

## **KNOWLEDGE, ATTITUDES AND PRACTICES OF HIJAMAH AND IT'S CORRELATES AMONG HIJAMAH USERS IN IRAQ 2022**

**Ali Hussein Auda<sup>1</sup>, Ali A. Abutiheen<sup>2</sup>, Hassan Alwan Baiee<sup>3</sup>**

<sup>1</sup> M.B.Ch.B., Family medicine practitioner

<sup>2</sup> Family and Community Medicine department \College of Medicine\ University of Kerbala\Karbala\Iraq

<sup>3</sup> Emeritus Professor Hammurabi Medical College University of Babylon

### **Abstract**

**Background:** Hijamah (cupping therapy) is an ancient therapy that has been employed for centuries in the treatment of various conditions and still currently used and practiced among large-scale of people in the world and in Iraq.

The practice of Hijamah has been part of middle eastern culture and Islamic heritage.

**Objectives of this study:** To assess the knowledge, attitudes and practices of Hijamah users , to identify safety practices of Hijamah, to assess the satisfaction of Hijamah users with this therapy and to identify the demographic characteristics of Hijamah users.

**Subjects & Methods:** Cross-Sectional approach was conducted on Hijamah users in Kerbala, Najaf and Babil Governorates, using written questionnaire which included demographic data, knowledge, attitudes and practices of Hijamah among users through the period from February to June 2022.

**Results:** The study included (426) Hijamah users.

The mean age was 40.22,  $\pm$ 11.44, (90 %) of them were males, (70.5%) had secondary level of education and higher education, (50%) knowing Hijamah from their friends.

Furthermore the vast majority of them (96%) believed that Hijamah is kind of prevention and treatment of diseases.

Among them (97%) reported that they got benefits after using Hijamah. About (67.1%) of Hijamah users have chronic diseases like hypertension, diabetes , low back pain . About (46%) of Hijamah users are tobacco smokers. The vast majority of Hijamah users (94%) repeat Hijamah twice and even more per year, and the majority (85%) of them believed and satisfied that Hijamah therapy cure their diseases, (85%) of Hijamah users practice Hijamah without recommendations from their health care providers.

**Conclusion:** The knowledge, attitudes and practices of Hijamah users were sufficient and accepted. More regulations of this traditional line of treatment that is widely used by the population in Iraq are needed, in order to reduce the adverse effects and complications of this traditional medicine.

**Key word:** Hijamah, cupping therapy, wet cupping, Hijamah users, complementary and alternative medicine, Iraq .

### **Introduction**

The story of Hijamah (Cupping therapy) has very long history. It is an ancient traditional therapy

that has been employed in early civilization. Evidences show that it was first practiced by the ancient cultures more than 2000 years ago (Huang et al. 2011) Its one of the oldest known medical techniques used to treatment of various conditions (AL-Tabakha et al .2018)( Ullah et al. 2006). In the Islamic literatures Hijamah is the most important technique for treatment of diseases. It regards a major part of Islamic medicine or what called Islamic prophetic medicine. The Islamic library include a dozen of sayings of the prophet Mohammad (PBUH) mentions Hijamah and strongly recommended to use it for the prevention and treatment of broad range of conditions.

The sayings concerning Hijamah are:

" The best of your treatment is Al Hijamah "

" Do Hijamah and don't let blood be so excited to kill you "

" The best therapy is Hijamah, how excellent relieving pain and clearing vision and cures illness "

(Sahih Muslim) (Sahih Al Bukhari ) (Bihar Al-anwar)

Today Hijamah from the most widely used therapy practiced by people all over the world. It has been a traditionally used for treatment of painful conditions, chronic diseases, inflammatory diseases and metabolic diseases (Ahmedi and Siddiqui. 2014) (Yoo and Tausk. 2004), and recently interest in Hijamah has re-emerged, it has now become a treatment modality in local clinics throughout Iraq.

In Iraq Hijamah widely used in treatment of a variety of diseases (e.g. Back pain, Headache, Sciatica, Joint pain, hypertension, diabetes and Increased blood viscosity due to smoking ) (Ahmedi and Siddiqui. 2014).

The rate of complementary and alternative medicine use has increased significantly over the past decade and family physician are increasingly asked to give opinion in this type of medicine including Hijamah (Phutrakool and Pongpiral.2022) (Yoo and Tausk. 2004)

As more patients become interested in complementary and alternative medicine, primary care physician should be aware of the broad benefits of therapy like Hijamah and provides additional benefit when added to conventional therapies.

### **Importance of the study**

The study give information about those people who used Hijamah therapy regarding their knowledge, attitudes and practices toward Hijamah in Governorates Najaf, Kerbala and Babil which located 100 kilometers south of Baghdad in Mid-Euphrates region, where Najaf which contained the Holy Shrine of Al Imam Ali (PBUH), Kerbala which contained the Holy Shrine of Al Imam AL-Hussein (PBUH) and Babil which contained the Babylonian civilization.

Going through the literatures which showed that researches in this regard were scares in Iraq.

### **Brief discription of Hijamah technique**

#### **Procedure:**

A cups made of glass, plastic or silicon of suitable size could applied on the skin and Hijamah done by 5 main steps:( Hasbani et al . 2021)(Al-Rubaye.2012)

The therapist disinfects the designated area for cupping therapy.

A suitable sized cup is positioned on the selected area and the therapist uses a method of

suction to suck the air inside the cup. The cup would be left on the skin for 3–5 minutes and then removed.

Many incisions of the skin done superficially by a scalpel blade , Then placed the cup again on the skin for 3–5 minutes until the blood is drawn into the cup.

The cup then removed.

The treated area is cleaned, disinfected, and a dressing is applied (Al-Bedah et al .2019).

### **Mechanisms of action and reported effects of wet cupping therapy**

The mechanism of action of cupping therapy was not clear until now (Gok et al. 2016) (Cao et al. 2012) The main proposed mechanisms of action were effects of sub atmospheric pressure suction, promoting peripheral blood circulation, and improving immunity (Zeng and Wang. 2016)

Despite that cupping therapy is one of the oldest medical techniques, although it is a widely used in the treatment of a various conditions the exact mechanism of action still unclear. It's may act thoroughly a lot of different mechanisms. Hijamah could enhance or suppress body hormones, might stimulate or modulate immunity, may act by get rid of harmful and toxic substance from the body or might ease the pain. Recently several studies have begun to investigate the mechanism underpinning Hijamah (Guo et al. 2017) (Rozenfeld and Kalichman .2016).

### **Common clinical indications for wet cupping therapy (Hijamah)**

Low back pain

(Moura et al. 2018) .

Neck pain

(Saha et al . 2017).

Arthritis

Osteoarthritis, gout, rheumatoid arthritis and ankylosing spondylitis. (Li et al .2017).

Carpel tunnel syndrome

It has been reported that combination of Hijamah and physiotherapy have significant improvement (Aboonq. 2019).

Post-herpetic neuralgia

(Wu et al. 2013) .

Fibromyalgia

(Lauche et al. 2016((Wolfe et al .2010)

### **Thalassemia**

A number of sessions of Hijamah, so making skin act as a super kidney resembles dialysis and causing direct excretion of pathological substances (El-Shanshory et al. 2018).

### **Role of Hijama in Covid-19 pandemic**

Sparse studies have assessed the effect of Hijamah therapy in Covid-19 pandemic. Hijamah may play a role in the activations complement system, modulation of cellular part of the immune system and in the improvement of the majority of Covid-19 symptoms and signs.

Other studies suggest that clinicians assess the therapeutic effects of Hijamah as adjuvant treatment along with other therapeutic strategies in the treatment of Covid-19 (Abbasi et al. 2021). Cupping therapy may ameliorate the most common symptoms and signs of Covid-19

### **Common side effects and complications of Hijamah therapy**

Hijamah therapy is generally considered as a safe treatment with minor side-effects and complications (Aboushanab and Al-Sanad.2018) .

Objectives

#### **The main objectives were:**

To assess the knowledge, attitudes and practices of Hijamah users ,to identify safety practices of Hijamah ,to assess the satisfaction of Hijamah users with this therapy and to identify the demographic characteristics of Hijamah users.

### **Subjects & Methods**

#### **Study design**

A cross-sectional study.

#### **Study setting:**

This study included Hijamah users in a different region throughout the governorates (kerbala, Najif and Babil).

#### **Duration of the study**

The study started from the beginning of December 2021 till the beginning of August 2022.

#### **Ethical Considerations**

Official approval of the research work was approved by the scientific committee of the department of family medicine in medical college, University of Kerbala, ethical approval was obtained from the ethical research committee of Kerbala medical College , verbal consents of the participants were obtained after explaining to them the objectives of the study , confidentiality: all information that collected from the participants through the research work was kept confidential and saved in a locked file with assuring anonymity and freedom to refuse to answer any question. Data used for research purposes only.

#### **Eligibility criteria**

##### **Inclusion Criteria**

Persons from all age groups and both gender who accept to participate in this study.

Adult participants who used Hijamah was enrolled in this study from different regions of governorates (kerbala, Najif and Babil) in Iraq.

##### **Exclusion criteria**

Participants who was not willing to participate in the research after explanation the objectives of the study.

Participants who suffer from severe mental illness and other disabilities.

Population from other governorates in Iraq.

**Sampling technique and sample size of the study**

426 Hijamah users from both gender were selected from the above mentioned setting from different regions of kerbala Najaf and Babil governorates.

**Estimation the sample size**

The minimum calculated sample size of this study was calculated using Fisher equation (pourhoseingholi et al. 2013).

$$n = \frac{Z^2 p(1 - p)}{d^2}$$

where:

n = the required sample size

Z = Differential coefficient

Z= 1.96

d = Estimated error value (<0.05)

P= expected a Prevalence as equal to 0.5 (50%) to get the large possible sample size.

According to this equation:

$$n = \frac{(1.96)^2 * 0.5(1-0.5)}{(0.05)^2}$$

$$n=384$$

the calculated sample size was 384, but 426 Hijamah users where enrolled in the study to overcome the possible nonresponse and to increase the power of the study.

**Data Collection Tool**

Data was collected from the Hijamah practitioners users by interview using pretested semi-structured questionnaire which was developed specially for this study based on the literature review of similar studies (Al-Yousef et al. 2018) (Ghazi. 2016) (Mokhtar et al. 2018). Data collection was done single handy by the researcher himself through face-to-face interview 2 days a week for 9 months.

**Questionnaire**

The main tool of the data collection in this research work is pretested semi-structured questionnaire prepared by the researcher himself in cooperation with the supervisor after reviewing similar **previous studies**

The questionnaire of the Hijamah therapy users include the following questions:

**Demographic data:**

Age , gender (male, female) ,marital status , education level ,place of residence (rural, urban) and occupations

**Habits of Hijamah user:**

Tobacco smoking habit

**Chronic diseases:**

knowledge about Hijamah therapy

Source of knowledge about Hijamah  
 Reasons for a cupping therapy  
 When you get benefit after Hijamah?  
 What are the preferred time for Hijamah?  
 Are there any side effects or complications during or after Hijamah?

#### **Regarding the awareness and satisfaction by the Hijamah therapy**

Did you keen about sterilisation procedure?  
 Confident with Hijamah therapy  
 Do you urge other to do Hijamah?  
 Reasons that prevent others from Hijamah  
 Would you like to continue using this therapy?  
 Do you suggest that Hijamah should obtain a clear and explicit scientific recognition?

#### **Validity of the questionnaire**

The prepared questionnaire were reviewed by a panel of 5 experts in family and community medicine. The comments and suggestions of the experts were used to correct and complete the data collection process through the prepared questionnaires.

#### **Data processing and analyses:**

The data was checked manually for completeness and consistencies and then coded.

#### **statistical analyses:**

Data were analysed using the statistical package for social science SPSS version 28. Data entered and managed using descriptive statistics (frequency description and percentage with table and figures) and inferential statistical (chi-square test and independent t-test) were used.

Chi square test was used to test the association between categorical variable, while the t- test was used to compare the mean of the quantitative continuous variable. p-value less than 0.05 was considered statistically significant.

#### **Results**

- A total of (426) Hijamah therapy users were included in the study, completed the questionnaire. The age of them ranges from 17 to 75 years. The mean age was  $40.22 \pm 11.44$ .
- The vast majority (90.1%) of Hijamah users were males (53.3%) of them lived in rural areas .
- Regarding the occupation of the Hijamah users about (51.4 %) were self-employed (34.3% ) were governmental employees .
- About (69.7%) of Hijamah users were married.
- Regarding the education level, about (76%) of Hijamah users were secondary and higher stage of education , however, (10.6 %) of them were illiterates . As showed in table 1

**Table 1: Baseline characteristics and demographic description of the study group Hijamah users (n= 426)**

Variable	Group	NO.	(%)
<b>Age.Group(Years)</b>	Less than 35	157	36.9
	35 - 49	183	43
	Equal or more than 50	86	20.1
<b>Gender</b>	Male	384	90
	Female	42	9.9
<b>Governorate</b>	Babil	225	53
	Karbala	100	24
	Najaf	101	24
<b>Place of residence</b>	Rural	227	53
	Urban	199	47
<b>Occupation</b>	Employee	146	34
	Self employed	219	51
	Unemployed	61	14
<b>Marital status</b>	Married	297	70
	Single	76	18
	Divorced	26	6.2
	Widow	27	6.3
<b>Educational level</b>	Illiterate\ read and write	45	11
	Primary school	80	19
	Secondary school	214	50
	University and higher	87	20

**Regarding the chronic diseases**

Approximately (67.1%) of Hijamah users were had chronic diseases like hypertension and diabetes and chronic Joints pain.

**Regarding the tobacco smoking**

About ( 45.8%) of Hijamah therapy users were tobacco smokers of all types (cigarattes , shisha and mixed).

**Regarding the knowledge, attitudes and practices of Hijamah among Hijamah users**

- About (50.2 %) of Hijamah user reported that they have heard about Hijamah through their friends, while the rest learned it through social medias or read it in the books or through nurses.
- About (85%) of It Hijamah therapy users reported that they were doing Hijamah without recommendations or referrals from their health care providers.
- The vast majority of the Hijamah users about (93.9 %) were doing Hijamah more than one per year, and about (84.5 %) of them stated that Hijamah give better improvement when used more than two times per year.

**Table 2: The distribution of Hijamah users according to the presence of chronic diseases, knowledge, behaviours, bad habits, places of Hijamah (n= 426)**

Variable	Group	NO.	%
<b>Chronic diseases</b>	No exist	140	33
	Exist	286	67
<b>Type of chronic diseases</b>	DM	26	6.1
	HT	135	32
	Arthritis	89	21
	Others	36	8.5
<b>Smoking</b>	No smoke	231	54
	Cigarettes	103	24
	Shisha	17	4
	Mixed	36	8.5
	X smoke	39	9.1
<b>How did you learn about Hijamah therapy?</b>	From doctors	31	7.3
	Social media	72	17
	Read it in books	63	15
	From a nurse	46	11
	Through friends	214	50
<b>What is the reason for you to use Hijamah:</b>	Prevention	377	89
	Treatment	33	7.7
	Restoring activity and promoting health	7	1.6



	Just a religious favour	9	2.1
<b>Did your Health Care Providers recommend or encourage you to get Hijamah?</b>	Yes	43	10
	Sometimes	21	5
	No	362	85
<b>How many times do you have Hijamah Per year</b>	Once	26	6.1
	Twice	136	32
	Three times	185	43
	Four times	59	14
	Undefined	20	4.7
<b>Is Hijamah more than once a year better in your opinion</b>	Yes	360	85
	Sometimes	22	5.2
	No	5	1.2
	I don't know	39	9.1
<b>Are you keen on alerting the copper to the necessity of sterilizing the place of size in your body and the tools of Hijamah, and the use of Disposable tools to use:</b>	Yes	116	27
	Sometimes	153	36
	No	99	23
	I don't Know	58	14
<b>What places do you use Hijamah:</b>	The barber shop	23	5.4
	Cupping shop	370	87
	Herbal shop	25	5.9
	Others	8	1.9

### **Regarding the preferred time of Hijamah**

About (38 %) of the Hijamah users believed that the most preferred time were spring season and all days except Wednesdays and Friday.

### **Regarding the side effects of Hijamah**

About (85.9%) of Hijamah users reported that the Hijamah were safe therapy. But, (14.1 %) of them claimed that there are side effects and complications during or after doing it, such as dizziness, fainting , scars and infections.

Regarding feeling better and improvement after using Hijamah, about (63.1%) of Hijamah users claimed that they feel better directly after Hijamah.

About (85 %) of the Hijamah therapy users reported that they strongly trust and confident

that Hijamah therapy will cure him, about (87.5% ) of them strongly believe and believe that Hijamah as a type of medicine and (78 %) of Hijamah users stated they urge others to use Hijamah (97.9 %) of the Hijamah users stated that they like to preserve this type of alternative therapy and about (91.1 %) of them suggest that Hijamah therapy should obtain a clear and explicit scientific recognition

### **Frequent use of Hijamah more than one per year**

There was a statistically significant association between age group of Hijamah users and using Hijamah one or more than one times per year.

In addition, there was a statistically significantly association between feeling better after using of Hijamah one or more than one times per year

Also, there was a statistically significant association between confidence that is effective treatment and frequent use of Hijamah one or more than one times per year. Other there is no statistically significant, show in table 5.

**Table 5: Association between of the study group and impact of frequent use of Hijamah more than one per year**

<b>Variable</b>	<b>Group</b>	<b>Once</b>	<b>Two- Three</b>	<b>More than three</b>	<b>P value</b>
<b>Age.Group (Years)</b>	Less than 35	13	127	17	<b>0.008</b>
	35 - 49	12	129	42	
	Equal or more than 50	1	65	20	
<b>Gender</b>	Male	22	286	76	0.103
	Female	4	35	3	
<b>Marital status</b>	Married	16	221	60	0.559
	Single	6	61	9	
	Divorced	3	18	5	
	Widow	1	21	5	
<b>Educational</b>	Illiterate\ read and write	8	34	3	<b>0.004</b>
	Primary	2	58	20	

<b>level</b>	school				
	Secondary school	13	159	42	
	University and higher	3	70	14	
<b>Did you feel better after cupping</b>	a big improvement	9	202	58	<b>&lt;0.001</b>
	Rather	10	117	20	
	I did not feel	5	1	1	
	I don't know	2	1	0	
<b>How confident are you that cupping will cure you</b>	very confident	10	235	63	<b>&lt;0.001</b>
	confident	2	45	7	
	IDN	13	39	7	
	No confident	1	1	1	
	really no confident	0	1	1	

## Discussion

This study demonstrates that Hijamah (cupping therapy), a nonconventional treatment, practiced among people in Iraq to high extent due to different causes. one of these causes is insufficiency of health services that introduced by governmental conventional treatment sector. In a local study conducted by Saad Ahmed Ali et al in 2021 and before that by Thamer Al Hilfi et al in 2013 showed the deterioration of the governmental health reality in Iraq about providing health-care services in term of poor infrastructures, high cost of treatment, provision of bad quality of the drugs and shortage of necessary drugs and the primary care specialists (Jadoo et al. 2021) (Al Hilfi et al. 2013).

Iraqi patients become distrustful of conventional treatment and go toward the alternative therapy including Hijamah which is cheap and available.

In addition, those people using Hijamah are Muslims and had believed in prophetic medicine including Hijamah as a part of their religious and this spiritual believes positively affect their health outcome and healing (Naseem. 2018).

In the present study there was a significant high prevalence of Hijamah therapy using among males much more than females. This finding is similar to findings of other study conducted in Saudi Arabia to assess the public perceptions of Hijamah (Al-Balawi et al. 2016), which was higher

among male. This may be related to cultural factors where males are more liberated to chose a nonconventional therapy than females especially in Islamic society.

Regarding the level of education, this is study shows a high a proportion of Hijamah therapy users have secondary and high-levels of education.

This indicates that the well-educated people in our society believe in this kind of alternative medicine and this may reflect the high spread of Hijamah therapy among the educated people.

This finding agrees with the study done in Egypt which found that Hijamah therapy practice increased in people with high level of education (Mokhtar et al. 2018), based on that, family medicine can offer many strategies for initiating a good relationship with those educated Hijamah therapy users and easily use this character to give more information about this type of therapy to avoid dangerous side effects like infections.

Regarding the chronic diseases, this is study shows that (67%) of Hijamah users suffers from chronic diseases, mainly, HT (31.7%), DM (6.1%), and others chronic back pain, skin disease and arthritis among others.

This result indicates that the prevalence of a chronic diseases is high in our country. According to the Iraqi Ministry of Health, it is estimated that (30%) of Iraqi people have high blood pressure, (14%) have diabetes and more than 30% are obese (Annual report 2019) , chronic diseases are the leading cause of morbidity and death in Iraq.

Local study done by Baiee et al 2021 show high prevalence of chronic diseases in Iraq (Baiee et al. 2021).

Those people with a chronic disease afford financial hardship, they need to use drugs for all their life, these drugs either unavailable or available in bad quality and high cost. So, this affects the adherence to their treatment and cause complications and disabilities, most of those people with chronic diseases have to use the alternative medicine including Hijamah therapy.

Regarding tobacco smoking, the current study reveals that about (46%) of the Hijamah users were tobacco smokers of all types (cigarettes, shisha, or mixed) and this may reflect the high prevalence of smoking in our society.

According to the ministry of health in Iraq (38%) of Iraqi males are smokers and (3 - 4%) of Iraqi females are smokers (annual report. 2019). A local study done by Baiee 2021 (Baiee et al. 2021), showed that the prevalence rate of smoking among Iraqi males was (38.9%) and another study done by Koubaissi 2021 showed high prevalence of smoking in Iraq (Koubaissi et al. 2021).

One of the effects of smoking is the elevation of the level of hemoglobin, hematocrit and viscosity of the blood as result of changes in the blood gases and secondary polycythemia (Malenica et al. 2017).

Those people using Hijamah believe that they get benefit as they do Hijamah. So, this may be the reason behind this large number of smokers using Hijamah therapy.

A randomized controlled trial study conducted in a Pakistan shows that

A randomized controlled trial study conducted in Pakistan showed that the effect of cupping therapy on arterial oxygen saturation among smokers leading to an increased oxygen saturation

and get better breathing after application of Hijamah (Hekmatpou et al. 2013).

This study shows that the majority of Hijamah users (85%) performed Hijamah as a self-treatment without consultations or encouragement of their Healthcare providers.

Thus, many Hijamah therapy are being done without medical supervision.

This finding goes in line with a study done in Iran where (87%) of people doing Hijamah without consultations (Nimrouzi et al. 2014) (Yekta et al. 2007).

This may be due to that Hijamah users are Muslims and they performed Hijamah as a part of sunnah of Prophet Mohammad (PBUH). While a study done in Saudi Arabia revealed that only (6.5%) of Hijamah users doing Hijamah without medical advice (Al-Balawi et al. 2016).

This may be due to that Hijamah users are Muslims and they performed Hijamah as a part of sunnah of Prophet Mohammad (PBUH). While a study done in Saudi Arabia revealed that only (6.5%) of Hijamah users doing Hijamah without medical advice (Al-Balawi et al. 2016).

This result comes in line with the findings of a study conducted by (Kaleem et al 2012) in patients with knee pain, and the study conducted in Turkey (Al-Rubaye. 2012) on skin disease, and the study done in Germany on a chronic neck pain (Saha et al. 2017). Those who use Hijamah frequently may also affected by polycythemia which caused by different causes mainly from tobacco smoking and they get relieve by reductions of viscosity of the blood and increasing saturation oxygen as they frequently used Hijamah (Hekmatpou et al. 2013).

Regarding the time of the time doing Hijamah, this study demonstrates that the most participants believe that there is a preferred time to do Hijamah. They preferred spring season of the year, after the full moon phases of the lunar month and all days of the week with the exceptions of Wednesday and Friday. This called Sunnah date of Hijamah (Sahih Muslim part 24 Riyadh . Dar Alsalam) (Al Bukhari MI (1969) The English Translation of Sahih Al Bukhari with the Arabic Text).

This result agrees with the study done in Indonesia about the cupping therapy which concluded the potential differences in the cupping therapy efficiency on a vital sign between Sunnah and non-Sunnah dates, found cupping therapy with Sunnah date has better improvement than non-sunnah (Syahruramdhani et al. 2020).

The explanation of this time effect is not clear, but it is based on historical traditional religious aspect that is the sayings of Prophet Mohammad (PBUH).

The current study shows that (85%) of Hijamah users reported no side-effects or complications during or after Hijamah therapy.

Hijamah therapy is generally safe when performed by a trained professional (kim et al. 2015).

About (15%) Hijamah users also reported some side effects like discomfort, pain at cupped site, skin infection, skin discolorations, headache, and dizziness.

Using the same equipments on more than one person without a proper sterilization may lead to spread of a blood born disease such as hepatitis B & C and AIDS (Nimrouzi et al. 2014) (Rehman et al. 2014).

Family Physicians should be aware about these side effects and take his role in detection of this source of infections early and interfere to apply preventive measures as quick as possible to

avoid the spread of infectious diseases as hepatitis B and C and other infections which might increase morbidity and mortality among Hijamah users (Rehman et al. 2014).

This study also found that the vast majority of the Hijamah therapy users are highly confident and strongly believed with Hijamah.

This means that the Hijamah was deeply rooted in our society and need to be addressed in a proper way, clean environment and high-level of disinfection to protect the users from severe side effects and complications.

This goes in line with finding of other two studies in Saudi Arabia which found that the majority of participants in the study are trusted and confident with Hijamah therapy (El-Olemy et al. 2017) (Al-Yousef et al. 2018).

### **Limitations of the study**

This study has a number of limitations including:

Short duration of the study

The study conducted in middle region of Iraq only, therefor the study may not truly represent the cultural differences in other areas of the country, and this many affect the generalizability of the results of this study.

limitation related to cross section study (cause and effect conclusions cannot be assessed or inferred)

### **Conclusion & Recommendations**

This study emphasized that Hijamah therapy gaining popularity in Iraq as a line of treatment of various diseases.

The knowledge, attitudes and practices toward Hijamah therapy among study population are sufficient and highly accepted. The vast majority of them believed and highly satisfied with that cupping therapy as most important way of other alternative medicine to be used with gain better outcomes for healing chronic diseases and relieving pain especially when Hijamah used frequently.

Religious factor were influencing the knowledge, attitudes and practice of cupping therapy among the cupping therapy providers and users.

Periodic checking of Hijamah practice places is essential to avoid any complication that may take place during this practice related to inappropriate places and to provide Hijamah in a safe manner and place

Raising the public awareness and health care providers information especially family physicians toward the accurate method and the safe approaches of alternative medicine in Iraq including Hijamah therapy through using mass media and social media and educate the primary health care setting (lectures , leaflets ,Posters and periodic seminars ) to avoid serious complications.

Further large-scale studies are strongly requested to address other variables related to Hijama use and Hijamah profession in our country.

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