%),while Yes were(23.0%), regarding the suffer from nausea when you have headache have a significant differences relation were P=0.000 and $\chi^2(25.920)$ the majority of participants answer No were(68.0%),while Yes were(32.0%), regarding light or noise bother you when have a headache have no significant differences relation were P=0.157 and $\chi^2(2.000)$ the majority of participants answer Yes were(55.0%),while No were(45.0%), regarding headache limit any of your physical or intellectual activities have no significant

differences relation were $P=0.157$ and $X^2(2.000)$ the majority of participants answer Yes were(55.90%),while No were(45.0%)

Table 3Distribution of the migraine score of questionnaire (MS-Q) (Positive (≥ 4) and Negative (<4)) of the participants.

MS-Q			
Positive (≥ 4)			
Negative (<4)		6	
Total		10	10
Score	Range	5.	
	Mean\pmSD	154 \pm 0.488	
Chi-square	2	805	
	P-value	028*	

Table 3 shows that the score of migraine screen questionnaire (MS-Q) have a significant differences relation of were $P\text{-value}= 0.028$ the participants the mean \pm SD was (3.154 \pm 0.488) while the data range (2-5) while the most of participants Negative (<4) were (58.0%.) while Positive (≥ 4) were (42.0%).

Figure 1: Distribution of the migraine score of questionnaire (MS-Q) (Positive (≥ 4) and Negative (<4)) of the participants

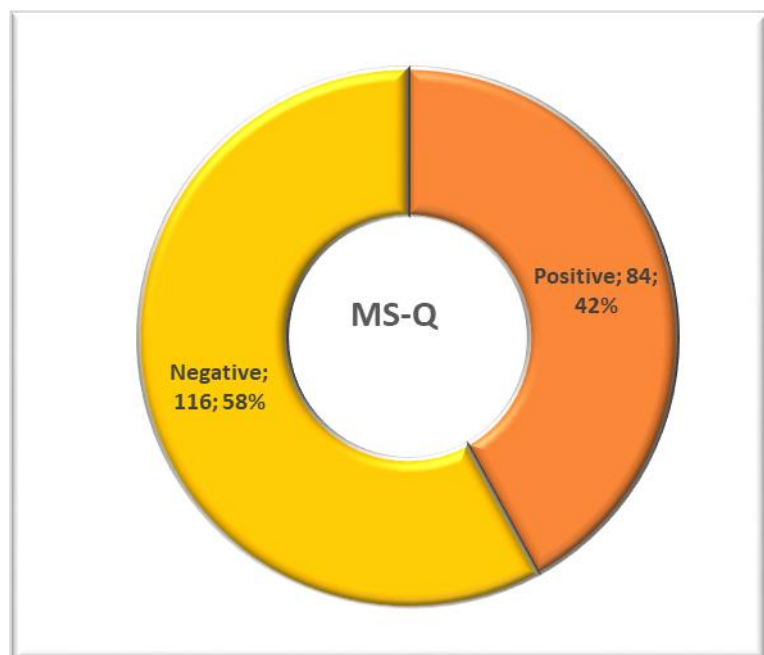


Table (4) Distribution of Participants' Migraine Disability Assessment grades

MIDAS	Days	
	Range	Mean±SD
How many days in the last 3 months did you miss work because of your headaches?	7.	7.5±1.118
How many days in the last 3 months was your productivity at work reduced by half or more because of your headaches? (Do not include days you counted in question 1 where you missed work)	18.	11.78±4.155
How many days in the last 3 months did you not do household work (such as housework, home repairs and maintenance, shopping, caring for children and relatives) because of your headaches?	34.	29.45±8.97
How many days in the last 3 months was your productivity in household work reduced by half or more because of your headaches? (Do not include days you counted in question 3 where you did not do household work.)	49.	27.19±13.89
How many days in the last 3 months did you miss family, social or leisure activities because of your headaches?	17.	7.87±4.11
Total	130.	81.64±49.23
Severity	Little or No Disability (G I)	36
	Mild Disability (G II)	98
	Moderate Disability (III)	42
	Severe Disability (IV)	24

Table 4 shows that regarding the Participants' Migraine Disability Assessment grades on how many days in the last 3 months did you miss work because of your headaches the mean \pm SD was (7.5 \pm 1.118) while the data range (1-7), regarding how many the days in the last 3 months was your productivity at work or school reduced by half or more because of your headaches the mean \pm SD was (11.78 \pm 4.155) while the data range (2-18), while regarding on how many days in the last 3 months did you not do household work (such as housework, home repairs and maintenance, shopping, caring for children and relatives) because of your headaches the mean \pm SD was (29.45 \pm 8.97) while the data range (1-34), regarding How many days in the last 3 months was your productivity in household work reduced by half of more because of your headaches the mean \pm SD was (27.19 \pm 13.89) while the data range (1-49), regarding On how many the days in the last 3 months did you miss family, social or leisure activities because of your headaches the mean \pm SD was (7.87 \pm 4.11) while the data range (0-17).

Regarding the mean \pm SD of the total (MIDAS) score were (81.64 \pm 49.23) and data rang were (3-130). The migraine disability grade (**G I**) of 36 participants (18.0%) was little or no disability, that of 98 (49.0%) was mild disability (**G II**), that of 42 (21.0%) was moderate disability(**III**), and that of 24(12.0%) was severe disability(**IV**).

Figure 2: Distribution of Participants' Migraine Disability Assessment grades

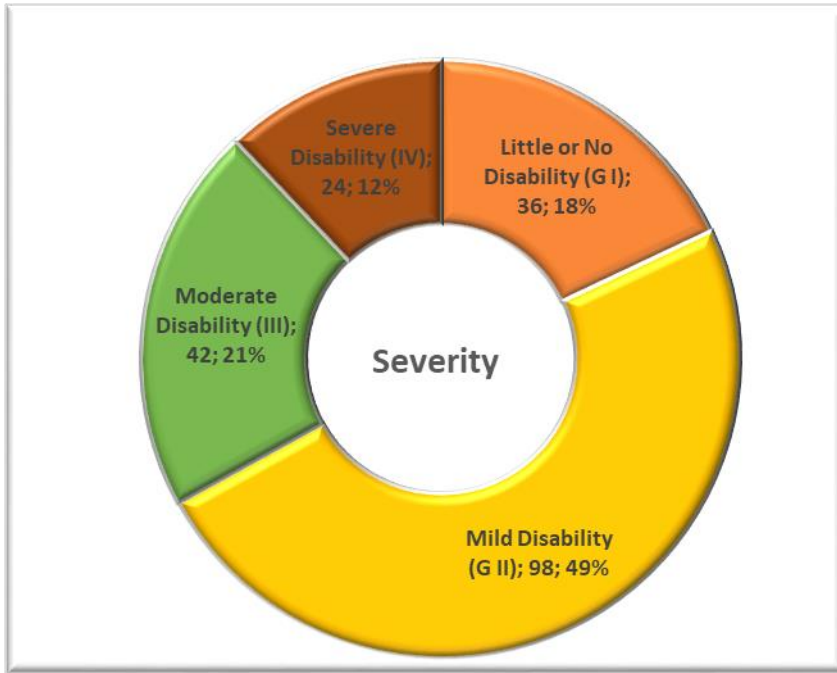


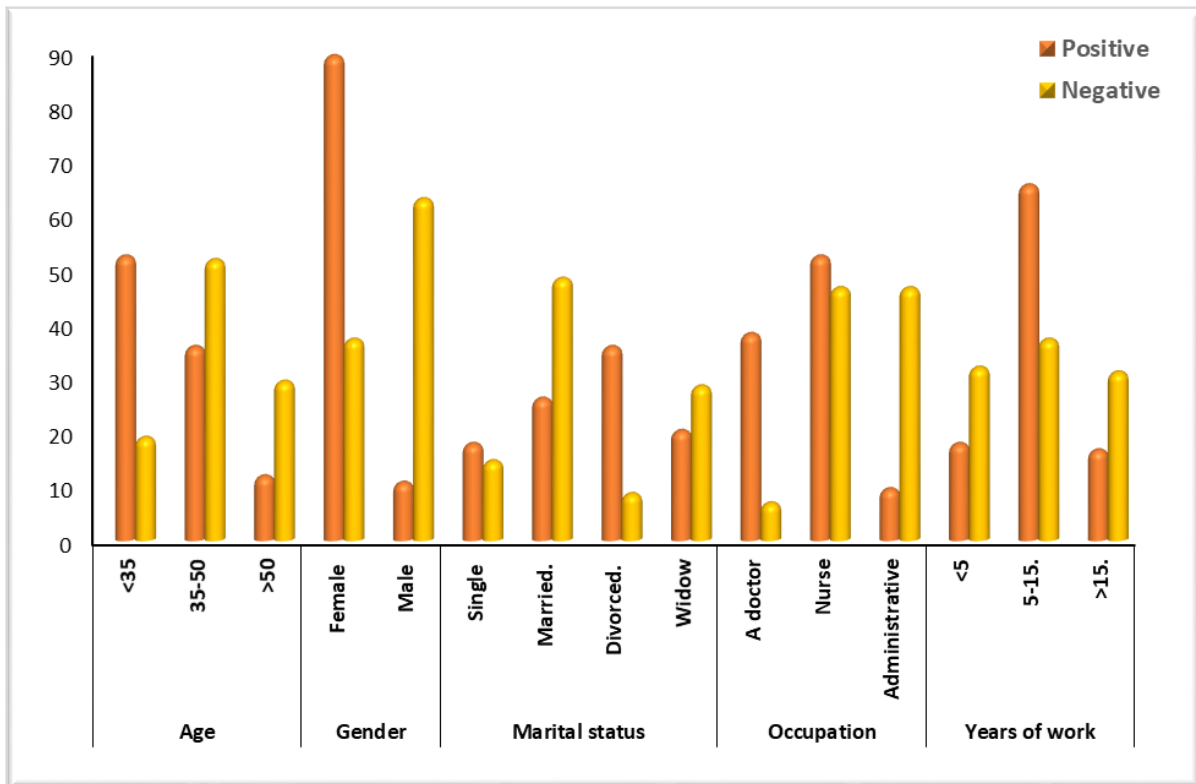
Table (5) Distribution of the correlation between socio-demographic data to Participants (Age, gender, marital status, Occupation and Years of work) and Migraine Disability Assessment

Table 4 shows MIDA grades according to migraine characteristics of Participants. significant differences in MIDA grades were present according to the age were $P=0.001$ and ($X^2 25.969$) with a great majority in the Positive

		S-Q		Total	Chi-square	
		Positive (n=84)	Negative (n=116)		df	value
Age	5	38	97	100	9.969	0.001*
	5-50	71	72	100		
	50	90	31	100		
Gender	Female	29	70	88	52.778	0.001*
	Male	71	93	100		
Marital status	Single	86	66	100	25.601	0.001*
	Married	19	28	100		
	Divorced	71	52	100		
	Widow	24	45	100		
Occupation	Doctor	10	90	100	45.597	0.001*
	Nurse	38	55	100		
	Administrative	52	55	100		
Years of work	5	86	90	100	15.74	0.001*
	5-15	48	70	100		
	15	67	30	100		

disability were (52.38%) in age (<35) years, also significant differences in MIDA grades were present according to the gender were ($P=0.001$) and ($X^2 52.778$) with a great majority in the Positive disability were (89.29%) in the female, while significant differences in MIDA grades were present according to the marital status were ($P=0.001$) and ($X^2 25.601$) with a great majority in the Negative disability were (48.28%) in the married, regarding significant differences in MIDA grades were present according to the Occupation were ($p=0.001$) and ($X^2 45.597$) with a great majority in the nurse and Positive disability were (52.38%), regarding significant differences in MIDA grades were present according to the Years of work were ($p=0.001$) and ($X^2 15.74$) with a great majority in the 5-15 years and Positive disability were (65.48%)

Figure (3) Distribution of the correlation between socio-demographic data to Participants (Age, gender, marital status, Occupation and Years of work) and Migraine Disability Assessment



5. Discussion

This cross-sectional study Assessment the levels of knowledge of the prevalence Migraine headache among healthcare providers in PHC centers in Makkah City, Saudi Arabia, 2019. Migraine is a common neurological disorder affecting Saudi population, was found to be higher than prevalence reported in different studies. For instance, headache was reported in 53.2% of individuals studied in Brazil in 2005 [25], 33.8% in Nairobi[26], and 27.9% in Kuwait[27]. The mean age of our participants was 35 years, which was close to the findings of the previous Saudi study conducted on migraine patients, where the mean age of patients was 34.21 years. Pradeep et al. reported that migraine was more frequent among young and middle-aged individuals [34]

The present study revealed that prevalence of migraine headache among healthcare providers in PHC centers Makkah City , with significantly higher grades of severity among females and nurse then doctor in our study that that most of the participants (45.0%) were in the age group(35-50) years follow by the age <35.0% were (33.0%) , the majority of them females was higher compared to male(59.0% and 41.0%) , regarding the marital status most of participants married were(39.0%)while widow were(25.0%), regarding occupation the majority of participant are nurse were(49.0%) while administrative practitioner were(31.0%), regarding the years of work majority of participant from 5-15 were (49.0%) (See table 1)

These findings are in accordance with those reported by several studies. Ferrarier al. reported that prevalence of migraine among the general population of the Arab countries ranged between 2.6% and 32%. The prevalence rates ranged from 12.2% to 27.9% among medical students, and ranged from 7.1% to 13.7% among school children. Females were more susceptible to migraine compared to males[36]

Table 2 shows that the score of migraine screen questionnaire (MS-Q) of the participants regarding the frequent or intense headaches have a significant differences relation were $P=0.000$ and $X^2(18.000)$ the majority of participants answer No were(65.0%),while Yes were(35.0%), regarding headaches usually for last more than 4 hours have a significant differences relation $P=0.000$ and $X^2(58.320)$ the majority of participants answer No were(77.53%),while Yes were(23.0%), regarding the suffer from nausea when you have headache have a significant differences relation were $P=0.000$ and $X^2(25.920)$ the majority of participants answer No were(68.0%),while Yes were(32.0%), regarding light or noise bother you when have a headache have no significant differences relation were $P=0.157$ and $X^2(2.000)$ the majority of participants answer Yes were(55.0%),while No were(45.0%), regarding headache limit any of your physical or intellectual activities have no significant differences relation were $P=0.157$ and $X^2(2.000)$ the majority of participants answer Yes were(55.90%),while No were(45.0%) Moreover, migraine was found to run in families [36].

The present study showed that the largest proportion of nurse in PHC had positive disability were(52.38%),followed by those with Little or No Disability were(46.55%), moderate disability were (15.0%), also shows that regarding the Participants' Migraine Disability Assessment grades on how many days in the last 3 months did you miss work because of your headaches the mean \pm SD was (375 ± 1.118) while the data range (1-7),

regarding how many the days in the last 3 months was your productivity at work or school reduced by half or more because of your headaches the mean \pm SD was (11.78 \pm 4.155) while the data range (2-18), while regarding on how many days in the last 3 months did you not do household work (such as housework, home repairs and maintenance, shopping, caring for children and relatives) because of your headaches the mean \pm SD was (29.45 \pm 8.97) while the data range (1-34), regarding How many days in the last 3 months was your productivity in household work reduced by half of more because of your headaches the mean \pm SD was (27.19 \pm 13.89) while the data range (1-49), regarding On how many the days in the last 3 months did you miss family, social or leisure activities because of your headaches the mean \pm SD was (7.87 \pm 4.11) while the data range (0-17). Regarding the mean \pm SD of the total (MIDAS) score were (81.64 \pm 49.23) and data rang were (3-130). The migraine disability grade(G I) of 36 participants (18.0%) was little or no disability, that of 98 (49.0%) was mild disability(G II), that of 42 (21.0%) was moderate disability(III), and that of 24(12.0%) was severe disability(IV).(See table 3)

In Malaysia, severe disability was reported among 73% of migraine patients, which was higher than that shown by our study. In accordance with our study, severe disability was significantly associated with increasing duration of migraine[37]. Alzahrani et al. found that headache had a severe effect on the job performance and the life of emergency department staff.[38]. similar study shown In accordance with our study it has been reported that migraine disabilities have an acute impact on the performance of the job and outcome, as 31% of migraine patients lost one workday in a period of three months and absented an average of 10.7 days per year[37], Moreover, Zivadinov et al. suggested that physical activity is one of the commonest triggers of headache [39]

also similar study the recent studies on populations living in high altitude regions has shown a high prevalence of headache, particularly migraine.[49] This high prevalence of migraine's headache is also similar to that reported in a previous study from Taif, which is another city in the Sarawat mountain ranges of Saudi Arabia.[40] Another recently published study from Riyadh, the capital of Saudi Arabia reported a prevalence of 84%. [23] These results are in contrast with the studies from the past decade and thus pose interesting questions. A review published in 2010 that focused on the epidemiology of headache in the Arab region included two community-based studies with large sample size from Saudi Arabia.[40] This review had reported the prevalence of headache to be much lower at 8-12% than that reported in the current study and some recent studies from the region.[23,39] This is an interesting observation as it suggests an extraordinary increase in headache prevalence in the Kingdom. Though these differences could be purely due to methodological reasons, different populations and different area, however the increased use of digital gadgets, especially handheld device like smartphones, warrants further studies to understand this phenomena.[40]

6. Conclusion

The present study showed that the prevalence of migraine in healthcare providers in PHC centers in Makkah is more or less the same the prevalence of migraine as that of other healthcare providers in PHC centers in deferentcites. Migraine is prevalent at Saudi Arabia. It is recommended that awareness related to knowledge of symptoms and triggers of migraine among general Saudi population be raised by print and electronic media as well as printed brochures should be placed in every health care center. Only one-third of Saudi migraineurs know about migraine triggers. Stress was the most migraine trigger, family history of migraine is very common among Saudi migraineurs.

7. References

1. Nosedá, R., & Burstein, R. (2013). Migraine pathophysiology: anatomy of the trigeminovascular pathway and associated neurological symptoms, cortical spreading depression, sensitization, and modulation of pain. *PAIN*, 154, S44-S53.
2. Loftus, A. M., Wade, C., & McCarron, M. O. (2016). Primary care perceptions of neurology and neurology services. *Postgraduate medical journal*, 92(1088), 318-321.
3. Parviz Bahrami, M. D., Hatam Zebardast, M. D., & Mohammad Zibaei, M. D. (2012). Prevalence and characteristics of headache in Khoramabad, Iran. *Pain Physician*, 15, 327-332.
4. Almalki, Z. A., Alzhrani, M. A. G., Altowairqi, A. T., Aljawi, Y. A., Fallatah, S. A., Assaedi, L. M., ... & Alqusair, S. A. (2018). Prevalence of migraine headache in Taif City, Saudi Arabia. *Journal of clinical medicine research*, 10(2), 125.
5. Woldeamanuel, Y. W., & Cowan, R. P. (2017). Migraine affects 1 in 10 people worldwide featuring recent rise: a systematic review and meta-analysis of community-based studies involving 6 million participants. *Journal of the neurological sciences*, 372, 307-315.
6. Zhang, Y., Kong, Q., Chen, J., Li, L., Wang, D., & Zhou, J. (2016). International Classification of Headache Disorders 3rd edition beta-based field testing of vestibular migraine in China: Demographic, clinical characteristics, audiometric findings and diagnosis statues. *Cephalalgia*, 36(3), 240-248.
7. Ojini, F. I., Okubadejo, N. U., & Danesi, M. A. (2009). Prevalence and clinical characteristics of headache in medical students of the University of Lagos, Nigeria. *Cephalalgia*, 29(4), 472-477.
8. Galinović, I., Vuković, V., Trošelj, M., Antić, S., & Demarin, V. (2009). Migraine and tension-type headache in medical students: a questionnaire study. *Collegium antropologicum*, 33(1), 169-173.

9. López-Mesonero, L., Márquez, S., Parra, P., Gámez-Leyva, G., Munoz, P., & Pascual, J. (2009). Smoking as a precipitating factor for migraine: a survey in medical students. *The journal of headache and pain*, 10(2), 101-103.
10. Ndejjo, R., Musinguzi, G., Yu, X., Buregyeya, E., Musoke, D., Wang, J. S., ... & Ssempebwa, J. (2015). Occupational health hazards among healthcare workers in Kampala, Uganda. *Journal of environmental and public health*, 2015.
11. Deleu, D., Khan, M. A., Humaidan, H., Al Mantheri, Z., & Al Hashami, S. (2001). Prevalence and clinical characteristics of headache in medical students in Oman. *Headache: The Journal of Head and Face Pain*, 41(8), 798-804.
12. Dong, H., Zhang, Q., Sun, Z., Sang, F., & Xu, Y. (2017). Sleep disturbances among Chinese clinical nurses in general hospitals and its influencing factors. *BMC*
13. Ibrahim, N. K., Alotaibi, A. K., Alhazmi, A. M., Alshehri, R. Z., Saimaldaher, R. N., & Murad, M. A. (2017). Prevalence, predictors and triggers of migraine headache among medical students and interns in King Abdulaziz University, Jeddah, Saudi Arabia. *Pakistan journal of medical sciences*, 33(2), 270..
14. Esmael, A., Gomaa, M., & Hazem, M. (2018). Are Carpal Tunnel Syndrome and Migraine Related?. *International Neuropsychiatric Disease Journal*, 1-13.
15. World Health Organization. (2011). *Atlas of headache disorders and resources in the world 2011*. Geneva: World Health Organisation.
16. Sacco, S., Ricci, S., Degan, D., & Carolei, A. (2012). Migraine in women: the role of hormones and their impact on vascular diseases. *The journal of headache and pain*, 13(3), 177-189.
17. Burch, R., Rizzoli, P., & Loder, E. (2018). The prevalence and impact of migraine and severe headache in the United States: figures and trends from government health studies. *Headache: The Journal of Head and Face Pain*, 58(4), 496-505.
18. Stovner, L. J., Hagen, K., Jensen, R., Katsarava, Z., Lipton, R. B., Scher, A. I., ... & Zwart, J. A. (2007). The global burden of headache: a documentation of headache prevalence and disability worldwide. *Cephalalgia*, 27(3), 193-210.
19. Burstein, R., Nosedá, R., & Borsook, D. (2015). Migraine: multiple processes, complex pathophysiology. *Journal of Neuroscience*, 35(17), 6619-6629.
20. Buse, D. C., Loder, E. W., Gorman, J. A., Stewart, W. F., Reed, M. L., Fanning, K. M., ... & Lipton, R. B. (2013). Sex Differences in the Prevalence, Symptoms, and Associated Features of Migraine, Probable Migraine and Other Severe Headache: Results of the American Migraine Prevalence and Prevention (AMPP) Study. *Headache: The Journal of Head and Face Pain*, 53(8), 1278-1299.
21. Russo, A., Bruno, A., Trojsi, F., Tessitore, A., & Tedeschi, G. (2016). Lifestyle factors and migraine in childhood. *Current pain and headache reports*, 20(2), 9.
22. Loder, E., Weizenbaum, E., Frishberg, B., Silberstein, S., & American Headache Society Choosing Wisely Task Force. (2013). Choosing Wisely in Headache Medicine: The American Headache Society's List of Five Things Physicians and Patients Should Question. *Headache: The Journal of Head and Face Pain*, 53(10), 1651-1659.
23. van Hemert, S., Breedveld, A. C., Rovers, J. M., Vermeiden, J. P., Witteman, B. J., Smits, M. G., & de Roos, N. M. (2014). Migraine associated with gastrointestinal disorders: review of the literature and clinical implications. *Frontiers in neurology*, 5, 241.
24. Fraga, M. D. B., Pinho, R. S., Andreoni, S., Vitalle, M. S. D. S., Fisberg, M., Peres, M. F. P., ... & Masruha, M. R. (2013). Trigger factors mainly from the environmental type are reported by adolescents with migraine. *Arquivos de neuro-psiquiatria*, 71, 290-293.
25. Domingues, R. B., Aquino, C. C., Santos, J. G., Silva, A. L., & Kuster, G. W. (2006). Prevalence and impact of headache and migraine among Pomeranians in Espirito Santo, Brazil. *Arquivos de neuro-psiquiatria*, 64, 954-957.
26. Amayo, E. O., Jowi, J. O., & Njeru, E. K. (2002). Headache associated disability in medical students at the Kenyatta National Hospital, Nairobi. *East African medical journal*, 79(10), 519-523.
27. Al-Hashel, J. Y., Ahmed, S. F., Alroughani, R., & Goadsby, P. J. (2014). Migraine among medical students in Kuwait University. *The journal of headache and pain*, 15(1), 1-6.
28. Yeh, W. Z., Blizzard, L., & Taylor, B. V. (2018). What is the actual prevalence of migraine? *Brain and behavior*, 8(6), e00950.
29. Bingefors, K., & Isacson, D. (2004). Epidemiology, co-morbidity, and impact on health-related quality of life of self-reported headache and musculoskeletal pain—a gender perspective. *European journal of pain*, 8(5), 435-450
30. Rabiee, B., Zeinoddini, A., Kordi, R., Yunesian, M., Mohammadinejad, P., & Mansournia, M. A. (2016). The epidemiology of migraine headache in general population of Tehran, Iran. *Neuroepidemiology*, 46(1), 9-13.
31. Steiner, T. J., Stovner, L. J., Vos, T., Jensen, R., & Katsarava, Z. (2018). Migraine is first cause of disability in under 50s: will health politicians now take notice?.
32. Fillingim, R. B., King, C. D., Ribeiro-Dasilva, M. C., Rahim-Williams, B., & Riley III, J. L. (2009). Sex, gender, and pain: a review of recent clinical and experimental findings. *The journal of pain*, 10(5), 447-485
33. Láinez MJ, Domínguez M, Rejas J, et al. Development and validation of the Migraine Screen Questionnaire (MS-Q). *Headache*. 2005;45(10):1328-1338. doi:10.1111/j.1526-4610.2005.00265.x

34. Pradeep, R., Nemichandra, S. C., Harsha, S., & Radhika, K. (2020). Migraine Disability, Quality of Life, and Its Predictors. *Annals of Neurosciences*, 27(1), 18
35. Ferrari, M. D., Klever, R. R., Terwindt, G. M., Ayata, C., & van den Maagdenberg, A. M. (2015). Migraine pathophysiology: lessons from mouse models and human genetics. *The Lancet Neurology*, 14(1), 65-80.
36. Stewart, W. F., Wood, G. C., Manack, A., Varon, S. F., Buse, D. C., & Lipton, R. B. (2010). Employment and work impact of chronic migraine and episodic migraine. *Journal*
37. Shaik, M. M., Hassan, N. B., Tan, H. L., & Gan, S. H. (2015). Quality of life and migraine disability among female migraine patients in a tertiary hospital in Malaysia. *BioMed research international*, 2015.
38. Alzahrani, A., Al-Shehri, L., Alshamrani, A., Alharthi, R., & Alomairi, N. (2017). Prevalence and Impact on Job Performance of Primary Headache Among Medical and Paramedical Staff in the Emergency Department. *Journal of Neurology Research*, 7(1-2), 5-12
39. Zivadinov, R., Willheim, K., Sepic-Grahovac, D., Jurjevic, A., Bucuk, M., Brnabic-Razmilic, O., ... & Zorzon, M. (2003). Migraine and tension-type headache in Croatia:
40. Benamer, H. T., Deleu, D., & Grosset, D. (2010). Epidemiology of headache in Arab countries. *The journal of headache and pain*, 11(1), 1-3.