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THE ROLE OF THE TRADITIONAL AND ALTERNATIVE MEDICINE PRACTICES IN THE TREATMENT OF HEADACHE AMONG RIYADH, SAUDI ARABIA POPULATION; A CROSS-SECTIONAL STUDY

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ABSTRACT

Background: Headache is one of the top ten commonest reasons for doctors' consultations. The aim of this study is to identify whether the traditional and alternative medicine practices play a role in the treatment of the headache and relieves head pain. **Methodology**: It is a cross-sectional study among the population in Riyadh, Saudi Arabia. data were collected by using validated self-administered questionnaire. The participant had to answer multiple questions, including demographics factors and questions related to the study objectives. Confidentiality was ensured. **Results**: In this study, we had collected 486 responses with a mean age of participants was 35.47 with standard deviations of 12.5 years. The percentage of participants who reported knowing about traditional or alternative medicine in the treatment of headache finding that only 30.8 % of participants indicated that they knew these medicines and 36.5 % had tried some of them. Moreover, we did not find any relation between any demographic factors and using of alternative medications however, we noticed some consideration. **Conclusion:** In conclusion, we found a low prevalence of using alternative medications among the population in Riyadh, Saudi Arabia. This reflects the good knowledge of the population in Saudi Arabia about alternative medications however, there is a need for developing policies and education programs for both population and physicians to improve the relationship between them.

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INTRODUCTION

Headache can be defined as head pain, located above the orbitomeatal line with/without including nuchal ridge. Headache is common worldwide (1). It has a history of 9000 years as a common neurological disorder, which could have been existed since humankind's creation (2). According to the International Headache Society, it is classified into primary and secondary disorders (3). 90% of all cephalalgias are considered as primary headache, which includes migraine, tension-type headache (TTH), cluster headache, trigeminal autonomic cephalalgias, pressure headache, cold-stimulus headache, etc. Headache is not fatal; however, it may lead to substantial disability and can be an economic burden. Where the secondary headache is a symptom caused by an underlying disease such as head injuries, infections, vascular disorders, neoplasms, or epileptic seizures (3,4). Studies have shown that stress, sleep disturbance, and dietary patterns are behavioral factors that usually triggers headache along with the psychological factors (5). The World Health Organization (WHO) estimated that the prevalence of current symptomatic headache disorder among adults is about 50% worldwide. Up to 75% of individuals aged 18-65 have had a headache once within a year. Nowadays, headache is considered as one of the top global disabling medical conditions (6). Headache was ranked at level 4 according to the Global Burden of Disease as the leading cause of years lived with disability since 1990 and up to 2016 in Eastern Mediterranean Region (4).

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Evidence suggests that more than 46% of the global population have active headaches, and up to 90% have experienced headache throughout lifetime (7). In 2016, estimates showed that the prevalence of migraine and TTH in the Eastern Mediterranean Region were 15.9% and 29.7% on all-age groups, respectively (4). The prevalence of headaches is about 8-12% in Saudi Arabia, 72.5% in Qatar, and 83.6% in Oman (8). Studies have shown that the prevalence of headache was common in females compared to males and youth (4,8), with a ratio of 1.2:1 and 1.7:1 for TTH and migraine, respectively (4). Headache is one of the top ten commonest reasons for doctors' consultations. The most common phenomenon that forced people to seek help from health care professionals was pain, which had an impact on the quality of life (9). Non-steroidal anti-inflammatory drugs (NSAIDs) are the first choice for mild to moderate migraine attacks. Paracetamol can be an alternative as well. In case of moderate to severe attacks and not responding to NSAIDs, triptans were proven to be effective in 60% of the cases. Antiepileptic drugs such as topiramate and valproic acid are used as prophylactic therapy (10). For TTH acute attacks, it is recommended to use NSAIDs and paracetamol. For prophylaxis, antidepressants are the choice. The rate of headache diagnosis was 40%, as revealed by a previous study. This is a factor that led to a high rate of untreated cases (10).

Patients often look for several treatments rather than having one treatment. migraineurs experience dissatisfaction due to their belief that Complementary and Alternative Medicine (CAM) would help to enhance their quality of life (11). A collection of herbs has been understudies for the treatment of headaches such as Ginkgo biloba, magnesium, Tanacetum parthenium, Petasites hybridus root, and Boswellia serrata. Moreover, some alternative therapies such as; yoga, relaxation, meditation, and cognitive-behavioral treatment showed improvement in patients with headaches in both adults and youth. The reason might be related to its impact on emotional and neural substrates in addition to stabilizing overall excitement (12). Studies have shown a widely used and try of CAM therapies on the general population after visiting a neurologist about 20-40%, 87.4%, and 85% in Italy, Germany, and America, respectively (13). One of the most used options are amongst CAM users is herbal treatments (14). CAM was not used straightaway to treat headache but were used for stress management, which is believed to be a major factor in migraine patients (12).

Moving on into Arab gulf countries that are mainly defined on a geographic basis, as members of Gulf Cooperation Council (GCC). Traditional Medicine (TM) represents medical profession information of the ancestors that passed through generations over centuries (15). There are different reasons for people to use TM including the dissatisfying modern medicine, and/or related to the user beliefs and values regarding health and life such as the treatment based on the Quran and the prophet's sunnah (16). A study has reported that 46% of the headache patient in Oman had prescribed medication while 37% used self-medication and 4% tried TM (8). AlHashel et al. investigated the use of TM on headache patients in Kuwait and found that 69.5% of the study population have tried it, and more than half of them because of religion beliefs (16). Due to the similarity in the GCC countries in all levels of economic, ethnic, cultural, and religion, we expect to reflect the same practice of TM in Saudi Arabia. The most common methods of TM in Kuwait to treat headaches are Hijama, Sabkah, headband, and application of ice pack (16).

In parallel, surveys showed that the majority of Saudis were interested in the use of TM either alone or in combination with modern medicine (15). A study found that a high prevalence of over-the-counter drugs (OTCs) use among students in Saudi Arabia during exams, 80% of the sample have used NSAIDs to obtain relief of headaches (17). The use of self-medication OTCs and TM is not only for mild pain but also can be in trauma situations such as burn injuries. Kattan et al. reported a high percentage of traditional remedies used among the Saudi population as burn first aid was about 77.4% (18). The use of TM might be potentially harmful to the patient if used by non-educated personnel or if the patient decided to only rely on TM (16).

These practices of non-evidence-based medicine may interfere with the prognosis leading to poor outcomes. Therefore, it is recommended to gather further information on this topic. Our study aims to detect the influence of TM on headache patients and its efficacy.

METHODOLOGY

This cross-sectional study targeted patients complaining of headache in Saudi Arabia. The study was conducted from January 2020 to December 2020. The participants included in the study were male and female Saudi patients aged 18 years and above. The exclusion criteria were non-Saudis, those who did not sign the informed consent, and those below 18 years of age. The sample size was 486. It is a cross-sectional study among the population in Riyadh, Saudi Arabia. data were collected by using validated self-administered questionnaire.
The participant had to answer multiple questions, including demographics factors and questions related to the study objectives. Confidentiality was ensured. The data were analyzed using the Statistical Package for Social Sciences Program (IBM SPSS Statistics, Version 23). Chi-square was used to attain a P-value between dependent and independent categorical data to estimate associations where P-value ≤ 0.05 is considered significant.

Ethical considerations: Prior ethical approval was obtained from King Fahad Medical City (KFMC), Riyadh, Saudi Arabia. Confidentiality and anonymity were maintained throughout the study and the collected data was only used for the purposes described in the study objectives.

RESULTS

In this study, we had collected 486 responses for our study with a response rate of 133 %. The mean age of participants was 35.47 with a standard deviation of 12.5 years. Most of the sample (38.5 %) were between 18 to 29 years old. Moreover, almost all of the participants were Saudi Arabian and 63 % of them were females with a ratio of about 2:1 (F:M). Considering education, we found that most of the sample had an education of University (71.8 %). Moreover, most of the participants live in villa (67.9 %), and most of them lived in owned home (72.3 %). Moreover, we found that most of the participants were from Riyadh (84 %). Finally, 35.1 % of the samples had indicated that they had been diagnosed with at least one type of headache. Table 1. According to participants, most of those having headache (42.5 %) described their headache as migraine while tension headache was the second popular type of headache (16.9 %) followed by sinus headache (Figure 1).

Moreover, we found that 89.8 % of participants reported that they had experienced headaches during this year with a mean duration of headache of 16.7 hours per week with a standard deviation of 26.12 hours per week. Moreover, most of the participants (37.9 %) indicated having pain in the forehead during headache, while 20.9 % had pain in the center of the head during the pain. They mostly indicated that these pains were moderate (55.9 %). Moreover, 46.8 % of participants indicated that they had headache pain twice or fewer times each month and 31.8 % of them used sedatives once per month for relieving the headache pain (Table 2). In figure 2, we showed up the percentage of participants who reported knowing about folk, traditional or alternative medicine in the treatment of headache finding that only 30.8 % of participants indicated that they knew these medicines and 36.5 % had tried some of them. Moreover, headband and massage were the most common traditional treatment used in this sample in treatment or reliving on headache were 31.6 % of participants indicated using of massage and 31.6 % indicated using of headband. This is followed by cupping or what is known by Al Hjama (21.9 %) Figure 3. Moreover, we found that 75.4 % of participants who had used traditional treatment in treating headaches found these medications effective in treating their headache with minimum side effect where only 1.8 % indicating having a side effect. Most of them used traditional treatment immediately after having headache (49.1 %) with a frequency of 3 times or more in the last year.

Table 1. Demographic factors of participants (N=486)

Variable		Count	Column N %
Age	less than 18 years	12	2.5%
	18-29	187	38.5%
	30-40	119	24.5%
	41-50	114	23.5%
	51-60	42	8.6%
	Older than 60 years	12	2.5%
Nationality	Saudi Arabian	466	95.9%
	Non-Saudi Arabian	20	4.1%
Gender	Male	180	37.0%
	Female	306	63.0%
Education	Elementary	1	0.2%
	Intermediate	17	3.5%
	Secondary	119	24.5%
	University	348	71.8%
Type of home	Villa	328	67.9%
	Apartment	95	19.7%
	Level	60	12.4%
Home condition	Owned	349	72.3%
	Rent	134	27.7%
Residency	Riyadh	404	84.0%
	Makkah	29	6.0%
	Eastern Province	21	4.4%
	Medina	3	0.6%
	Asser	14	2.9%
	Qassim	5	1.0%
	Hail	1	0.2%
	Tabuk	3	0.6%
	Al Baha	1	0.2%
Have you ever been diagnosed with any type of headache?	Yes	148	35.1 %
	No	274	64.9 %

The reasons behind using traditional treatment are mainly religious or cultural issues (37.5 %), thought that modern medicines are ineffective (27.7 %), or fearing of side effects of these medications (25.9 %). Moreover, most of these users were used alternative medications before going to physicians (72.1 %) and 63.8 % of them will not inform their doctors about using these treatments (Table 3). Moreover, 81.7 % of participants were satisfied with the results of traditional and alternative medicine in the treatment of headaches however, only 39.1 % thought that folk treatment could be used in the treatment of headache and 32.2 % would use them as a solo treatment (Table 4). In this study, we did not find any relation between any demographic factors and using of alternative medications however, we noticed some consideration. First, the use of alternative medications to treat headache is at its top in very young and very old populations. Second, females tend for using alternative medicine than males (33.5 % of females Vs 26 % of males used traditional medicine). Finally, using of alternative medicine was higher in people who lived in rental homes than those living in an owned home (Table 5).

DISCUSSION

Traditionally and alternative medicine is commonly used among the population in Saudi Arabia (19). We aimed in this study to identify whether the traditional and alternative medicine practices play a role in the treatment of the headache and relieves the head pain besides, identifying the frequency of using these medications among the public in Saudi Arabia. We considered Hijama, head banding, Sabkha, and diet modification as non-conventional medicine that interfere with the proper controlling of headache and other conditions in our society. There is evidence that is indicated that alternative medicine was not only used for the healthcare of the poor, and its prevalence increased in regions where allopathic medicines are predominant in the healthcare systems (20). The prevalence rate of using traditional medicine in all aspects of diseases in the Gulf region is high (19) where in the United Arab Emirates, the prevalence was 67 % and in Saudi Arabia was 42 % (21,22). To our knowledge, this is the first study of traditional medicine use by headache patients in Saudi Arabia. In this study, we had found that 30.8 % of participants used traditional or alternative medicine to treat headache. When comparing our results with other studies conducted in other countries, we found that our prevalence of using traditional medicine in the treatment of headache of 30.8 % was lower than reported by other studies including a study conducted in Kuwait with a prevalence of 69.5 % among headache clinic patients (19), and a study conducted in Italy where the prevalence of traditional medicine was 31 % in migraine, 40 % in chronic tension-type headache and 29 % in cluster headache patients (23,24,25).

Moreover, our result was lower than reported in a study conducted in the United Kingdom of 32 % (26), in the United State of America with the prevalence of 44.4 % (27) and 41.3 % (28) and 81 -85 % in Austrian and German population (29). This might reflect cultural and regional differences on how and by whom complementary and alternative medicine therapies were provided. In this study, we did not find any relation between any demographic factors including age, gender, and education, and using of alternative medications however, we noticed some consideration. This result is in agreement with the study of Kuwait (19) which did not find a significant difference between groups regarding gender or education level. This is also consistent with many other studies that are conducted about using different traditional medicine (30, 31). Moreover, we had found that females are slightly more users of traditional treatment than males however, this is not significant. This is in agreement with other studies that found that traditional medicine use was more prevalent in young females due to mass media affection, family members, and friends however these studies had found a significant correlation (32,33). In this study, we found that massage and headband were the most common traditional medicine used among patients while Al Hijama prevalence was 21.9 %. Moreover, religion or cultural aspects are the most common reason behind using traditional medicine.

This is in contrast with the study of Kuwait where Al Hijama was the most common treatment (65.6 %) (19). The religious roots of hijama is that the Prophet Muhammad encouraged its use however Prophet Mohammed didn't specify which disease hijama will heal, moreover, he didn't stop people from seeking medical advice at first (34). Moreover, we found that 75.4 % of participants who had used traditional treatment in treating headache found these medications effective in treating their headache with minimum side effects where only 1.8 % indicating having a side effect. This is in agreement with the study of Alrowais where they found that most of the participants of traditional medicine rely on their thought that traditional medicine is more effective than conventional treatment (35). Moreover, it is known during the literature review, that traditional medicine could be harmful if used without medical supervision or when patients depended on it ignoring conventual ones (19,20,25). However, in this study, only 1.8 % of users of traditional medicine had some side effects, we found that most of the participants would not use these medications as a solo treatment of headache. This reflects that participants however they had a perception of the effectiveness and safety of traditional treatment, they had a negative attitude toward it.

Finally, we had found that most of the participants would use traditional medicine before going to physicians and most of them would not tell their physicians about using these medications reducing the role of the physicians. Therefore, physicians should be understanding, supportive, and open-minded when dealing with patients who use traditional or alternative medicine. Healthcare providers should educate patients about their traditional or alternative medicine use, monitor potential benefits or adverse events, and educate patients about conventional medicine. Tradition or alternative medicine is unfortunately applied by some unprofessional healers just to gain money which is misuse of the healthcare system and using the illness of the people solely for financial reasoning. This study has some limitations. First limitation is that this study depended on self-reported questionnaire which may cause some of personal bias as some participants may not indicate correct attitude in order to appear as better persons. Moreover, some parts of the questionnaire depended on some events that happened in last month which may cause some recall bias.

Table 2. Duration of headache and frequency of it as reported by patients

		Count	Column N %
Have you ever experienced headaches during this year?	Yes	379	89.8%
	No	43	10.2%
Are there headaches with pain in the head and face area?	Full head	84	19.9%
	Forehead	160	37.9%
	Back of head	53	12.6%
	Center	88	20.9%
	No	37	8.8%
In the event that there were pains, how would you describe these pains?	Slight	79	19.3%
	Moderate	229	55.9%
	Severe	102	24.9%
How frequent is the headache pain in a month?	None	113	27.0%
	Twice or less	196	46.8%
	3-14 times	110	26.3%
	more than 14 times	0	0.0%
How many times a month used sedatives for such cases of headaches?	1	134	31.8%
	2	79	18.7%
	3 or more	96	22.7%
	Never used it	113	26.8%

Table 3. Frequency of using tradition/ alternative medication to treatment of headache

		Count	Column N %
Did these medications have a positive effect on your condition	Yes	86	75.4%
	No	28	24.6%
Did you have any side effects from these medication	Yes	2	1.8%
	No	112	98.2%
When have you been using these methods of treatment from the time of the pain?	Immediately	56	49.1%
	During the day	33	28.9%
	During the week	25	21.9%
How often have folk and alternative medicine methods been used?	1	28	24.8%
	2	26	23.0%
	3 or more	59	52.2%
What is the motivation and reason for your use of traditional and alternative medicine?	Ineffective medicine	31	27.7%
	Fear from medications	29	25.9%
	Religion/ culture	42	37.5%
	Not availability of physicians	10	8.9%
When did you start using traditional and alternative medicine treatments from the time you visited the neurologist?	Before	75	72.1%
	After	29	27.9%
Did you tell the doctor about these methods?	Yes	34	36.2%
	No	60	63.8%

Table 4. Satisfaction of participants about using of alternative medications

		Count	Column N %
Are you satisfied with the results of your traditional and alternative medicine treatment?	Yes	89	81.7%
	No	20	18.3%
Do you personally think that folk and alternative medicine can be relied upon in treating headaches?	Yes	43	39.1%
	No	67	60.9%
Do you personally think that folk and alternative medicine can be relied upon alone in treating headaches?	Yes	92	32.2%
	No	194	67.8%

Table 5. Demographic factors and using of traditional medicine in treatment of headache

Variable		Have you ever used any of the traditional or alternative medicine treatments?				
		Yes		No		P-value
Age	less than 18 years	3	33.3%	6	66.7%	0.194
	18-29	41	24.3%	128	75.7%	
	30-40	34	32.1%	72	67.9%	
	41-50	38	39.6%	58	60.4%	
	51-60	10	31.3%	22	68.8%	
	Older than 60 years	4	40.0%	6	60.0%	
Nationality	Saudi Arabian	123	30.3%	283	69.7%	0.253
	Non-Saudi Arabian	7	43.8%	9	56.3%	
Gender	Male	39	26.0%	111	74.0%	
	Female	91	33.5%	181	66.5%	
Education	Elementary	0	0.0%	1	100.0%	0.147
	Intermediate	8	57.1%	6	42.9%	
	Secondary	28	28.0%	72	72.0%	
	University	94	30.7%	212	69.3%	
Type of home	Villa	81	28.0%	208	72.0%	0.215
	Apartment	31	37.8%	51	62.2%	
	Level	16	33.3%	32	66.7%	
Home condition	Owned	93	29.6%	221	70.4%	0.402
	Rent	36	34.0%	70	66.0%	

* significant at p value < 0.05

Finally, this study had been conducted among general population with different prevalence of headache, we recommend conducting hospital-based study. In conclusion, we found a low prevalence of using alternative medications among the population in Riyadh, Saudi Arabia. This reflects the good knowledge of the population in Saudi Arabia about alternative medications however, there is a need for developing policies and education programs for both population and physicians to improve the relationship between them.

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