

Knowledge and practice and attitude toward cupping therapy among physicians in Sheikh Khalifa medical city

Meera Al Zaabi¹, Esraa Al Zuraiqi¹, Jawaher Al Dhanhani¹,
Maryam Al Yammahi¹, Muna Al Teniji², Ebtihal Darwish³

¹Family Medicine Residency Program PGY 3, Sheikh Khalifah Medical City, Abu Dhabi, UAE, ²Department of Family Medicine, Ambulatory Healthcare Services, Abu Dhabi, UAE, ³Department of Family Medicine, Ethraa Consultation Center, Dubai, UAE

ABSTRACT

Background: Complementary medicine (CM) is gaining popularity worldwide. According to the 2019 World Health Organization global report on traditional and complementary medicine (T&CM), 80% of member states acknowledged practicing T&CM. In the United Arab Emirates, T&CM practice prevalence in 2012 was 20–39%. These trends highlight physicians' need for knowledge on CM, such as cupping therapy. **Objective:** This study aims to assess knowledge, practice, and attitude toward cupping therapy (CT) among physicians in Sheikh Khalifa medical city (SKMC). **Methodology:** A cross-sectional study was conducted from September 2020 to March 2021 among the physicians of SKMC. The survey was carried out using an online questionnaire. The questionnaire included four sections: socio-demographics, knowledge of physicians toward cupping therapy, physicians' attitude toward cupping therapy, and physicians' practice toward cupping therapy. SPSS version 28 was used for data analysis. Data were reported in frequencies and percentages. A *P* value of <0.05 is the level of statistical significance. **Results:** The response rate was 83%. Among the 154 participants, 67.5% had adequate knowledge of CT, 66.9% showed a positive attitude, and 31.2% reported good practice toward CT. Individuals below 40 years reported significantly lesser knowledge than individuals over 40 years (*p* = 0.035, OR 0.49 [0.246–0.998]). Over 80% of physicians concur that cupping therapy can be used to treat and manage low back pain, joint discomfort, headache, migraine, and anxiety. The majority of physicians believe that education regarding cupping therapy is required. **Conclusions:** Most physicians had adequate knowledge and a positive attitude toward cupping therapy.

Keywords: Abu Dhabi, alternative medicine, cupping therapy, hijama, knowledge, traditional medicine

Introduction

Complementary medicine refers to a range of therapeutic and diagnostic disciplines that exist outside the institutions that teach and administer traditional health care.^[1] Complementary medicine is becoming more prevalent in health care. According

to the WHO global report on Traditional & Complementary Medicine (T&CM) 2019, 80% of member states acknowledged practicing T&CM among their populations.^[2] However, there is still much disagreement regarding what it is and what role the disciplines included in this term should have concerning conventional medicine.

Cupping therapy (CT), like osteopathy, chiropractic, homeopathy, acupuncture, and herbalism, falls under the umbrella of traditional or conventional medicine and is an important component of complementary and alternative medicine

Address for correspondence: Dr. Meera Al Zaabi, Post Graduate Trainee, Department of Family Medicine, Sheikh Khalifah Medical City, Abu Dhabi, UAE.
E-mail: meera.alzaabi13@gmail.com/mealzaabi@seha.ae

Received: 13-09-2022

Revised: 23-10-2022

Accepted: 31-01-2023

Published: 31-05-2023

Access this article online

Quick Response Code:



Website:
www.jfmpc.com

DOI:
10.4103/jfmpc.jfmpc_1825_22

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Al Zaabi M, Al Zuraiqi E, Al Dhanhani J, Al Yammahi M, Al Teniji M, Darwish E. Knowledge and practice and attitude toward cupping therapy among physicians in Sheikh Khalifa medical city. *J Family Med Prim Care* 2023;12:979-85.

worldwide. Cupping is done by placing cups on specific skin sites and establishing a subatmospheric pressure with either warmth or suction.^[3]

Different studies performed in different parts of the world reported different prevalence of cupping therapy. Studies in Saudi Arabia reported that 35.7%^[4] and 45.4%^[5] of the population had undergone CT. A study performed in Ain Shams & Benha University hospitals in Egypt reported that 16% of the patients underwent cupping therapy. In the UAE, the 2012 report shows that T&CM practice prevalence was 20–39%.^[2] The practice of cupping therapy has been regulated by the Department of Health (DoH) since 2010. According to DoH, CT was categorized under the category (other), by 40–59% of the UAE population.^[2] This increasing trend among T&CM users and practice highlight the need for knowledge of complementary medicine such as cupping therapy.^[6]

To our knowledge, the majority of research papers we found in the Gulf region focus more on the patient rather than the physician's perspective. An example was a study done in Saudi Arabia regarding cupping therapy suggested that 71.5% of the population had a strong belief in its effectiveness, 60% were using on physicians' advice, 54.8% discussed it with their doctor, and 89.7% believed that it is an effective method of treatment.^[6] A recent Saudi study reported that 75% of hospital employees displayed a high degree of CT expertise, and 72% have a high level of acceptance for implementing CT into their practice, according to a survey. The study also found that hospital personnel with a high degree of understanding were three-and-a-half times more likely to implement CT into their practice.^[7]

It is important to analyze cupping therapy use, understanding, and perception, especially among healthcare professionals. Healthcare professionals must be versed in its indications and contraindications. This will prevent patient complications. This study aimed to determine the knowledge, attitude, and practice of cupping therapy among physicians in of the hospitals in Abu Dhabi. Furthermore, this study provides the framework for reforming present regulations on complementary and alternative medicine in the UAE and highlights areas where the existing healthcare system may not meet patients' holistic care needs.

Methodology

This cross-sectional, questionnaire-based survey recruited physicians from the SKMC, Abu Dhabi physician registry 2019. Practicing physicians from medicine and its subspecialties, general surgery, and its subspecialties, emergency medicine, psychiatry, anesthesia, and rehabilitation who were present at one of the hospitals in Abu Dhabi, from September 2020 to March 2021, were included in the study. Non-practicing physicians and

residents, including physicians from radiology, pathology, critical care physicians, pediatricians and pediatric residents, physicians on study leave, and physicians who have acquired an administrative post, were excluded.

A total of 359 physicians met our inclusion and exclusion criteria. The sample size of 186 was calculated using an online sample size calculator (www.raosoft.com) with 95% CI and 5% margin of error. The final sample was selected through systemic randomization using an online number generator.

Data were collected using a self-administered electronic questionnaire using Google Forms. The survey instrument was sent to the doctors at their email addresses.

The questionnaire included four sections: socio-demographics, knowledge of physicians toward cupping therapy, physicians' attitude toward cupping therapy, and physicians' practice toward cupping therapy.

There were six questions under the knowledge section. Questions were mainly about indications, side effects, and contraindications of cupping therapy. The maximum score that could be achieved was 25. Scores above 16 were considered adequate knowledge, and scores equal to or below 15 were considered inadequate knowledge. The questionnaire had four questions under the attitude section; the individual responses were as follows: Agree, Neutral, and Disagree. The maximum score was 8. We considered a score of 5 or more as a positive attitude and a score of 4 or less as a negative attitude. When assessing practice, there were three questions. The maximum score was 3. Therefore, scores equal to 2 or more were considered a good practice, and scores equal to 1 or less were reflected as poor practice. Specialties were divided into relevant to cupping therapy, including internal medicine, rheumatology, neurology, dermatology, orthopedics, psychiatry, rehabilitation, and emergency medicine; and non-relevant to cupping therapy, including nephrology, gastroenterology, oncology, infectious diseases, endocrinology, general surgery, ENT, emergency medicine, maxillofacial, plastic, and ophthalmology.

A pilot study was conducted on 35 participants, they were excluded from the final data collection, and the questionnaire was modified accordingly. Brief education about the research's aim and the objective was explained through email sent to participants along with the link to the questionnaire. Signed informed consent was obtained from all participants before filling out the online survey. To maintain confidentiality, we did not collect any personal information from respondents. Data were presented and analyzed using Statistical Package for Social Sciences software, 28th version. A *P* value of <0.05 is the level of statistical significance.

Ethical approval was obtained from one of the hospitals in Abu Dhabi Institutional Review Board and the Research Ethics Committee.

Results

A total of 154 questionnaires were completed out of 186, and the response rate was 83%. Data analysis revealed that more than half of all participants were females (55.2%), 44.2% were UAE nationals, 54.5% were less than 40 years, 70.1% were married, 54.5% were employed for less than ten years, 70.8% were residents/specialists/fellows, and about 68.8% were categorized within specialties relevant to cupping therapy. [Tables 1 and 2] In general, out of all physicians, 67.5% (n = 104) had adequate knowledge. Regarding physicians' attitudes toward cupping therapy, 66.8% (n = 103) had a positive attitude. However, it was observed that 68.8% (n = 106) of the physicians had poor practice with CT [Figure 1].

When assessing the knowledge among our 154 participants, it was found that 39.3% of young physicians (<40 years) have inadequate knowledge, compared to 24.3% of older physicians (> 40 years). We evaluated that participants above 40 possess a significantly higher knowledge of CT (P 0.035, OR 0.49 [0.246–0.998]). Consultants reported significantly better attitudes than residents (p < 0.043). However, no significant difference has been observed in any other variable and group [Table 3].

More than 80% of physicians agree that cupping therapy can be used for the treatment and management of lower back pain, joint pain, headache, migraine, and anxiety. Coagulation is reported a contraindication by 88% of the physicians [Table 4].

Only one-third of physicians recommend advice or ask their patients about cupping therapy.

It is also evaluated that around 13% of the physicians disagree that cupping therapy is an effective complementary treatment that can be used as an adjunct therapy to medical treatment. The majority of physicians agree that providing education about cupping therapy the need of time [Table 5].

Discussion

The current study evaluated the knowledge, attitude, and

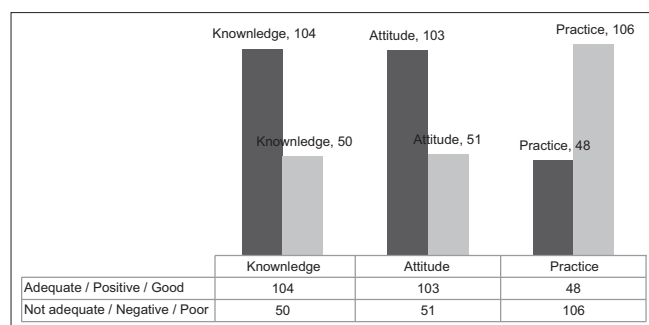


Figure 1: Level of knowledge, attitude, and practice toward cupping therapy

practice of CT among the physicians working in SKMC, Abu Dhabi. It is observed that the majority of the physicians have adequate knowledge and a positive attitude toward cupping therapy. However, two-thirds of the respondents reported poor practice.

Our study's results align with the study performed in Egypt on health science students. An Egyptian study reported that more than 80% of the students had good knowledge regarding traditional and complementary medicine, including hijama. In our study, almost 67.6% of the respondents had adequate knowledge. A study performed in Saudi Arabia reported that 70% of doctors are familiar with cupping therapy.^[8]

The percentage of respondents who reported having good practice toward cupping therapy was approximately 31.2%. Despite good knowledge, an Iranian study reported that only 9.9% of physicians used one or more alternative medicine treatments, and 24% referred their patients.^[9] These findings are similar to the findings of our study. This could be explained due to advanced technology in medicine, and physicians may prefer to use the newest methods rather than alternative medicine in managing patients.

Table 1: Social and Demographic factors of the study participants

Demographic factors	Frequency (n)	Percentage
Age		
<40 YEARS	84	54.5
>40 YEARS	70	45.5
Gender		
Male	69	44.8
Female	85	55.2
Marital Status		
Single	44	28.6
Married	108	70.1
Divorced/Widow	02	1.3
Nationality		
UAE National	68	44.2
Non-UAE National	86	55.8

Table 2: Professional Characteristics of the study participants

Professional Characteristics	Frequency (n)	Percentage
Employment duration		
<10 years	84	54.6
10-20 years	49	31.8
>20 years	21	13.6
Job title Combined		
Resident/Specialist/Fellow	109	70.8
Consultant	45	29.2
Speciality		
Relevant to cupping therapy	105	68.2
Non-relevant to cupping therapy	49	31.8

Table 3: Association of knowledge, attitude, and practice in different groups of physicians

Variable	Knowledge					Attitude					Practice				
	Adequate n (%)	In-adequate n (%)	OR	95% CI	P	Positive n (%)	Negative n (%)	OR	CI	P	Good N (%)	Poor N (%)	OR	CI	P
Age															
< 40 years	51 (60.7)	33 (39.3)	0.496	(0.246-0.998)	0.035	59 (70.2)	25 (29.8)	1.395	(0.711-2.735)	0.213	26 (31)	58 (69)	0.97	(0.493-1.939)	0.54
≥ 40 years	53 (75.7)	17 (24.3)				44 (62.9)	26 (37.1)				22(31.4)	48 (68.6)			
Gender															
Male	48 (69.6)	21 (30.4)	1.184	(0.599-2.339)	0.378	47 (68.1)	22 (31.9)	1.106	(0.563-2.176)	0.453	22(31.9)	47 (68.1)	1.06	(0.535-2.107)	0.5
Female	56 (65.9)	29 (34.1)				56 (65.9)	29 (34.1)				26 (30.6)	59 (69.4)			
Nationality															
UAE national	48 (70.6)	20 (29.4)	1.286	(0.648-2.550)	0.771	45 (66.2)	23 (33.8)	0.945	(0.481-1.855)	0.171	19 (27.9)	49 (72.1)	0.76	(0.381-1.524)	0.576
Non-UAE national (Arab/non-Arab)	56 (65.1)	30 (34.9)				58 (67.4)	28 (32.6)				29 (33.7)	57 (66.3)			
Job title															
Residents/Specialist/Fellow	69 (63.3)	40 (36.7)	0.493	(0.221-1.101)	0.058	78 (71.6)	31 (28.4)	2.013	(0.979-4.137)	0.043	34 (31.2)	75 (68.8)	1.00	(0.474-2.125)	0.576
Consultant	35 (77.8)	10 (22.2)				25 (55.6)	20 (44.4)				14 (31.1)	31 (68.9)			
Specialty															
Relevant	71 (67.6)	34 (32.4)	1.012	(0.491-2.088)	0.264	68 (64.8)	37 (35.2)	0.735	(0.351-1.538)	0.264	30 (28.6)	75 (71.4)	0.68	(0.336-1.414)	0.202
Non-relevant	33 (67.3)	16 (32.7)				35 (71.4)	14 (28.6)				18 (36.7)	31 (63.3)			

Table 4: Responses about the cupping therapy's knowledge

Questions about Knowledge		
For which disease s cupping therapy can hijama be used?		
Lower back pain	129	83.76
Joint pain	125	81.16
Hypertension	50	32.46
COPD	13	8.44
Scleroderma	12	7.79
Septic arthritis	14	9.09
Which of the following neurological diseases can cupping therapy be used for?		
Headache	127	82.5
Migraine	124	80.5
Stroke	16	10.4
Seizure	11	7.14
Which of the following dermatological diseases can cupping therapy be used for?		
Skin tags	10	6.49
Urticaria	46	29.87
Skin inflammation	53	34.42
Acne vulgaris	40	25.97
Eczema	73	47.4
Which of the following psychological diseases can cupping therapy be used for?		
Anxiety	125	81.17
Schizophrenia	14	9.09
Depression	92	59.74
Which of the following is a common side effect of cupping therapy?		
Anemia	53	34.42
Thrombosis	30	19.48
Allergic reaction	57	37.01
Headache or dizziness	97	62.99
Which of the following contraindications of cupping therapy?		
Coagulation	136	88.31
Menstruating women	44	28.57
Post herpetic zoster pain	50	32.46

UAE nationals and Arab specifically are more aware of cupping therapy than other nationalities. As in Arab and Islamic countries, cupping therapy is based on prophetic counsel and cultural traditions.^[10]

In the current study, most participants reported that cupping therapy could help treat and manage musculoskeletal disorders. Studies have also reported that cupping therapy benefits individuals with musculoskeletal disorders and decreases the associated symptoms.^[11]

CT has been found to reduce pain scores by altering the individual's physiological status, as it can mimic the release of morphine-like substances (endorphins), serotonin, or cortisol, leading to pain relief. This explains why cupping therapy can benefit many neurological, musculoskeletal, dermatological, and psychiatric conditions.^[12,13]

Table 5: Responses about the cupping therapy's practices and attitude

Questions about Practice		
Do you recommend your patients to use cupping therapy as an adjunct therapy? Based on their clinical conditions		
Yes	49	31.8
No	105	68.2
Do you ask your patients about their usage of cupping therapy?		
Yes	51	33.1
No	103	66.9
Do you advise your patients about cupping therapy's indications/SE/contraindications?		
Yes	49	31.8
No	105	68.2
Questions about Attitude		
Cupping therapy is an effective complementary treatment		
Agree	57	37
Neutral	77	50
Disagree	20	13
Physicians who have tried cupping therapy are more likely to suggest it to the patients		
Agree	74	48.1
Neutral	64	41.6
Disagree	16	10.4
Cupping therapy can be used as an adjunct therapy to medical treatment		
Agree	74	48.1
Neutral	59	38.3
Disagree	21	13.6
Educating physicians about cupping therapy is necessary		
Agree	86	55.8
Neutral	56	36.4
Disagree	12	7.8

In accordance with the previous study considering the role of CT in managing neurological disease^[14] and chronic diseases,^[15] our study participants showed sound knowledge. However, our study participants showed limited awareness of the efficacy of CT in treating dermatological conditions such as urticaria which is reported in the literature.^[16]

As proven in a trial, this result correlates with a study conducted in Saudi Arabia that reported that 96.6% of the patients underwent cupping therapy to treat their headaches.^[17]

The current study showed that two-thirds of respondents had a positive attitude toward cupping therapy. The positive attitude was associated with the job title of residents/specialists/fellows. However, we found that age and education do not affect attitude levels. The same finding was seen in the KSA study, which concluded that there was no significant association between attitude, age, and educational level.^[17]

In our study, more than 50% of respondents agreed that educating physicians about cupping therapy is necessary.

Meanwhile, 48% have shown that physicians, who have tried cupping therapy, are more likely to suggest it to their patients. Various studies on the attitudes of medical personnel in various nations regarding complementary medicine have yielded disparate results. According to a survey conducted in the United States, 76% of the medical staff has used complementary and alternative medicine (CAM).^[18]

We found that a limited number of study participants refer or counsel patients for CT. These findings are in accordance with a study performed in the Emirate of Abu Dhabi targeting the general population attending seven ambulatory health services showed that most respondents never discussed complementary medicine with their physicians.^[19] This could be explained by the fact that healthcare providers generally have no option within the medical system to refer patients and no clinical guidelines to counsel patients on cupping therapy.

This study has a few limitations. It was a single-center study, and findings cannot be generalized. The limited sample size and the low response rate are other limitations. This is the first study in the UAE on physicians' cupping knowledge, attitude, and practice. Similar researches in the UAE, Saudi Arabia, and Bangladesh were among populations rather than physicians, and several were on different techniques of alternative medicine, limiting outcomes' comparison.

Conclusions

Our study concluded that physicians possess adequate knowledge and a positive attitude toward cupping therapy. However, despite the good knowledge of cupping therapy, physicians find it difficult to practice, refer, or counsel.

Acknowledgment

The authors of this study would like to thank all the physicians for their participation.

Highlights

- A study was conducted to assess the physicians' knowledge, attitude, and practices on cupping therapy.
- Physicians have a thorough understanding of cupping therapy.
- Young doctors exhibited a more favorable attitude toward cupping therapy
- Cupping therapy is challenging for physicians to practice, refer, and educate patients on.

Key message

From our study, we have seen physicians have adequate knowledge but poor practice. To address this issue, we can propose a future research to identify the common factors that present as a barrier to medical counseling on cupping therapy.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Zollman C, Vickers A. What is complementary medicine? *BMJ* 1999;319:693-6.
2. World Health Organization. WHO global report on traditional and complementary medicine 2019. World Health Organization; 2019. Available from: <https://apps.who.int/iris/handle/10665/312342>.
3. Arslan M, Yeşilçam N, Aydın D, Yüksel R, Dane Ş. Wet cupping therapy restores sympathovagal imbalances in cardiac rhythm. *J Altern Complement Med* 2014;20:318-21.
4. Elolemy AT, AlBedah AM. Public knowledge, attitude and practice of complementary and alternative medicine in Riyadh region, Saudi Arabia. *Oman Med J* 2012;27:20-6.
5. Mohammad Y, Al-Ahmari A, Al-Dashash F, Al-Hussain F, Al-Masnour F, Masoud A, *et al.* Pattern of traditional medicine use by adult Saudi patients with neurological disorders. *BMC Complement Altern Med* 2015;15:1-5.
6. Al-Yousef HM, Wajid S, Sales I. Knowledge, attitudes, and perceptions of cupping therapy (CT) in Saudi Arabia-a cross-sectional survey among the Saudi population. *Biomed Res J* 2018;29:3351-5.
7. Buran-Omar AP, Alaban AG. Integrating Al-Hijamah into the healthcare system in Saudi Arabia: Hospital staff's perception, possible use, and acceptability. *J Complement Med Res* 2022;29:228-34.
8. Al-Rowais NA, Al Bedah AM, Khalil MK, El Olemly AT, Khalil AA, Alrasheid MH, *et al.* Knowledge and attitudes of primary health care physicians towards complementary and alternative medicine in the Riyadh region, Saudi Arabia. *J Complement Med Res* 2012;19:7-12.
9. Azin S, Nooraii S, Moshkani Z. Complementary/alternative medicine: Knowledge, attitudes and practice among general practitioners in Tehran, Iran. *Iran J Pharm Sci* 2010(Suppl 2):27.
10. Al-Rawi S, Fetters MD. Traditional Arabic & Islamic medicine: A conceptual model for clinicians and researchers. *Glob J Health Sci* 2012;4:164.
11. Ullah K, Younis A, Wali M. An investigation into the effect of cupping therapy as a treatment for anterior knee pain and its potential role in health promotion. *Internet J Altern Med* 2007;4:1-9.
12. Hani U, Saleem M. Review on cupping therapy (al-hijama): A miraculous alternative system of medicine, which is an unbeatable cure for all ailments. *J Pharmacogn Phytochem* 2019;8:2406-14.
13. Kouser HV, Nayab M, Tehseen A, Mahfooz S, Ruqaiyya B, Anwar M. Evidence-based therapeutic benefits of cupping therapy (Hijama): A comprehensive review. *J Drug Deliv Ther* 2021;11:258-62.
14. Al-Bedah AM, Elsubai IS, Qureshi NA, Aboushanab TS, Ali GI, El-Olemy AT, *et al.* The medical perspective of cupping therapy: Effects and mechanisms of action. *J Tradit Complement Med* 2019;9:90-7.
15. Rahman HS, Ahmad GA, Mustapha B, Al-Rawi HA, Hussein RH, Amin K, *et al.* Wet cupping therapy ameliorates pain in patients with hyperlipidemia, hypertension, and diabetes: A controlled clinical study. *Int J Surg Open* 2020;26:10-5.

16. Acta Medica IranicaActa Medica IranicaShirazi MT, Kenari HM, Eghbalian F. The role of bloodletting and cupping in severe acute urticaria and angioedema as skin emergencies in Persian medicine. *J Pharmacopuncture* 2022;25:7-14.
17. Ghazi SS. Knowledge, attitude and practice of cupping therapy among Saudi patients attending primary healthcare in Makkah, Kingdom of Saudi Arabia. *Int J Med Sci Public Health* 2016;5:966-72.
18. Johnson PJ, Ward A, Knutson L, Sendelbach S. Personal use of complementary and alternative medicine (CAM) by US health care workers. *Health Serv Res* 2012;47:211-27.
19. Al Marshedi S, Al Samahi E, Mohammed MA, Darwish E, Al Fahim M. Knowledge, attitudes, and practice of complementary and alternative medicine in the Abu Dhabi Region. *World Family Medicine* 2019;17:8-16.