

EFFECT OF WET CUPPING USE AMONG PATIENTS COMPLAINING OF PAIN ATTENDED IN THE HIJAMA CLINIC MAKKAH SAUDI ARABIA 2019

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ABSTRACT

Background:

Wet cupping is a traditional and alternative treatment that is still used to reduce patients' pain in several Eastern and European countries. It has been proven effective and has an essential role in reducing pain and as a treatment for many diseases in past studies. Nowadays, there is a growing interest in the field of complementary and alternative medicine (CAM). This discipline includes a diverse set of approaches used for prevention and treatment of many diseases. Several benefits of CAM have been proven, and it may be considered an effective modality for disease prevention, treatment of non-communicable diseases and for improving the quality of life of individuals with chronic medical conditions.² Many patients who may not be satisfied with the outcomes of modern medicine, particularly those with chronic diseases, may be satisfied with the outcomes of CAM. Pain is the most common reason for seeking therapeutic alternatives of conventional medicine. Cupping, wet or dry, is an ancient treatment, which was broadly utilized in several communities, and it was recommended by the Islamic society.

Aim of the study: The study aimed to assess the effect of wet cupping use among patients complaining of pain attended in the Hijama clinic in Makkah City at Saudi Arabia.

Method: A retrospective records review study was conducted using medical records of patients who attended in the Hijama clinic at Makkah, KSA from January 2019 to December 2019. Our total, 200 patients attended the clinic during the year 2019. Out of those patients, 120 were complaining of pain and were included in the study. The Chi-square test and Multivariate logistic regression were used to measure the association between the various socio-determinants and the wet cupping use.

Results: A chi-square test of independence was performed to determine the association between the frequency of WCT use and the main complaint, independence was performed to determine the association between the frequency of WCT use and the main complaint. There was a statistically significant association between them, Chi-square $X^2 = 86.663$, $p = 0.001$.

Conclusion: Wet cupping has positive effects on reducing pain. There are promising effects in favor of using wet cupping for improving quality of life of patients with chronic conditions, cupping is recommended as a complementary treatment modality for chronic medical conditions, especially pain .

Keywords: Effect, wet cupping, pain, Hijama, clinic, Makkah.

1. INTRODUCTION

Bone pain is a common health problem and a major cause of activity restriction. This pain may not be limited to a particular age or gender, extensively in countries such as Saudi Arabia. Interest in traditional medicine has risen dramatically, not just by members of the public but also among medical practitioners, decision-makers, and researchers in Saudi Arabia[1].

Patients with bone pain feel aching, tenderness, or other discomfort in some parts of their bones with or without moving. This pain may be due to any causes that affect the function or structure of the bone such as trauma or a deficiency in calcium and vitamin D, which could lead to osteoporosis, metastatic bone cancer, sickle cell anemia, osteomyelitis, leukemia, or pregnancy-related pelvic girdle pain. The leading traditional therapies in Saudi Arabia are religious healing, cupping therapy, healing with honey, and herbal medicine. Cultural and religious beliefs encourage to seek traditional pain relief in Saudi Arabia. Most traditional pain management methods are presumably innocuous; however, some may be deleterious [2].

Bone pain may be reduced with pain relievers, powerful antibiotics, nutritional supplements, cancer treatments, or surgery according to the cause.[3] In addition, acupuncture was significantly effective more than physical

exercise to relieve pain according to the physical function score of the Zurich claudication questionnaire (ZCQ) and is considered as more satisfactory than medication according to the satisfaction score.[4] Moreover, doubts exist on the management of pain with traditional medicine, particularly for controlling intractable and unremitting pain. There is a scarcity of reliable information on the use, safety, and effectiveness of traditional pain management treatments in Saudi Arabia. [5]

The prevalence of chronic pain is varied among countries. It's calculable to be twenty four % in developing countries whereas this prevalence is higher in developed countries with twenty eight % according to a recent review study.[6]. Pain is the most common reason for seeking therapeutic alternatives of conventional medicine.[7,8]

Traditional and Complementary Medicine (T&CM) comprises a wide range of different therapies that are used outside conventional healthcare of conventional therapy. However, T&CM and modern medicine are now offered together in an integrative healthcare approach. In many modern medical centers, the offering of T&CM and modern medicine delivered in an integrative healthcare approach. Traditional medicine refers to practices based on the native culture whereas the terms "complementary medicine and alternative therapies(CAM)" refers to broad set of health care practices that are not part of the country's own traditions. [1]

Previous studies reported that the prevalence of using CAM is ranging from 5% to 74.8% worldwide.[9].it was estimated that nearly one third of American adults had used at least one type of complementary and alternative medicine in their lives.[10]. Recently, CAM is becoming more popular in European countries and other developed countries. The percentage of the adults who have used CAM at least once is 38% in Belgium, 75% in France, 48% in Australia and 70% in Canada. World Health Organization.[11]

Cupping is well-known complementary remedy and an ancient treatment, which was broadly utilized in several communities, and it was recommended by the Islamic society[12]

Cupping is divided into 2 major categories: Dry Cupping and Wet Cupping Therapy (WCT). Dry cupping is the process of using a vacuum on different regions of the body in order to gather the blood in that area without performing incisions to the skin. This study is focusing on wet cupping which is defined as "the method of utilizing a vacuum at numerous points on the body however with incisions so as to get rid of blood which lies simply beneath the surface of the skin.[13] In the Middle East and most of the Arab countries, cupping is known as Hijama that is Arabic word means that sucking .[14]

1.1 Literature Review

Lauche et al,[18] who reported that a series of cupping treatments significantly increased the scores for the physical function and quality of life of patients with chronic non-specific neck pain in. In 2012, they also reported that a single session of conventional cupping was found to be an effective treatment for improving pain and quality of life (particularly physical function) in patients with chronic non-specific neck pain.[15,16]

Mohamed El Sayed et al., 2014 reported that Wet cupping (Hijama) is an old medical technique, which has been broadly applied for treatment of numerous conditions, such as acute/chronic inflammation, communicable diseases, and the immune system diseases[17].

Another study conducted in Iran[18] found that conventional wet cupping performed in a primary care setting was safe and acceptable for patients with non-specific low back pain. In South Korea,[19] a pilot study conducted for 32 participants provided preliminary data on the effectiveness and safety of wet cupping for pain management. However, their results included a small pilot sample.

Cupping has been employed in the treatment and cure of a broad vary of pain conditions. It had been reported that Cupping might relieve the pain of herpes[20]. rheumatoid arthritis[21,22], fibromyalgia,[23,24] persistent nonspecific low back pain[25], acute trigeminal neuralgia[23] migraine[26],and tension headache [27]

Furthermore, Teut et al[28] conducted a randomized controlled, exploratory pilot study to investigate the effectiveness of cupping therapy among 21 patients with pain of knee osteoarthritis. Their results showed significantly better component scores of the short form 36 of the physical domain in the cupping group than for the control group .

In a study conducted in Riyadh by Mohammad et al concerning patterns of Traditional Medicine use for patients with medical neurological disorders. The results showed that among all rumored styles of Traditional Medicine types in this study, wet cupping was the commonest method (45.4%), followed by herbs, skin cauterization operation, and reciting of the Holy Quran .[29]

Another study performed in Saudi Arabia by Alzahim et al. regarding use of CAM by Saudi patients with liver diseases attending a Tertiary care center. They found 14% of the patients used WCT and about 60% of them approving it as valid treatment for his or her conditions. They recommend further studies to include other diseases. [30]

1.2 RATIONALE

The World Health Organization (WHO) reported that a considerable proportion of the world's population is dependent upon traditional medicine for health care. Eighty percent of people in developing countries and 65% of people in developed countries turn to traditional medicine for wellness and well-being This raises the alarm about the use of cupping from outside the medical field and improve the outcome of this raises the alarm (Al-

Hashel et al. 2018), However, traditional medicine's practice and usage differ according to socioeconomic status, geography, religious, spiritual, and cultural beliefs (Harris et al. 2012). In addition to that, The MOH has introduced many to its services, with substantial emphasis on PHC. the quality of the health care system will improve the healthcare organization's in Saudi Arabia in the light of vision 2030 to organizing and defining workof the wet cupping

1.3 Aim of the study:

The study aimed to assess the effect of wet cupping use among patients complaining of pain attended in the Hijama clinic in Makkah City at Saudi Arabia.

1.4 Objectives:

1. To assess the effect of wet cupping use among patients complaining of pain attended in the Hijama clinic in Makkah City at, Kingdom of Saudi Arabia.
2. To assess the patterns of wet cupping for patients who were referred to Hijama clinic with pain in Makkah City at Saudi Arabia. during the period from January to December of the year 2019.

2. MATERIALS AND METHODS:

2.1 Place of Study:

The study was carried out in Makkah city, which is the second largest city in Saudi Arabia after the capital city, Riyadh. The study was performed in Hijama Clinic. Patients referred to Hijama clinic from other clinics to receive wet cupping therapy for different medical conditions.

2.2 Study Design:

This study was analytic retrospective record review using medical records of Patients who attended Hijama clinic.

2.3 Sample size and Study Population:

A total of 280 patients visited the clinic during the period between January 2019 to December 2019. A total of 120 patients were complaining of pain as their main complaint out of 280 patients visited the clinic during the year 2019.

This current analytic retrospective record review included medical records of patients who were referred to Hijama clinic with pain as their main complaint. Therefore, A total of 80 records were excluded because the pain was not their main complaint or because the reason for referral to the clinic was not due to pain related conditions.

3. Data collection

3.1 Data collection tool (instrument):

Data collection sheet constructed by the main investigator was used to review data of the medical records. The data collection sheet included three sections:

- 1) Socio-demographic information section (such as: gender, age, nationality, marital status, occupation, level of education, monthly income and residence).
- 2) Medical history section: (such as: reason for referral and the main diagnosis, history of other diseases, medication in use, family history of chronic diseases)
- 3)Wet cupping therapy section:(such as: number of sessions, date of each session, region number of anatomical points for cupping, history of other complementary or alternative therapy using and expectation of improvement with Hijama).

3.2 Inclusion criteria

1. All male and female patients aged <25->55 years
2. Referred from Cupping Clinic or other Clinic
3. Chronic medical conditions.
4. Understood the research process,
5. Disease lasting 3 months or more
6. Accepted to participate ,
7. Willing to sign the study written informed consent (after reading the protocol and accepting it).

3.3 Exclusion criteria

1. Patients were excluded from the study if they did not fulfill the eligibility criteria ,
2. Not accept to comply with the study protocol,
3. Had mental illnesses that could interfere with study completion.

3.4 Data Collection technique:

The data was taken from the medical records of the patients who attended Hijama clinic in the period from January 2019 to December 2019. The medical records in this clinic are paper records and every medical record in the clinic has four sections:The first part is self-reported assessment form filled by the patients which contains questions about socio-demographic data, past medical history, family medical history, medication in use, history of previous use of cupping or other CAM, and expectation of improvement with Hijama. The second part included essential laboratory investigations and medical progress notes including reasons for referral and medical history.

The third part is the consent form and cupping session notes including date of each session and site of Hijama anatomical points. The fourth part is pain evaluation form.

Usually, every patient is followed up for two to three sessions and there is at least a period for a month before the next cupping session at the clinic. Every cupping session last for about one hour. The wet cupping procedure in Hijama clinic involves cleaning the target area with an alcohol swab, the cup is then placed on the selected site, and the air inside the cup is sucked by electrical or manual suction. When the cup clings to the skin, it is left for a period of 3 to 5 minutes. The cup then is removed, and five superficial incisions are made on the skin using surgical blades about 0.4 cm to 0.8 cm in length and 0.2 mm to 0.3 mm in depth and are performed parallel to each other. The cup is placed back over the same area and the suctioning is repeated. The cupping procedure is repeated approximately two to three times using the same manner without making the skin incisions. Finally, the skin is cleaned and dressed with gauze and a plaster.

3.5 Ethical considerations:

This study has been conducted under the approval from the administrator's in hijama clinic centers and more specifically at Makkah before the beginning of study fieldwork .

All participants who received wet cupping at the Clinic signed a consent form indicating that their data would be used in multiple studies funded . Medical records in Hijama Clinic records storage were reviewed by the main investigator and co-authors, and the data were obtained by data collection sheet. No copy of the records was obtained and no records were taken outside the clinic. For Confidentiality, the collected data were kept secured and were used for purpose of study only.

3.6 Statistical analysis:

The data was statistically analyzed by using SPSS software version 24. Descriptive analysis was presented in means and standard deviations for continuous variables whereas categorical variables were presented in frequency and proportion. P-value will be considered significant if $p < 0.05$ at a confidence interval of 95%. The Chi-square test and Multivariate logistic regression were used to measure the association between the various socio-determinants and the wet cupping use.

3.7 Budget

It was been self-funded

4. RESULTS :

Table (1) Distribution Socio-demographic Characteristics of the patients attending Hijama Clinic complaining of pain (n=200)

	N	%
Age		
<25	30	15
25-35	42	21
35-45	70	35
45-55	36	18
>55	22	11
Gender		
Female	136	68
Male	64	32
Marital Status		
Single	44	22
Married	156	78
Level of Education		
Illiterate	20	10
Primary School	24	12
Intermediate School	40	20
Secondary School	58	29
University School	42	21
Postgraduate	16	8
Occupation		
Working	150	75
Not work	50	25
Income		
Poor	42	21
Average	110	55
Good	48	24
Chronic diseases		
No	62	31
Yes	138	69

Table 1 show, total 200 patients attended the clinic during the year 2019, the majority (68.0%) were women. The largest age group was the 35-45 years group (35.0%) and the smallest group was the >55 years group (11.0%). The most common education level was Secondary School (29.0%). Of these patients 78% were married. More than (55.0%) percent of the patients have average monthly income. Most of the patients are employees (75%). More than (69.0 %) have chronic diseases.

Table (2) Distribution of the other types of treatment used along with wet cupping and Patterns of WCT use among patients complaining of pain attending Hijama clinic.

	N	%
Use of conventional Treatment(CT) or Other CAM types		
Yes	160	80
No	40	20
User of Conventional Treatments (n=135)		
NSAIDs	89	66
Opioids	28	21
Others	18	13
User of other CAM (n=65)		
Herbal	40	62
Acupuncture	7	10
Food Supplements	14	21
Others	4	7
Reason for referral		
Back Pain	80	40
Neck, Shoulder and joint Pain	62	31
Headaches and Migraine	58	29
Frequency of WCT use in the clinic		
Once	56	28
Two to three	78	39
More than or equal to four	66	33
WCT performed in Sunnah days		
Yes	74	37
No	126	63

Regarding the patients reported using other kinds of treatments (80.0%). Of those who used conventional treatments for pain, the majority of them were using Conventional drugs (NSAIDs) (66.0%). Regarding those who used other CAM were (62.0 %) used herbal medication were (21.0%) used food supplements were(10.0%)used acupuncture, and other were(7.0%). The variable has less than the total 231 frequencies because of missing values.

The most common reason for referral Hijama clinic among patients complaining of pain during the year 2019 was the back pain (40.0%) as presented followed by Neck, shoulder and joint pain (31.0%), and headaches and migraine (29.0%).

Regarding the frequency of WCT use in the clinic, the majority of patients performed cupping for Two to three times (39.0%) while (33.0 %) of the Patients used WCT more than or equal to four and (28.6 %) used cupping for 2 to 3 times. Of these patients, only (37.0%) of the patients tend to use wet cupping during Sunnah Days of lunar months.

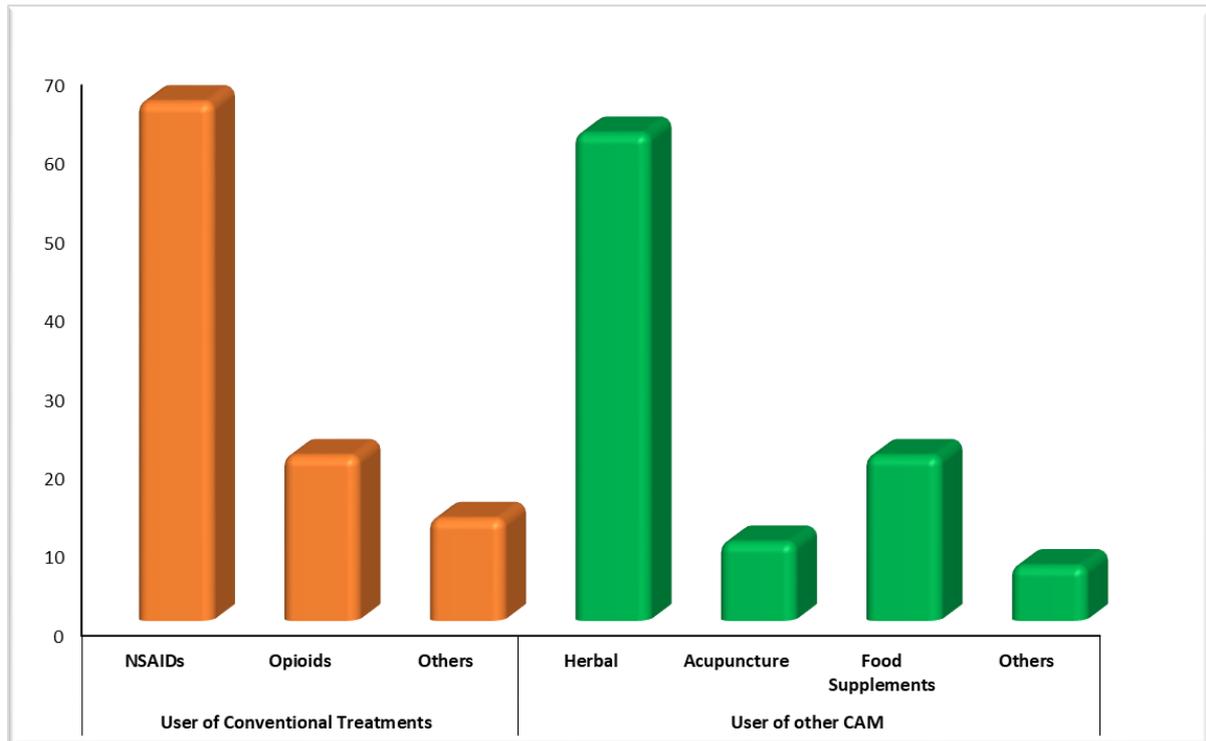


Figure (1) Distribution of the other types of treatment used along with wet cupping and Patterns of WCT use among patients complaining of pain attending Hijama clinic

Table (3) The association between the frequency of WCT use and the main complaint of (Neck, Shoulder and joint Pain, Headaches and Migraine)

			Frequency of WCT use			Total
			Once	Two to three	More than or equal to four	
Main complaint	Back Pain	N	17	14	49	80
		%	30.4%	22.6%	59.8%	40.0%
	Neck, Shoulder and joint Pain	N	30	32	0	62
		%	53.6%	51.6%	0.0%	31.0%
	Headaches and Migraine	N	9	16	33	58
		%	16.1%	25.8%	40.2%	29.0%
Total	N	56	62	82	200	
	%	100.0%	100.0%	100.0%	100.0%	
Chi-square	X ²	86.663				
	P-value	<0.001*				

Table 3 shows that A chi-square test of independence was performed to determine the association between the frequency of WCT use and the main complaint, independence was performed to determine the association between the frequency of WCT use and the main complaint. All expected cell frequencies were greater more than or equal to four. There was a statistically significant association between them, Chi-square $X^2 = 86.663$,

p=0.001. regarding the Neck, Shoulder and joint Pain the frequency of WCT the majority of patients performed cupping for total (62%) while headaches and migraine were total (58.0%)

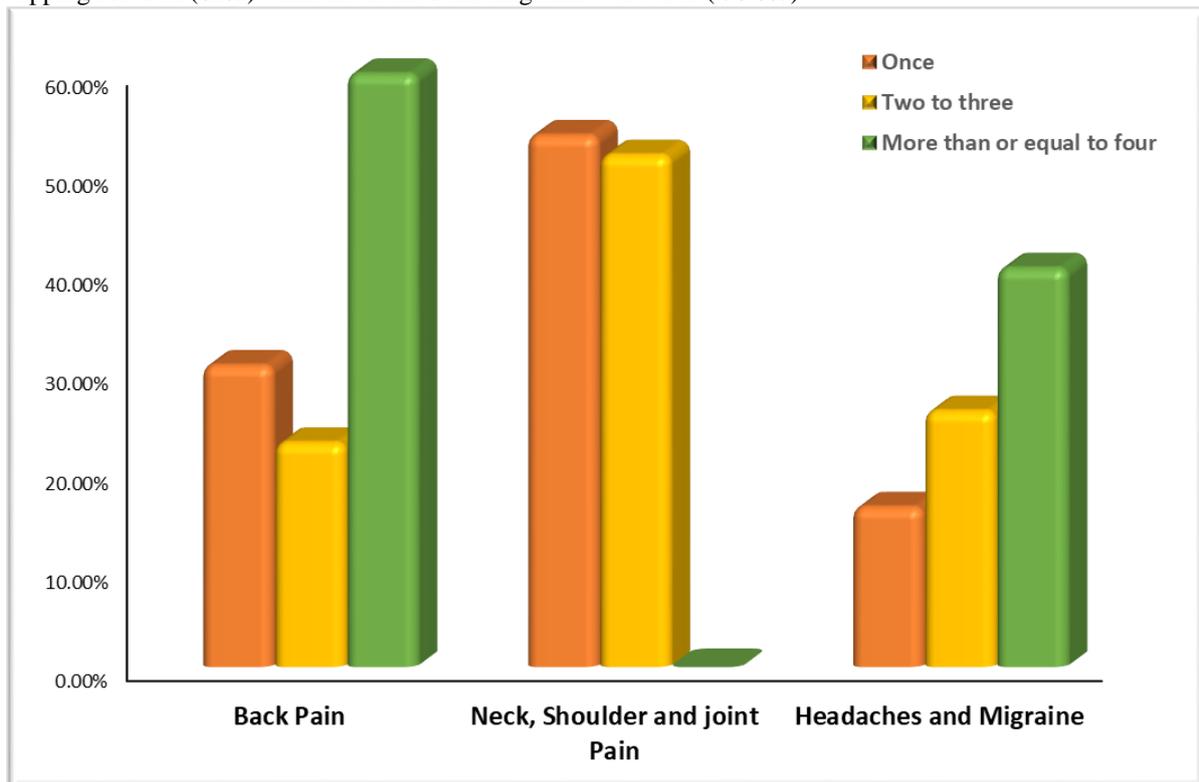


Figure (2) The association between the frequency of WCT use and the main complaint of (Neck, Shoulder and joint Pain, Headaches and Migraine)

Table (4) Distribution of the association between determinants of Wet Cupping Use and the demographic data(age, gender, Level of education, Occupation, economic level, Chronic diseases)

		Use WCT only (n=40)		Use simultaneously WCT along with CT or other CAM types (n=160)		Total		Chi-square	
		N	%	N	%	N	%	X ²	P-value
Age	<25	10	25	20	12.5	30	15	9.131	0.05*
	25-35	12	30	30	18.75	42	21		
	35-45	9	22.5	61	38.125	70	35		
	45-55	7	17.5	29	18.125	36	18		
	>55	2	5	20	12.5	22	11		
Gender	Female	12	30	124	77.5	136	68	31.266	0.000*
	Male	28	70	36	22.5	64	32		
Marital Status	Single	10	25	34	21.25	44	22	0.256	0.613
	Married	30	75	126	78.75	156	78		
Level of Education	Illiterate	11	27.5	9	5.625	20	10	39.665	0.000*
	Primary School	7	17.5	17	10.625	24	12		
	Intermediate School	15	37.5	25	15.625	40	20		
	Secondary School	2	5	56	35	58	29		
	University School	3	7.5	39	24.375	42	21		
	Postgraduate	2	5	14	8.75	16	8		
Occupation	Working	15	37.5	135	84.375	150	75	33.321	0.000*
	Not work	25	62.5	25	15.625	50	25		
Income	Poor	30	75	12	7.5	42	21	75.938	0.000*
	Average	8	20	102	63.75	110	55		
	Good	2	5	46	28.75	48	24		
Chronic diseases	No	11	27.5	51	31.875	62	31	0.291	0.589
	Yes	29	72.5	109	68.125	138	69		

Table (4). Show all socio demographic characteristics, there was a statistically significant association between age ($X^2 = 9.131$, $P=0.05$), gender ($\chi^2 = 31.266$, $P=0.00$) and level of education ($\chi^2 = 39.665$, $P=0.00$), Occupation ($\chi^2 = 33.321$, $P=0.00$), Income ($\chi^2 = 75.938$, $P=0.00$), having other chronic diseases no significant association ($\chi^2 = 0.291$, $P=0.589$) and being or being not user of WCT only.

DISCUSSION:

This study assesses the effect of wet cupping use among patients complaining of pain attended in the Hijama clinic in Makkah City at Saudi Arabia. Most of the previous studies tend to evaluate the determinants of complementary and alternative medicine use as whole instead of evaluating single type. On the other hand, our study focusing mainly on WCT use and whether patients prefer to use cupping alone.

There is a growing demand for complementary & traditional medicine (C&TM) in Saudi Arabia. A recent study in Saudi Arabia showed that a person spends out of his pocket on the average 560\$ per year on C&TM visits and products. [1, 31,32]

Our results demonstrate that the most common reason for using wet cupping among patients complaining of pain who attended hijama clinic is the back pain (40.0%) as presented followed by Neck, shoulder and joint pain (31.0%), and headaches and migraine (29.0%). These results are consistent with data from the Korean health panel study that reported musculoskeletal disorders were the main reason for visiting the clinic of complementary and alternative medicine. Furthermore, There was a significant association in our study between the type of pain conditions and frequency of using wet cupping implying that patients with back pain use cupping more frequently than others. [22]

The majority of the patients in this current study expected complete cure with wet cupping use, while only few patients expected less or no cure. This finding is similar to that stated in a previous study conducted on cancer patients. [33]

This present study found that patients with chronic diseases have higher odds for using wet cupping simultaneously with other types of treatments instead of using cupping alone. This is quite possible because those patients with chronic diseases in addition to being referred from other clinics due to their pain conditions, they usually visit other clinics more than other patients seeking for treatment of co-morbidity which increase their chance to use conventional therapy. Moreover, it was reported that the use of CAM is common among patients with chronic diseases. [22, 23,34]. The results of women having more odds ratio than men in using cupping along with other treatments could be explained by the principle that women utilize more health services than men. [34] However, in a survey conducted on the patients attending primary health care, 69% of patients with chronic musculoskeletal pain were using a combination of CAM and CT and women were found to be significantly more likely to combine both treatments. [18]

Older patients more than 45-55years in this study are 35% times higher in using wet cupping in combination with other treatments. Unlike what has been reported that younger patients seem to use more CAM than elderly [35,33]. However, this is similar in some aspect to that found in surveys conducted in Saudi Arabia and South Korea that elderly are more likely to use CAM than younger participants. [32,29]

This is not similar to that reported by Mohammad et al., who found no association between socio-demographic factors and CAM use. [36] However, our findings are consistent with previous studies that reported significant association of either education, type of residency, or occupation. [28,34,36] This disagreement in the results with the previous studies could be explained by the variations in the included population, study design and types of CAM used in such studies.

Understanding the determinants and patterns of wet cupping therapy use which is common approach of CAM is important in prioritizing the health services and knowing the characteristics of patients who are frequently using wet cupping. Moreover, this will help in establishing policies to suit patients' needs and will help in integrating WCT in governmental health services to be provided together with conventional treatments mainly for patients having other chronic diseases in addition to pain related conditions.

CONCLUSIONS:

pain was the most common cause of referral to the Cupping Clinic. Wet cupping (Hijama) intervention improved most of the domains of the patients with chronic medical conditions. Improvements were present also found that the most common reason for using wet cupping among patients attended hijama clinic complaining of pain was musculoskeletal pain related conditions. Therefore, this present study is useful for the government to determine the characteristic of WCT users and to make policies to suit these patients' needs. the study added that there are promising effects in favor of using wet cupping for improving of patients with chronic conditions. Cupping is recommended to be used as a complementary treatment modality for chronic medical conditions, which agrees with recommendations from Hadith.

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