



Review Article

Wet Cupping (al-hijama) for Mental Health: A Systematic Review

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ABSTRACT

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This systematic review aimed to evaluate the effects of wet cupping on the treatment of mental illness. A total of 2,670 studies were retrieved using PubMed, Cochrane Library, Web of Science, Google Scholar, and Science Direct databases, and of these, 2,661 were excluded due to not meeting the inclusion criteria. There were 9 articles included in this review including 1,124 individuals who received wet cupping. Mental health was explored in, those who had migraines, metabolic syndrome, smoking addiction, post-traumatic stress, chronic medical disease, and depression. As an intervention procedure, the triple S technique was used in all studies. Only 3 studies reported that none of the participants complained of adverse events during or after the cupping therapy. In all studies, wet cupping was reported to be effective in reducing psychological symptoms. However, there are few randomized controlled trials testing the effectiveness of wet cupping in the treatment of mental health, and most are of poor quality. Therefore, more rigorous studies are required before the effectiveness of wet cupping for the treatment of mental illness can be determined.

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Introduction

Wet cupping is an ancient treatment, which is broadly utilized in several communities and for many conditions, and it has been endorsed by Islamic society because Prophet Muhammad (PBUH) recommended wet cupping [1,2].

Al-hijamah is Islamic wet cupping of prophetic medicine, and it uses a 3-step technique. Step 1 is suction (vacuuming of the skin to create skin uplifting), Step 2 is scarification (puncturing the skin), and Step 3 is the suction technique (the suction of skin to remove collected fluids due to the trauma of skin scarification) i.e., triple S technique. Traditional Chinese wet cupping therapy is a 2-step technique which is skin scarification, and suction i.e., the double S technique. The only difference is Step 1 which is not performed in Chinese wet cupping [3].

Wet cupping is an effective treatment that clears blood and interstitial spaces from causative pathological substances. Although there is wide use of wet cupping therapy in various conditions

such as acute/ chronic inflammation, pain, infectious diseases, osteoarthritis, migraine, and immune system disorders, its mechanisms of action are not fully understood [4,5].

Mental health disorders are a highly prevalent group of comorbidities in patients with physical disease. In a meta-analysis study, it has been reported that mental disorders are common in people with chronic physical diseases and there is a significant positive relationship between them [6]. The COVID-19 pandemic has led to increased mental health problems in society [7], and the use of complementary traditional treatment methods has increased [8].

There are multiple theories regarding the mechanism of action of wet cupping. One of them is the psychological effect [5]. Although wet cupping is used in the symptomatic treatment of many diseases there has been insufficient research on the effects of wet cupping therapy on mental health [9-11]. In addition, no data is available on the use of wet cupping in the treatment of psychiatric diseases on the World Health Organization International Clinical Trial

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Registry Platform [12].

There has been research on the mental health impact of wet cupping, but most is of low quality. Additionally, there is no systematic review of the therapeutic effects of wet cupping therapy for mental illness diseases. This study aimed to evaluate the effects of wet cupping for the treatment of mental health symptoms.

Materials and Methods

Literature research

Articles published in scientific journals up to January 2022 were searched using 5 databases (PubMed, Cochrane Library, Web of Science, Google Scholar, and Science Direct) and the keywords “Hijama,” and/or “wet cupping.” In addition, the reference list in the selected articles was reviewed for further relevant articles. From a total of 7,980 retrieved studies, 9 studies were included in the systematic review. Details are presented in the Preferred Reporting Items for Systematic Reviews and Meta Analyses (PRISMA) flow diagram (Fig. 1).

Study selection

Inclusion criteria: (1) Randomized controlled trials, quasi-experimental studies, cohort, case-control, and case report; (2) Full-text available; (3) English or Turkish language; (4) Low, medium, and strong quality studies; (5) Studies using only wet cupping therapy and that reported effectiveness of treatment; (6) Studies examining the effects of wet cupping on mental health.

Exclusion criteria: (1) Study protocols, congress papers, thesis, or qualitative studies; (2) Studies published in languages other than Turkish and English; (3) Studies that did not study mental parameters.

Quality of studies

The selection process for the articles reviewed was performed by 1 researcher. The quality assessment tool was not used in the selection of the studies. All studies reaching the inclusion criteria were included in the review. These studies retrieved without time limitation, indicate the absence of publication bias. All the included studies chose the improvement of the symptoms as the outcome measurement.

Coding of studies

The data coding form was prepared by the researcher and analyzed under a single title (Details of the included studies). There were 5 articles that reported random selection from the 9 studies included in the review. Data were coded by the researcher using the coding forms in the Microsoft Office Excel program and deficiencies were corrected. The data encoded was revised twice. Thus, coding reliability was ensured.

Data analysis and reporting

The coding form prepared consisted of 4 main parts. The data were grouped and analyzed in line with these titles. The mean change of outcome measures compared to baseline was assessed the differences between the intervention groups and the control groups and pre-post test. This study was conducted using the PRISMA guidelines [13].

Ethics

There was no ethical violation because no data was collected from the participant. All studies included in the analysis are shown in the source section.

Results

Study characteristics

Nine studies met the inclusion criteria and the key data are listed (Table 1). Considering all 9 studies there were 1,124 individuals in total. The sample numbers ranged from 1 to 629 across the 9 studies. The studies were carried out in the last 7 years, and originated from Iran [14], Egypt [15], Turkey [16-18], Saudi Arabia [19,20], India [21], and Pakistan [22]. Three trials [14,15,19] described the randomization procedure. Additionally, through the selection process, 3 pre-post test models [18,21,22], 2 case reports [16,17], and 1 prospective observational [20] were selected for review.

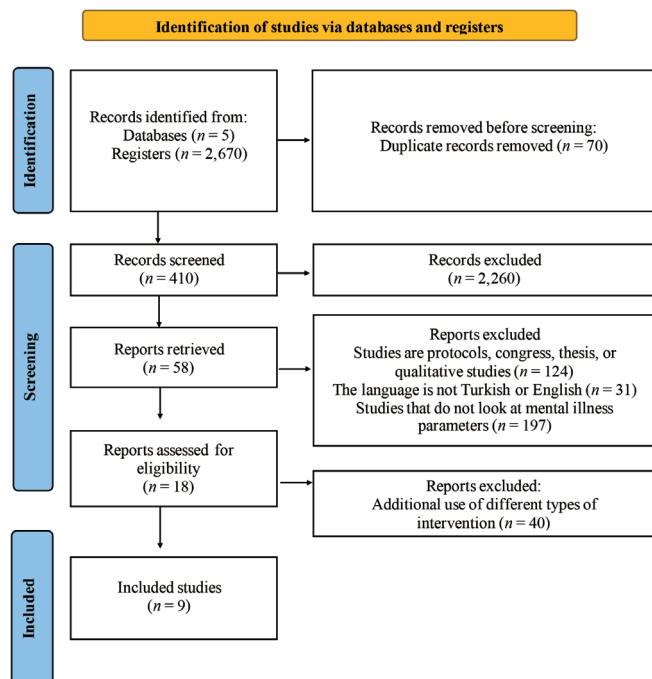


Fig. 1. PRISMA flowchart of included studies.

Table 1. Details of the Included Studies.

Study ID	Study characteristics	Study description	Procedure		Effects/adverse events
			Intervention	Control	
Farahmand et al/ 2014 [14]	Country: Iran Design: RCT SS:126	Condition: Metabolic syndrome Sex (M/F): 58-78 AA:18-65 Duration: 12 wk Number: 3 × Outcome measure: BDI Cupping points: Between the spinal process of the 1 st and 3 rd thoracic vertebrae.	Applicator: Doctor - Partial vacuum was caused with a cup. - Wet cupping was applied to bloodletting points by a sterile razor and suction was activated -After 5-10 min, the cup was removed and the skin was bandaged	Only isocaloric diet	Adverse: NR -There was a significant variation in scores between assessment points for anxiety and depression ($p < 0.001$), but these did not differ significantly between groups ($p = 0.78$ and $p = 0.69$)
Saeed et al/ 2015 [15]	Country: Egypt Design: RCT SS:46	Condition: Smoking addiction Sex (M/F): 46- AA: 36 Duration: 12 wk Number: 3 × Outcome Measure: BDI Cupping points: 7 th cervical spine between the 2 shoulder blades area behind the ear	Applicator: NR -The sessions were conducted on the 17 th , 19 th , and 21 st of the lunar months. -For all patients, detailed medical history and thorough clinical examination were documented. -The procedure was explained and provided written consent. - Room temperature was adjusted - The patient took a position (the sitting or supine position) - The skin of the patient was cleaned with an antiseptic solution - An appropriate size of cups was selected and applied to 4 points -The cups were left for a few min and then it was removed -The selected points were scarified (2 cm). The cup was again placed on the 4 points selected and then the cups were unscrewed - The wound was rubbed with an antibiotic ointment and then covered with a sterile bandage for 1 d.	Only smoking cessation program	Adverse: NR -During the 2 nd follow-up, there was a significant decrease in the frequency of anxiety in the patients in Group 2 compared with the patients in Group 1 ($p: 0.04$). -Wet cupping therapy may be effective as an adjuvant in a smoking cessation program.
Benli et al/ 2016 [16]	Country: Turkey Design: A case report SS:1	Condition: Posttraumatic stress Sex (M/F): -/1 AA: 42 Duration: 4 wk Number: 1 × Outcome Measure: PSQI Cupping points: DU14, B41 (bilaterally), B43 (bilaterally)	Applicator: NR - Physical examination and laboratory tests were made -Wet cupping was performed on selected 5 points	None	Adverse: NR -The patient stated that he slept comfortably from the 1st d and his need for alprazolam decreased. -The amount of trazodone use decreased. - In the 6-month follow-up of the patient, it was stated that the sleep disorder problem decreased but did not completely go away.
Al Jaouni et al/ 2017 [19]	Country: Saudi Arabia Design: RCT SS:629	Condition: Chronic medical disease Sex (M/F): 127/502 AA: 44.18 Duration: 1 wk Number: 1 × Outcome Measure: WHOQOL-BREF Cupping points: NR	Applicator: Doctor -All participants were provided with information and provided written consent. - The patient took a position (the sitting or supine position) The practitioner wore sterilized gloves and a face mask. -A surgical blade was used to superficially cut the skin (about 10 cuts) - An appropriate size of cups was selected and cups were applied (a period of 5 to 10 min) and then it was removed -The cup was removed and sterilized with 75% alcohol. -Cupping was applied again (5-10 min), removed then cleaned with 75% alcohol. -The wounds were sterilized with 2% iodine, covered with gauze, and fixed bandage for 24 hours.	Routine treatment	Adverse: None The scores of all domains especially psychological health improved after wet cupping therapy ($p > 0.001$)

Table 1. (continued).

Study ID	Study characteristics	Study description	Procedure		Effects/adverse events
			Intervention	Control	
Benli et al/ 2018 [17]	Country: Turkey Design: A case report SS:1	Condition: PD Sex (M/F): 1/- AA: 39 Duration: 60 wk Number: 7 × Outcome Measure: HAM-A Cupping points: (DU14), BL41 (bilaterally), BL44 (bilaterally)	Applicator: NR -Physical examination and laboratory tests were made -Wet cupping was performed in 6 steps (skin demarcation, sterilization, cupping, puncturing, cupping, and sterilization) on selected 5 acupuncture points	None	Adverse: NR -After the 1 st cupping session, he said that his symptoms of panic disorder decreased. After 15 d, he stopped using the drug and confirmed he did not experience panic attacks. -Wet cupping could play a role in the treatment of anxiety disorders.
Ersoy et al/ 2019 [18]	Country: Turkey Design: pre-post TM (single arm) SS:53	Condition: Healthy volunteers Sex (M/F): 27-26 AA: 43,68 Duration: 12 wk Number: 3 × Outcome Measure: WHOQOL-BREF Cupping points: DU14, UB42 (bilateral), UB46 (bilateral)	Applicator: NR -All participants were provided with information and provided written consent. -The skin of the patient was cleaned with a povidone iodine solution -An appropriate size of cups was selected and cups were applied to 5 points (a period of 3 to 5 min) and then it was removed -2-3 mm deep and 3-5 mm long superficial incisions were made on the skin with a sterile surgical blade (no:11) -The cup was again placed on the 5 points selected and then the cups were unscrewed A sterile bandage was applied	None	Adverse: None -Psychological domains of the participants as well improved after sessions overall and in all the subgroups ($p < 0.001$) -Quality of life may be improved in healthy adults by wet cupping therapy.
Kaki et al/ 2019 [20]	Country: Saudi Arabia Design: POS SS:128	Condition: Migraine Sex (M/F): 14-114 AA: 40.5 Duration: 4 wk Number: 4 × Outcome Measure: WHOQOL-BREF Cupping points: Under the head and between the shoulders	Applicator: Expert Therapist -All participants were provided with information -Skin laceration was performed using a sterile surgical lancet. -Firstly, cups were applied to bloodletting points and suction was activated -Sterilization of skin was performed, and skin laceration was performed using a sterile 22-surgical lancet. -It was initiated by reapplying the cups on the skin scarification points to encourage bloodletting --After 5-10 min, the cup was removed, the skin was cleaned with alcohol and covered with gauze for 24 hours.	None	Adverse: None -There was a significant improvement in the quality of life after wet cupping treatment ($p < 0.050$) -Patients indicated that they decreased episodes of negative feelings such as blue mood, despair, anxiety, and depression ($p : 0.002$)
Rahman et al/ 2020 [21]	Country: India Design: pre-post TM SS:10	Condition: Depression Sex (M/F): 10/- AA: 20-25 Duration: 4 wk Number: 4 × Outcome Measure: BDI Cupping points: NR	Applicator: NR -Physical examination and laboratory tests were made -The procedure was explained to the patient. After informed consent was obtained -Medical history was taken note of bleeding disorders and medications that may increase the risk of bleeding. -Vitals were monitored -Cups were applied on the head after making superficial incisions until the bleeding stopped on its own -Area was cleaned and bandaged.	None	Adverse: NR Wet cupping therapy was found to be significant and effective in managing cases of moderate depression ($p > 0.001$)
Noor et al/ 2021 [22]	Country: Pakistan Design: pre-post TM (single arm) SS:132	Condition: Depression Sex (M/F): 51/69 AA: 69 Duration: 12 wk Number: 6 × Outcome Measure: GDS Cupping points: C4, C5, C7, T1, T2 and T3 on neck and shoulder respectively	Applicator: Trained Researcher -Consent was obtained from the patients -The points were cleaned with alcohol and the sterilized disposable cup was placed on the points for manual vacuum (5 min). -The cuts were made with the help of a lancet and the cup was again placed on the same points as described above -The cups were removed (after 5-10 min) and then the area was cleaned and honey was applied, then sterilized gauze was placed for 12 to 24 hours.	None	Adverse: NR -The decrease in GDS scale between pre and post-intervention was statistically significant ($p < 0.001$). -The mean score of GDS before intervention: 8.95 ± 2.09, after 1 month: 6.05 ± 1.54 and after 3 months of continued: 4.63 ± 1.47

Study description

All 9 studies explored the effect of wet cupping on mental health, but for different conditions including metabolic syndrome [14], smoking addiction [15], posttraumatic stress [16], panic disorder [17], chronic medical disease [19], migraine [20], and depression [21,22]. In addition, healthy volunteers were studied [18]. Studies included a wide range of participants' ages (18–69 years), and both males ($n = 334$) and females ($n = 790$) were included in the studies. The frequency of intervention varied between 1 and 7 (times), and the duration of intervention was between 1 week and 60 weeks. The number of cupping points was between 1 and 5, and the most frequent cupping point was GV 14. In 2 studies, no information was given about cupping points [19,21].

Wet cupping procedure

All patients were exposed to wet cupping in the 1st session and the wet cupping procedure is explained to patients. The practitioners who performed the wet cupping were described in 4 studies as the doctor [14,19], an expert therapist [20], or a trained practitioner [22], while no information was given in the remaining studies. The sterilization procedure was applied in all 9 studies. It is seen that limited studies are stating that physical findings and examinations were made before the application [16,17,21]. As an intervention procedure, the 3 S technique was used in the 9 studies. Only 1 study gave information about the time in which the trophy was made. Those sessions were conducted on the 17th, 19th, and 21st of the lunar months [15]. Information about the positioning of the cup was given in only 2 studies [15,19].

Effect of the wet cupping

Only 3 studies reported that none of the participants complained of adverse events during or after the cupping therapy [18,19,20]. In all studies, wet cupping was reported as effective in reducing psychological symptoms. Wet cupping was reported in 4 studies to be significantly effective in the management of cases with a diagnosis of mental illness [16,17,21,22].

Discussion

In this systematic review, evidence from studies that surveyed the effects of wet cupping therapy on psychological symptoms was evaluated. Studies on the subject began to increase from 2014. In addition to modern medicine, there has been widespread use of wet cupping as an intervention in society. It is noteworthy that the places where studies have been carried out (using the keywords “Hijama,” and/or “wet cupping”) are mostly Muslim countries which are indicative of religious beliefs. To determine the reliability of wet cupping, it will be beneficial to conduct studies with high methodological quality around the world. The number of randomized controlled trials (RCTs) included in this review is insufficient and the sample sizes were small, and 2 of the 9 studies were case reports. These studies are not robust enough to determine whether wet cupping may benefit mental health treatment. The low

quality of RCTs' inadequate randomization and blinding affects the reliability of reported results of these studies.

All 9 studies explored the effect of wet cupping, but for different conditions. Few studies examined the effect of wet cupping on psychiatry diseases. In a study that assessed the current evidence (in systematic review) on cupping therapy for various conditions, it was reported that cupping has been applied in a variety of clinical areas, but there was no information about its use in the treatment of psychiatric disorders [11]. In essence, the effectiveness of wet cupping needs to be documented for psychiatry conditions. Both genders were represented across the 9 studies, and the age range was 18 to 69. The participants were mostly young and only 1 study participant was elderly. Contraindications of wet cupping according to age (below 2 years and above 60 years) have been reported in the literature [23,24]. Evidently there is a need for studies with a high level of evidence and long-term follow-ups. The frequency of intervention varied between 1 and 7 (times), and the duration of intervention varied between 1 and 60 weeks. There was no standard procedure for the number of times and duration of applications of wet cupping. This highlights the need for standard operational procedures to be determined to qualify wet cupping effectiveness in the treatment of a health condition, and in this case as a treatment for mental health treatment. The anatomical sites used for wet cupping differed over the 9 studies. Overall, the most preferred region for cupping (in those studies that reported this detail) was the back. Anatomical sites for practicing wet cupping differ from disease to disease. The safest and most suitable skin points are on the back. From a cosmetic point of view, this is advantageous because the back has a relatively large surface area to apply sucking cups, and it is a region distanced from critical structures. In an article, the regions used for psychiatric conditions are given; on the left/ right of the midline of the back, upper part of the head on the coronal suture, the spinous process of the 7th cervical vertebra and below region, the upper part of the head on the coronal suture, the behind both ears, and at a distance from jugular veins, over the medial aspect of the right scapula, in between 4th and 5th lumbar vertebrae, middle of the upper part of the vault of the skull, middle of the upper part of the vault of the skull to the far right and left of the region, at the back of the cranium, on both sides of the midline, on both sides of the neck behind and below both ears, and upper part of the forehead [3]. In all 9 studies, the wet cupping procedure was explained to patients. It has been reported that honey can sterilize the skin in one study [22]. It is reported in the literature that honey can be used as a disinfectant [25]. Only 2 studies provide information on posture [15,19]. During the wet cupping treatment, the posture of a patient should be comfortable, and fit the needs to access the treatment location [2,3,5]. Thus, future studies should report the specific posture(s) used for different treatment areas. It is noteworthy that few studies gave information about the practitioner. Characteristics of the practitioners providing cupping should be reported. A trained and certified therapist is necessary for ensuring the application of wet cupping safely and effectively [26,27]. There is only 1 study that gives information about the time of the month the wet cupping occurred [15]. In the Prophet Muhammad (PBUH) hadiths, wet cupping is recommended on days number 17th, 19th, 21st of the

lunar month, and the best days to perform cupping are on Monday, Tuesday, and Thursday [2,24]. To date, there is no study on the scientific impact of these days and dates in the application of wet cupping. This variable should be considered in future studies. In the 9 studies, there was no information about the diet before and after wet cupping therapy. In wet cupping therapy performed in Islamic regions, it is recommended that meat is not consumed for 48/72 hours before and after the procedure. Blood flow to the skin decreases with an increase in mesenteric arterial circulation after feeding. For this reason, fasting for at least 3-4 hours prior to the procedure is recommended [10,28].

In 6 of the 9 studies, adverse events related to wet cupping were not reported. The safety of wet cupping therapy is an important issue. The competence of the practitioner, patients' beliefs, expectations from the treatment, chronic diseases of patients (such as diabetes), use of pharmaceutical drugs (such as blood thinners), the type of procedure, and sterilization procedure before wet cupping treatment are factors that may affect the occurrence of side effects [4,5,27,28]. Reporting side effects as part of a standard operational procedure as well as the effectiveness of the intervention is essential. The quality of the studies in this review is poor and so the results reported may be false-positives. Based on the evidence reviewed it can not be determined whether wet cupping treatment for mental health is effective. In the future, it would be advisable for researchers to follow the reporting interventions in clinical trials of cupping (STRICTOC) guidelines when designing clinical trials to study wet cupping [26].

Conclusion

Wet cupping appears to be effective in managing cases of mental health. However, there are no specific criteria for standardized wet cupping treatment. A precise reporting standard is necessary for high-quality clinical evidence of the effectiveness and safety of wet cupping. Further studies are needed.

Conflict of Interest

The author has no conflicts of interest to declare.

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None.

Ethical Statement

This research did not involve any human or animal experiments.

Data Availability

All relevant data are included in this manuscript.

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