Review Article:

Cupping Therapy (Al-Hijama) Qualification Program for Health Practitioners in Saudi Arabia

Ahmed T. El-Olemy[1,2]

1. Professor of Public Health, MD. Public Health and Community Medicine, Faculty of Medicine, Tanta University, Egypt.
2. Consultant and Head of Academic Affairs and Training Unit, National Center for Complementary and Alternative Medicine, Ministry of Health, Riyadh, Saudi Arabia.

Received onOct 11, 2024, accepted for publication on Nov 13, 2024, dx.doi.org/10.5455/mjhs.2025.02.013

Corresponding Author:
Ahmed T. El-Olemy, Faculty of Medicine, Tanta University, Egypt, National Center for Complementary and Alternative Medicine, Ministry of Health, Riyadh, Saudi Arabia. 11662 P.O. 88300, Mail ID: a_elolemy@yahoo.com, a.alolemy@nccam.gov.sa.

OPEN ACCESS Distributed under Creative Commons CC BY-NC-ND 4.0

Abstract:

Well-articulated, properly conducted, and need-oriented qualification programs tend to create extremely efficient and competent healthcare programs. This manuscript aimed at increasing awareness, improving knowledge, and acquiring skills for cupping therapy for health practitioners.

The health practitioners' qualification program was planned, organized, and implemented in five days eight hours daily. It includes both theoretical and practical sessions using different methods of teaching. The methods of teaching and learning include interactive lectures, role play, practical sessions, assignments, simulation, learning by doing, case studies, problem-based learning, and self-directed learning. Topics covered include; introduction and comparison between CAM and Conventional Medicine, history of cupping, Hadiths on cupping, types of cupping, tools, and equipment used for cupping, theories that could explain the mechanism of action of cupping, cupping session, side effects and complications of cupping, precautions, absolute and relative contraindications, infection control in cupping clinics, wrong beliefs associated with cupping, points of cupping and different systems for choosing points, research models used in cupping, evidence-based cupping, Medical ethics and research ethics of cupping therapy. The program used different types of assessments; They are mostly based on assignments (20%), oral exams (30%), practical exams (30%), and Objective Structured Clinical Examinations (OSCE) (20%). A practitioner who scores 60% or more will be considered eligible to attend the written exam. The program feedback received was most supportive of the qualification program and appreciative of the facilitators, the knowledge and skills gained, and the way it was delivered.

Key words:

Cupping; Hijama; Teaching; health practitioners; Qualification program, KSA

Introduction:

More than 70% of people worldwide use health-care approaches developed outside of mainstream Western or conventional medicine[1]. Yet, despite increased complementary and alternative medicine (CAM) use by patients, allopathic healthcare providers often lack sufficient knowledge of CAM therapies and products and their role in health and healing. They are unaware About the safety and effectiveness of CAM therapies. They lack the requisite expertise to collaborate with CAM practitioners to provide patients with integrated health care [2,3]. CAM therapies have been associated with serious and even life-threatening adverse events[4]. Thus, conventional healthcare providers need to understand the safety and efficacy issues pertinent to widely used CAM therapies, incorporate assessment of CAM use into their history and physical examinations of their patients, and collaborate efficiently with CAM practitioners [5]. Cupping therapy (Al-Hijamah) is a traditional folk therapy practiced mostly by traditional healers worldwide since ancient times [6,7]. Initial reports of cupping had been found in Egyptian and Chinese scriptures; however, the first description of cupping is traced in Ebers Papyrus, the oldest medical textbook written in 1550 BC. Subsequently, cupping was passed on to the Greeks, Romans, and Western countries [7,8]. Over centuries, the cups and cupping techniques have changed; however, its beneficial effects were increasingly recognized both by the cupping practitioners and users [9] along with keen interest in research on cupping therapy.

Medical education has undergone a major transformation along with the change in the concept of health and disease. It is becoming increasingly community-oriented, learner-centered, self-learning, and self-peer assessing process [10]. Educational institutions, particularly those in developing countries such as Saudi Arabia, face sorts of challenges in the implementation of change via the introduction of new systems and procedures. This is the more common type of organizational change they encounter, as they become more global in their perspectives and face performance-based assessments such as accreditation [11-17].

Properly conducted and well-planned need-oriented qualification programs tend to create extremely efficient, competent, better quality, and cost-effective healthcare services, improve compliance with regulatory measures, and enhance satisfaction levels without wasting resources [18-20]. However, planning and implementing effective training is not always easy due to qualification programs unsupportive of a true business goal, unclear vision and purposes

and loaded with complex information [19, 20]. Overall, training is undergoing innovative changes in all fields of developing a highly competitive workforce around the world. A model of structured teaching, training, and assessment by peers has replaced the traditional education system where the teacher is the sole provider of knowledge, and the learner is a passive receiver [21]. Trainees and students are now given equal opportunities for curriculum development, active interactive learning, decision-making, and evaluation [22]. Evaluation of qualification courses is an integral part of the qualification program specifically intended to demonstrate its effectiveness and provide feedback to the evaluators and attendees on how the implementation of a program has progressed [23]. Accordingly, qualification programs may need modifications for further improvement. In addition, the evaluation of training is a process of assessing its potential value, benefits, effectiveness, impact on trainees, performance of trainers, suitability of course contents, and delivery methods [24].

Cupping therapy trainers need to give detailed pertinent knowledge along with practical skills of cupping therapy (Al-Hijamah) to the trainees [25]. An important quality of healthcare professionals is to instill a strong will to provide the best training services to the trainees and the willingness to periodically evaluate themselves for improvement [26]. Healthcare practitioners intending to practice cupping therapy need to take a comprehensive qualification course [27]. Qualification courses for cupping therapy are often tailored considering evidence-based practices of safety and efficacy, the Philosophy of community-oriented, people-centered teaching [28,29].

The vision of the program:

Knowledgeable, highly skilled, research-oriented A Hijama practitioner, with a high level of Professionalism based on safe, and evidence-based practice.

Concepts of the program:

Adoption of the concept of professionalism, the concept of safe cupping technique, the concept of evidence-based cupping, and research-oriented practitioners.

Overall Aims and Objectives:

Upon successful completion of the qualification program, health practitioners should be able to:

a. Define what is traditional, complementary, and alternative medicine, integrative health, other synonyms, and related terminologies, how to deal with different forms, and how they differ from each other and from that related to conventional medicine.
b. Define cupping therapy and describe the history and hadiths on cupping.
c. Discuss the classifications and types of

cupping.

d. Identify indications, advantages, and disadvantages of tools and equipment used for cupping.
e. Assess evidence of safety, efficacy, cost effectiveness and mechanism of action of cupping therapy.
f. Access and search the literature and critically evaluate research on cupping.
g. Adopt medical ethics and research ethics related to cupping.
h. Take a positive attitude towards evidence-based cupping.
i. Identify common frauds, misconceptions, and wrong beliefs related to cupping therapy
j. Acquire skills for history taking, examination, putting treatment plan, selection of points, scarification, and applying different types of cupping.
k. Adopt infection control measures in cupping clinics and proper use of personal protective measures.
l. Discuss indications, contraindications and precautions in cupping practice.
m. Clarify the role of the National Center for Complementary and Alternative Medicine (NCCAM) in KSA as a national reference for all CAM concerns including cupping regulations, licensing, and accreditation.

Intended Learning Outcomes of the Program (ILOs) :

Knowledge and understanding:

Upon successful completion of the program, health practitioners should be able to A-1) Describe the characteristics of Complementary and Integrative Medicine. A-2) Learn about safety, efficacy, cost-effectiveness, and mechanism of action of cupping. A-3) Learn about the history of cupping therapies, and Hadiths on cupping. A-4) Enumerate side effects and complications of different types of cupping. A-5) Describe the uses, indications, and contraindications of the different types of cupping. A-6) Learn about evidence-based cupping therapy. A-7) Judge medical ethics and research ethics related to cupping. And A-8) Define trusted CAM resources with special consideration for cupping.

Intellectual skills:

Upon successful completion of the program, health practitioners should be able to B-1) Suggest the right type of cupping for a particular health problem. B-2) Summarize common diseases where cupping therapy can be included in the management plan. B-3) Design a suitable plan for the management of cases using cupping. B-4) Communicate efficiently with patients seeking cupping. B-5) Suggest health education messages regarding the proper use of cupping and conventional medicine. And B-6) Deal with misconceptions and wrong beliefs about cupping therapy.

Professional and practical skills:

At the end of the program, the health practitioner should be able to C-1) Discuss the assignments of different cases in the practical notes concerning the type of cupping used, theories, side effects, and contraindications and suggest the disease(s) that can be managed using cupping based on evidence-based medicine. C-2) Do interpretations of a research project including different cases treated using cupping therapy, effectiveness, and recommendations. C-3) Acquire practical skills related to different types of cupping. And C-4) Acquire practical skills for scarification.

General and transfer skills:

At the end of the program, the health practitioner should be able to D-1) Communicate within the teamwork in the cupping clinics and centers. D-2) Plan and conduct a research task related to cupping. D-3) Basic information/ health technology literacy, table (1).

Table 1: Course ILOs-Matrix-Teaching and learning strategy and health practitioner assessment:

No.	TOPIC	ILOs	Teaching methods	Assessment method
1	Introduction, characteristics, and comparison of CAM vs. conventional medicine	A1, A7, D2	Interactive lecture	Oral, written
2	History and Hadiths of cupping	A3, A7, B6, D3	Interactive lecture	Oral, written
3	Types of cupping	A4, A5, B1, B6, C1, C2, C3, C4, D2, D3	Practical session	Oral, written, practical, OSCE
4	Tools and equipment used for cupping	A4, A5, B1, B2, B3, C1, C2, C3, C4, D2, D3	Practical session	Oral, written, practical, OSCE
5	Theories that could explain the mechanism of action of cupping	A2, A3, A5, A6, B1, B2, B3, B6, C1, C2, D2, D3	Small group discussion	Oral, written
6	Cupping session	A1, A2, A4, A5, A6, A7, B1, B2, B3, B4, B5, B6, C1, C2, C3, C4, D1, D3	Practical session	Oral, written, practical, OSCE
7	How to deal with patients before, during, and after cupping	A1, A2, A4, A5, A6, A7, B1, B2, B3, B4, B5, B6, C1, C3, C4, D1, D3	Roleplay	Oral, written, practical, OSCE
8	Side effects and complications of cupping	A2, A4, B4, B5, B6, C3, C4, D3	Interactive lecture	Oral, written, practical, OSCE
9	Precautions, absolute and relative contraindications	A5, A6, B1, B2, B3, B5, B6, C1, C2, C3, D2, D3	Interactive lecture	Oral, written
10	Infection control measures in cupping clinics	A2, A4, B4, B5, B6, C1, C3, D1, D3	Interactive lecture	Oral, written, practical, OSCE
11	Wrong beliefs associated with cupping	A2, A3, A5, A6, B2, B4, B5, B6, C1, C4, D1, D2, D3	Team-based learning	Oral, written
12	Points of cupping and different systems for choosing points	A2, A3, A5, A6, A8, B1, B2, B3, B6, C1, C2, C3, D2, D3	Interactive lecture	Oral, written, practical, OSCE
13	Case studies based on research	A2, A4, A5, A6, A7, A8, B1, B2, B3, B6, C1, C2, C3, C4, D2, D3	Case-based learning	Oral, written, practical, OSCE

14	Research methods used in cupping	A1, A2, A4, A5, A6, A7, A8, C1, C2, D2, D3	Interactive lecture	Oral, written
15	Evidence-based cupping	A1, A2, A6, A7, A8, B1, B2, B3, B5, B6, C1, C2, C3, D2, D3	Interactive lecture	Oral, written
16	Medical ethics and research ethics of cupping therapy	A1, A2, A4, A5, A6, A7, A8, B3, B4, B5, B6, C1, C2, D2, D3	Self-directed learning	Oral, written
17	Simulation lab	C1, C3, C4	Demonstration	practical, OSCE
18	Video display	A2, A4, A5, B1, B5, B6, C1, C3, C4, D1	Video display and Criticism	practical, OSCE
19	Demonstration and learning by doing on volunteer	A2, A4, A5, A6, B1, B3, B4, B5, B6, C1, C2, C3, C4, D1	learning by doing	practical, OSCE
20	Wet cupping on volunteer	A2, A4, A5, A6, B1, B3, B4, B5, B6, C1, C2, C3, C4, D1	learning by doing	practical, OSCE
21	Wet cupping on volunteer	A2, A4, A5, A6, B1, B3, B4, B5, B6, C1, C2, C3, C4, D1	learning by doing	practical, OSCE

Description:

NCCAM is the national reference for all activities related to CAM in Saudi Arabia. It started regulation of cupping therapy since the year 2015. Cupping therapy was mostly practiced by non-qualified and unlicensed traditional healers. Hence, NCCAM planned, organized, standardized, and implemented a health practitioner qualification program for cupping therapy. Physicians, physiotherapists, nurses, and CAM practitioners are only allowed to attend the program. The program implemented in a course of five days included both theoretical and practical parts for eight hours daily. Health practitioners were assessed at the end of the program through oral, practical, written, and OSCE exams.

Topics to be covered:

Topics to be covered during the program include 1) Introduction, characteristics, and comparison of CAM vs. conventional medicine. 2) History of cupping. 3) Hadiths on cupping. 4) types of cupping techniques. 5) tools and equipment used for cupping. 6) Theories that could explain the mechanism of action of cupping. 7) cupping session. 8) side effects and complications of cupping. 9) precautions, absolute and relative contraindications. 10) infection control measures in cupping clinics. 11) wrong beliefs associated with cupping. 12) points of cupping and different systems for choosing them. 13) research methods used in cupping. 14) evidence-based cupping. 15) Simulation in cupping training 16) How to deal with patients before, during, and after cupping 17) Medical ethics and research ethics of cupping therapy. In addition to practical training on different cupping techniques with special emphasis on wet cupping, the most prevalent type in Saudi Arabia (table 2).

Table 2: Details of the qualification program schedule:

No.	Topic	Teaching & learning methods	No. of hours
1	Introduction, characteristics, and comparison of CAM **vs.** conventional medicine	Interactive lecture	1
2	History and Hadiths of cupping	Interactive lecture	1
3	Types of cupping	Practical session	2
4	Tools and equipment used for cupping	Practical session	1
5	Theories that could explain the mechanism of action of cupping	Small group discussion	2
6	Cupping session	Practical session	2
7	How to deal with patients before, during, and after cupping	Role-play	2
8	Side effects and complications of cupping	Interactive lecture	1
9	Precautions, absolute and relative contraindications	Interactive lecture	2
10	Infection control measures in cupping clinics	Interactive lecture	2
11	Wrong beliefs associated with cupping	Team-based learning	2
12	Points of cupping and different systems for choosing points	Interactive lecture	2
13	Case studies based on research	Case-based learning	4
14	Research methods used in cupping	Interactive lecture	1
15	Evidence-based cupping	Interactive lecture	1
16	Medical ethics and research ethics of cupping therapy	Self-directed learning	2
Practical session 1	Simulation lab	Demonstration	1
Practical session 2	Video display	Video display and Criticism	1
Practical session 3	Demonstration and learning by doing on volunteers	learning by doing	3
Practical session 4	Wet cupping on volunteer	learning by doing	3
Practical session 5	Wet cupping on volunteer	learning by doing	3
Practical session 6	Video display	Video display and Criticism	1
SUBTOTAL	Interactive lectures	11	40
	Small group discussion	2	
	Practical session	17	
	Case-based learning	4	
	Team-based learning	2	
	Self-directed learning	2	
	Role plays	2	

Methods of teaching:

- Brainstorming
- Interactive lectures
- Simulation
- Small group discussion
- Case-based learning
- Role-play
- Problem-based learning
- Self-directed learning
- Team-based learning

- Video display and Criticism
- Demonstrations
- Learning by doing
- Assignments

1. **Introduction, characteristics, and comparison of CAM vs. Conventional Medicine.** At the end of the lecture, health practitioners should be able to define Traditional Medicine, Alternative, Complementary Medicine, Integrative Health, and other names and related terminologies, and how they differ from each other and conventional medicine. Compare conventional medicine and CAM as regards safety, efficacy, research problems, evidence-based Medicine, medical ethics, qualification, regulation, etc. Discuss different classifications of CAM modalities and therapies, describe the common CAM practices used worldwide and in KSA, and define the National Center for Complementary and Alternative Medicine.
2. **History of cupping.** At the end of the lecture, health practitioners should be able to describe how cupping is transmitted through different generations, famous scientists wrote about cupping benefits, specifications, and tools used.
3. **Hadiths on cupping.** At the end of the lecture, health practitioners should be able to benefit from the true hadiths of the prophet Mohammed, peace upon him, related to cupping therapy and practice. Plane certain guidelines based on hadiths.
4. **Types of cupping.** At the end of the session, health practitioners should be able to define different classifications and types of cupping, indications, and contraindications of cupping, advantages and disadvantages of each one.
5. **Tools and equipment used for cupping.** At the end of the session, health practitioners should be able to know the advantages and the disadvantages of cupping, the indications, and contraindications of different types of cups according to the material of cups, function, shape, size, and set inside the cup. Tools used for scarifications and historical sets.
6. **Theories that could explain the mechanism of action of cupping.** At the end of the session, health practitioners should be able to discuss different theories that could explain how the patient can benefit from cupping according to diagnosis and type of cupping used and apply this in different scenarios.
7. **How to deal with the patient before, during, and after cupping.** At the end of the session, health practitioners should be able to give instructions for patients before and after cupping, prop-

er history taking, laboratory work, and investigations required to reach the proper diagnosis, and how one can follow up.

8. **Cupping session.** At the end of the session, health practitioners should be able to suggest the proper management plan including treatment principles; conventional medicine required, other complementary medicine modalities, physiotherapy, health education, nutrition education, change of lifestyle…. etc. The treatment plan for cupping includes the type (s) of cupping used, the number of sessions, the frequency between sessions, and the points of cupping. Decide the proper position of patients. Steps of cupping from disinfection till the end of the session.
9. **Side effects and complications of cupping.** At the end of the lecture, health practitioners should be able to know different side effects and complications that may be related to cupping and how to deal with them to minimize their effects.
10. **Precautions, absolute and relative contraindications.** At the end of the lecture, health practitioners should be able to take all precautions required for the safety of cupping, to prevent any suspected adverse events. These are precautions related to the tools and equipment, precautions related to the patient, practitioners, disinfection, and sterilizations, and precautions related to the practice itself. Aware of absolute and relative contraindications for cupping and contraindications of cupping in sports injuries.
11. **Infection control measures in cupping clinics.** At the end of the lecture, health practitioners should be able to do routine hand washing properly, use personal protective measures, and take universal precautions for infection control at health-care facilities. Also, measures for proper waste disposal in cupping clinics.
12. **Wrong beliefs associated with cupping.** At the end of the session, health practitioners should be able to define and deal with wrong beliefs prevalent in our community from the traditional healers' views who used to practice cupping for hundreds of years ago.
13. **Points of cupping and different systems for choosing the points.** At the end of the session, health practitioners should be able to discuss general guidelines for selecting points of cupping, different systems used for selecting points, points mentioned in the hadiths of the prophet Mohammed, peace upon him, and to detect their sites on the skin. Study different points mentioned in the

research related to cupping and how to benefit from them.

14. **Research methods used in cupping.** At the end of the lecture, health practitioners should be able to differentiate between research methods used in conventional medicine and those in CAM especially cupping, difficulties of research in cupping and how to overcome them, know the importance of control group and placebo in research. Define reverse strategy and choose the proper research methods suitable for cupping.
15. **Evidence-based cupping.** At the end of the lecture, health practitioners should be able to discuss the concept of evidence-based cupping, the criteria for rating the strength of evidence, and how they differ from conventional medicine. Define the circular approach for evidence in CAM and know simply how to reach for evidence of cupping in the management of any disease within a reasonable time.
16. **Medical ethics and research ethics of cupping therapy.** At the end of the lecture, health practitioners should be able to discuss the ethical issues of CAM, especially for cupping; the ethics of the CAM practitioner towards patients, himself, the public, and his colleagues and toward his job. Discuss the ethics of the cupping practitioners towards the advertisement of CAM practices and products. Signing medical consent and patient rights.
17. **Simulation in cupping training.** At the end of the session, health practitioners should be able to practice cupping on artificial skin, to acquire skills of scarification before working on humans.
18. **Interactive lectures.** Interactive lectures will involve the health practitioner in active discussions and may provide brief learning activities during the lecture to achieve the learning objectives stated under each topic.
19. **Practical sessions.** The daily practical sessions are applied. In the first session, health practitioners start to apply cupping on artificial skin. In the second session, they practice dry, flash, dry cupping, and wet cupping on a human volunteer. In the following sessions, they do preventive wet cupping on the area below the 7th cervical spine, and two respiratory windows (in the inter-scapular area) on volunteers.

Quality Assurance and Evaluation Process :

This qualification program needs constant reviewing and monitoring to ensure that it meets the demands placed on it. Hence, there will be many assessment strategies for the evaluation of the program.

They are: 1) Health practitioner feedback at the end of the program, seeking practitioner comments on both teaching, learning, and assessment of the program along with the practitioner views on the general course organization and implementation. 2) Practitioner feedback on a sample of teaching and learning activities, obtained at the end of each activity. 3) Tutor feedback. 4) Examiner feedback. 5) Peer evaluation, where a staff member may visit a particular teaching and learning activity and provide formative feedback about its conduct. 6) Analysis of the practitioners› examination results. 7) External reviews.

Discussion:

The survey study of the status of CAM education in health colleges in Saudi Arabia, in 2012, revealed that there is no specialized track or postgraduate education on CAM in any health college in Saudi Arabia. Eleven (12.2%) colleges were teaching CAM courses in their curricula, not including cupping [30]. Hence, the health practitioners' qualification program for cupping was planned and implemented to increase awareness, improve knowledge, and acquire skills for cupping therapy (Hijama) for health practitioners.

This practitioner qualification program is the first governmental program worldwide. There is no qualification degree of cupping, bachelor's degree or higher. National surveys done in Saudi Arabia reported that cupping ranked fourth CAM modality used by the public (35%) after herbal therapy (59%), spiritual healing, and honey and bee products (55%) each [27]. Health professionals and policymakers in Saudi Arabia reported that 25% of the population used cupping [28]. Another survey of the patients attending primary health care centers revealed that 13% of them used cupping before. Also, 11.4% used cupping for the same disease before requesting conventional medicine [29].

This qualification program covers one week of teaching in NCCAM, Riyadh, KSA. It is in the Northern part of Riyadh City, the capital of Saudi Arabia. These qualification courses with different methods of teaching and learning are used to improve quality and interest in the course, gain knowledge, and acquire skills. The program includes most of the topics related to cupping based on literature review and health practitioners' expectations to satisfy all needs of the participants. This is in line with many authors who stated that the use of different methods has a great impact on knowledge and skills retention [31-33].

There is no approved and trusted source or guidelines for the educational material of the cupping qualification course. Published textbooks on cupping therapy, gray literature of unpublished data, and infor-

mation were reviewed. Most of the research published on cupping in different sources is reviewed, especially systematic reviews, Meta-analysis, randomized and non-randomized controlled trials, and analytical and descriptive studies. Also, we contacted famous and respected cupping health practitioners in Saudi Arabia, the Middle East, Asia, and Europe to benefit from their experience in the field. At the same time, we attended many private training courses in different countries. All these activities were practiced for preparing scientific and standardized training material based on evidence-based medicine.

The training materials were approved and updated regularly. It was approved by 15 experts in the field after making some modifications according to their recommendations and requests. Also, the program has been tested and methods of teaching were approved by cupping experts, experts in training and education, and public health, community medicine, and family medicine consultants. They attend a course for three days for auditing, evaluating, and approving the program. Regular and continuous auditing and assessment of the course done by NCCAM. Updates based on the results of the published research are regularly added to the training material.

More than 25 trainers shared in implementing the program under the supervision and control of the author to ensure high-quality performance of the course.

All the health practitioners who attended the course passed the assessment exams. The feedback received was supportive for the program, the information provided, skills gained, and the way it was delivered. This satisfaction with the course may have a good impact on its future. Most health practitioners expressed that cupping needs to be integrated into the medical schools' curricula, and this trend is consistent with other studies[34-36]. The long-term implications of this finding are many, including the cupping capacity-building clinical practice, research, teaching, and training [37].

According to many studies, there are many barriers against the integration of cupping and the use of CAM therapies found across the world[38-40]. In the context of the Western medical settings, lack of evidence for cupping, lack of staff training, lack of reimbursement, legal issues raised by medical schools and institutions, relative lack of competent cupping providers, lack of appropriate equipment, and cupping therapy being too time-consuming, were the main barriers [38,39,41].

Limitations of the program:

Navigating the information landscape and obtaining reliable information is challenging due to the presence of disinformation, the false claims of cupping. Preserv-

ing updated knowledge and philosophies, while protecting them from inappropriate regulation is crucial. Lack of Research in cupping with poor quality due to difficulty in blindness and placebo.

Summary and Conclusion:

The Qualification program for cupping has been planned and implemented during the year 2015 for Health practitioners at NCCAM, Riyadh, KSA. The Methods of teaching and learning included interactive lectures, practical sessions, assignments, simulation, learning by doing, case studies, problem-based learning, and self-directed learning. Topics covered during the course included; Introduction, characteristics and comparison of CAM vs. Conventional Medicine, history of cupping, Hadiths on cupping, types of cupping techniques, tools, and equipment used for cupping, theories that could explain the mechanism of action of cupping, cupping session, side effects and complications of cupping, precautions, absolute and relative contraindications, infection control measures in cupping clinics, wrong beliefs associated with cupping, points of cupping and different systems for choosing them, research methods used in cupping, evidence-based cupping, simulation in cupping training, How to deal with patients before, during and after cupping and Medical ethics and research ethics of cupping therapy. In addition to practical training on different cupping techniques with special emphasis on wet cupping, the most prevalent type in Saudi Arabia. At the end of the program, attendance was assessed using oral, practical, written, and OSCE exams.

Recommendations:

1) Reliable information is crucial for consumer safety, informed choices, and shared decision-making in health care. 2) Significant investment and prioritization of cupping research are imperative. 3) Need for more research data to advance its use and integration. 4) Conduct rigorous scientific studies to support the evidence base regarding safety, quality, effectiveness, cost-effectiveness, and mechanism of action of cupping. 5) Explore innovative approaches for research appropriate to the unique characteristics of traditional, complementary, and integrative medicine (TCIM) knowledge and practices with special reference to cupping. 6) Contribute to developing/implementing electronic patient record systems accessible by TCIM health practitioners and promote interoperability. 7) Regularly monitor and report on the implementation of the program.

Acknowledgment:

The author is grateful to all the staff members of the National Center for Complementary and Alternative Medicine who have participated in the delivery of the pro-

gram, assessment, and final evaluation of the practitioners. This program is dedicated to the soul of Dr. AbdelGawwad El-Sawi who shared in the planning, assessment, and implementation of the program.

COMPETING INTERESTS:

The authors have declared that no competing interests exist.

References:

1. Duke Integrative Medicine, 3475 Erwin Road, Durham, North Carolina, 27705, USA, 2010.
2. Brown J, Cooper E, Frankton L, et al. Complementary and alternative therapies: Survey of knowledge and attitudes of health professionals at a tertiary pediatric/women's care facility. Complem Thera Clini Pract. 2007;13: 194-200.
3. Kemper KJ, O'Connor KG. Pediatricians' recommendations for complementary and alternative medical (CAM) therapies. Ambula Pediat. 2004;4: 482-487.
4. Basila D, Yuan CS. Effects of dietary supplements on coagulation and platelet function. Thrombo Resea 2005;117: 49-53.
5. Barbara S, Janice MZ, Joyce KK, Sharon CF, Angela J. Case-Based Online Modules to Teach Graduate Level Nursing Students About Complementary and Alternative Medical Therapies. J Prof Nurs 2012;28: 125-129.
6. Tamer Shaban. Cupping therapy encyclopedia, January 5; 2014. ISBN-13: 978-1494780517
7. Qureshi NA, Shaban T, Elsubai IS, Alqaed MA, Gazzaffi I, El-Olemy AT, Al-Bedah AM. History of cupping (Hijama): A narrative review of literature. Journal Integrative Medicine. 2017;15(3):172–181.
8. Chirali IZ. The cupping procedure. In: Chirali IZ. Traditional Chinese medicine cupping therapy. London: Churchill Livingstone. 1999;73-86.
9. Al-Bedah AM, Aboushanab TS, Alqaed MS, Qureshi NA, Suhaibani I, Ibrahim G, Khalil M. Classification of cupping therapy: A tool for modernization and standardization. Journal Complementary Alternative Medical Research. 2016;1(1): 1-10.
10. Sidrah N, Sadia J, Tauqir A, Asif Zia A. Assessment of improvement in knowledge and skills amongst trainees on workshop on "Labor and partograph". J Pak Med Assoc 2010;60: 844-848.
11. Vicki W. Summit on Integrative Medicine & The Health of the Public: Issue Background and Overview. Washington, DC: Institute of Medicine. 2009; Retrieval 2011-1-18.
12. Catherine Z, Andrew JV, Janet R. ABC of Complementary Medicine. 2nd ed. BMJ Books, 2008; ISBN: 978-1-4051-

3657-0.

13. Lyn W, Freeman. Mosby's complementary and alternative medicine: A research- based approach. 3rd edt. 2008; ISBN-13: 978-0323053464.
14. Mark SM. Fundamental of Complementary and Alternative Medicine. 5th edtn. Elsevier Health Sciences. 2014; ISBN: 9780323298940.
15. Richard Liebowietz, Linda Smith, Tracy Gaudet. The Duke Encyclopedia of New Medicine: Conventional and Alternative Medicine for All Ages. The Duke Center for Integrative Medicine. Rodale Books, USA 2006.
16. Al-Jauziyah IIQ. Healing with the medicine of the prophet. Dar-us-Salam Publications, Riyadh, Saudi Arabia 1999.
17. Center for Integrative Medicine at the University of Arizona, USA 2023.
18. Christie Fullarton, Josephine Palermo. Evaluation of a large group method in an educational institution: The World Café versus Large Group Facilitation. First presented at the Annual Conference of the Australasian Association for Institutional Research, Enhancing Quality Research: a Global Perspective held in Canberra, 19– 21 November 2008. Deakin University, Australia. Published in 01 November 2008;14(1):1-6.
19. Bolman LG, Deal TE. Reframing change. In J. V. Gallos (Ed.), Organization development. San Francisco: JosseyBass. 2007;447–469.
20. Kirkpatrick DI. Luminary perspective: Evaluating training programs. In: Handbook for workplace learning professionals, Elaine Biech (editor). The American Society for Training & Development, ASTD Press. United States of America 2008.
21. Abbatt FR. Teaching for better learning. A guide for teachers of primary health care staff. 2nd ed. WHO, Geneva 1992.
22. Freeth D, Hammick M, Koppel I, Scott R, Hugh B. A critical review of evaluations of interprofessional education. London: Learning and teaching support Network for Health Sciences and Practice 2002.
23. Koblinsky M, Matthews Z, Hussein J, et al. Going to scale with professional skilled care. Lancet. 2006;368:1377-86.
24. Sigrid van Fondern. Language Services Toolkit, Training Evaluation Report. Regional Information and Advocacy Council Inc. 2006;1-11.
25. Rugh J. Self-Evaluation. Ideas for participatory evaluation of rural community development projects. World Neighbors, 4127 NW 122 St., Oklahoma City, OK 73120-8869, USA 1992.

26. Carroll M, Palermo J. Increasing national capability for quality higher education—the case of the Sultanate of Oman. Paper presented at the Australasian Association for Educational Research, Coffs Harbour, New South Wales, Australia 2006.
27. El-Olemy AT, Al-Bedah AM. Public knowledge, attitude and practice of complementary and alternative medicine in Riyadh Region, Saudi Arabia. Oman Medical Journal. 2012;27(1):20-26. DOI: 10. 5001/omj.2012.04
28. AlBedah AM, El-Olemy AT, Khalil MK. Knowledge and attitude of health professionals in the Riyadh region, Saudi Arabia, toward complementary and alternative medicine. Journal Family and Community Medicine. 2012;19(2): 93.
29. AlBedah AM, Khalil MK, El-Olemy AT et al. The use of and out-of-pocket spending on complementary and alternative medicine in Qassim province, Saudi Arabia. Annals Saudi Medicine. 2013;33(3):282-289.
30. Al-Rukban MO, AlBedah AM, Khalil MK, et al. Status of complementary and alternative medicine in the curricula of health colleges in Saudi Arabia. Complement Ther Med 2013;20: 334-339.
31. Morgan RL, Whorton J E, Gunsalus C. A Comparison of Short Term and Long-Term Retention: Lecture Combined with Discussion Versus Cooperative Learning. J Instruc Psy 2000;27: 53-57.
32. Wood EJ. Problem-Based Learning: Exploiting knowledge of how people learn to promote effective learning. Bioscience Education e-joiinmt 2004;3: 3-13.
33. Jacobsen PA, Eggen P, Kauchak D. Methods for Teaching: Promoting Student Learning in K-12 Classrooms (7 ed.). Boston: Prentice Hall 2005.
34. Akan H, Izbirak G, Kaspar EC, et al. Knowledge and attitudes towards complementary and alternative medicine among medical students in Turkey. BMC Complement Altern Med. 2012;12:115.
35. Yildirim Y, Parlar S, Eyigor S, et al. An analysis of nursing and medical students' attitudes towards and knowledge of complementary and alternative medicine (CAM). J Clin Nurs 2010;19: 1157-1166.
36. Alis O, Ganime S, Nuran B, et al. An analysis of nursing and medical students' attitudes towards and knowledge of complementary and alternative medicine (CAM). J Altern Complement Med. 2007;13: 1007-1010.
37. Al-Bedah AM, Aboushanab TS, Alqaed MS, et al. Assessing the Effective-

ness of Using Simulation in Cupping Therapy Training Course for Undergraduate Medical Students: A Study in Riyadh, KSA. J Adv Med Pharm Sci 2017;13: 1-7.

38. Sierpina VS, Schneeweiss R, Frenkel MA, Bulik R, Maypole J. Barriers, strategies, and lessons learned from complementary and alternative medicine curricular initiatives. Acad Med 2007;82: 946-950.
39. Frenkel M, Arye EB. The growing need to teach complementary and alternative medicine: Questions and challenges. Acad Med 2001;76: 251-254.
40. Fonfa AE. Patient perspectives: Barriers to complementary and alternative medicine therapies create problems for patients and survivors. Integr Cancer Ther 2007;6: 297-300.
41. Yeo AS, Yeo JC, Yeo C, et al. Perceptions of complementary and alternative medicine amongst medical students in Singapore-A survey. Acupunct Med. 2005; 23:19-26.