

Evaluation of Patient Outcome, Satisfaction, and Attitudes towards Integrative Medicine Model in Saudi Arabia: A Pilot Study

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Authors' contributions

This work was carried out in collaboration between all authors. Authors MK and NAQ designed the study, performed the statistical analysis, wrote the protocol and first draft of the manuscript. Authors SMA and MK managed the analyses of the study. Authors MK, SMA and NAQ managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Background: In response to the wider use of traditional medicine especially wet cupping therapy (Hijamah) in Saudi Arabia, integrated cupping clinics were established as a model in two governmental hospitals in Jeddah and Medina. This study aimed at evaluating patients' outcome, satisfaction, and attitudes towards integrative cupping clinics.

Methods: A pilot survey study of patients treated in the two cupping integrative medicine clinics. A pre-structured questionnaire was used to measure the outcome of treatment by means of the Integrative Medicine Outcome Scale (IMOS), patients' satisfaction via the Integrative Medicine Patient Satisfaction Scale (IMPSS) and their attitudes towards the concept of integrated medicine (IM).

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Results: Of the 168 patients included, 17.7% reported complete recovery, 47% stated a major improvement and 26% expressed a slight to moderate improvement. Concerning patient satisfaction, 39% were very satisfied, and 49% were satisfied. About 65% reported collectively complete recovery and major improvement. However, 88% were very satisfied or satisfied significantly with the services ($p < 0.0001$). Patients strongly agreed that integrated cupping clinic satisfies patients' needs, it improves health care system and helps patients to avoid unqualified practitioners. However, they disagreed that the Ministry of Health (MOH) should provide only modern medicine or cupping can replace modern medicine.

Conclusion: Wet cupping model of integrative medicine clinics is a promising experience which needs to be replicated along with establishing similar clinics in other hospitals, and used as one of the healthcare transformation paradigms in Saudi Arabia.

Keywords: Integrative medicine; wet cupping; Hijamah; complementary medicine; traditional therapies; Saudi Arabia.

1. INTRODUCTION

Traditional and Complementary medicine (T&CM) is commonly used worldwide including Saudi Arabia [1-3]. Even with the availability of advanced modern medicines in Saudi Arabia, patients often seek for an alternative treatment which they cannot find in the modern medical system [4-6]. National prevalence survey of T&CM is yet to be conducted in Saudi Arabia. However, multiple regional surveys and narrative reviews showed that the prevalence of traditional medicine is ranging from 60-70% in Saudi Arabia [3]. As a response to the increased demand in Western societies, Integrative Medicine (IM) as a model is emerging as an ideal holistic approach to patient care [7-9]. Many research have reported different models of integration of T&CM into the mainstream modern medicine along with ten basic principles of healthcare integration including easy access to the healthcare services [7,10,11]. However, IM as a healthcare delivery system is facing many challenges including the diversity of T&CM therapies, questionable efficacy and effectiveness, and the different demands on specific therapies in various cultures and communities around the world. Therefore, researchers focused on the efficacy and effectiveness of isolated complementary therapies over the past few decades rather than facing the challenges in evaluating the model of IM itself. Furthermore many methodological challenges inherent in evaluating the complex IM models were discussed to propose new approaches to deal with those potential difficulties [12,13]. Understanding the cultural basis for integrating conventional and traditional medicine in healthcare may pave the way forward for better, successful models of integration [13].

The National Center for Complementary and Alternative Medicine (NCCAM) under the patronage of the Ministry of Health (MOH) was established in Saudi Arabia in year 2008, and was considered a national reference and absolute authority for all aspects of (T&CM). In Saudi Arabia, traditional medicine (TM) is mainly practiced by unlicensed traditional healers and used parallel to the conventional healthcare system [14]. The concept of IM is not advocated in the MOH. In the MOH, and as an important part of conducting clinical trials on the use of wet cupping in the management of nonspecific low back pain (NSLBP) [15], integrated cupping clinics were established in secondary care MOH hospitals. Consequently, cupping clinics were developed as a model of healthcare integration, one each in King Fahad General Hospital in Jeddah and King Fahad General Hospital in Medina in the Western region of Saudi Arabia. NSLBP to be managed with an approved protocol was the first chronic health condition to be treated in the integrated cupping clinics. To consolidate further the integrated cupping model, a referral system and multidisciplinary teams of conventional and complementary medicine physicians were also built. Most important component of integration was the relevant training through conducting a number of workshops for hospital teams. The team in each hospital consisted of four members; a consultant orthopedic surgeon, two physicians trained as cupping providers, and one nurse. Despite the obstacles such as no formal recognition of cupping providers at that time, the study was successfully conducted in the year 2014. Notably, many regulatory decisions were made to facilitate the building of the IM model. The model was new for Saudi patients as they used to get traditional therapies like cupping therapy

from traditional healers even without informing their modern medicine physicians [4,5,16,17].

1.1 Aim of the Study

This study aimed at evaluating patient's satisfaction, self-reported outcome, and attitudes towards the concept of integrative medicine and targeted only those patients who attended the integrated cupping clinics in two specified public hospitals. Also, to evaluate the feasibility of using one-dimensional outcome and satisfaction scales.

2. METHODS

2.1 Study Design

This is a cross-sectional analytic study concerning patients who attended the two integrative medicine clinics in the year 2014.

2.2 Settings

This study was conducted at two out-patient integrative cupping clinics established in two secondary healthcare hospitals including King Fahad Hospital in Jeddah city and King Fahad Hospital Medina city in the Western region of Saudi Arabia.

2.3 Sample Selection

All patients treated in the clinics over a period of one year were included in this study. The selection of the sample (n=168) was through the convenient sample technique.

2.4 Procedure

A face-to-face interview was conducted with the patients by the trained attending nurse using pre-structured questionnaire. For this purpose, the assigned nurse approached the individual patients who received the consultation in the integrated wet cupping clinics. The nurse clarified any question or concern about the study raised by any patient who agreed voluntarily to participate in this research. The service was not only for the cupping therapy but also the orthopedic consultation and referral system. The entire interview took about 15 to 20 minutes. Notably the nurse who conducted the interview was not involved in the integrated model.

2.5 The Instrument

This is a pre-designed questionnaire that contained four parts. The first component included personal sociodemographic information.

The second part tends to measure the overall outcome of patients after using the integrative medicine services. The outcome was measured using the Integrative Medicine Outcome Scale (IMOS) [18]. The outcome scale is divided into; complete recovery, major recovery, slight-moderate recovery, and no change or deterioration. The third part aims to measure patient satisfaction using the Integrative Medicine Patient Satisfaction Scale (IMPSS) [19]. Satisfaction scale is divided into five categories; very satisfied, satisfied, neutral, dissatisfied and very dissatisfied. The fourth part included five-point Likert scale questions regarding patient attitudes towards the concept of integrated cupping clinics in public hospitals. Both the scales have been used reliably with good validity in research [18,19].

2.6 Ethical Consideration

The study was approved by the Ethical committee of NCCAM. Participants were informed about the objectives of this research by the assigned, trained nurses in two clinics. In addition, they were told that their anonymized data will be used only for the research purpose and its confidentiality will be maintained. In addition, personal identification information was not recorded. The participant can withdraw from this study without affecting the followup treatment. Written informed consent was taken from all participants prior to face-to-face interview. Furthermore, this study did not involve any risk to the participants.

2.7 Data Management and Statistical Analysis

Data were analyzed using Statistical Package for the Social Sciences (SPSS) version 20. Data were presented as absolute numbers and proportions. Responses to Likert scales were presented as proportions and means. To present the responses to the five-point Likert scale as means, numbers from one to five were assigned to the 5-point Likert scale [20]. Chi-square and t-test were used to see the significant associations and differences concerning categorical and quantitative data, respectively. A p-value of ≤ 0.05 was considered significant.

3. RESULTS

3.1 Sociodemographic Characteristics

Of the 168 participants, 71.2% were Saudi participants and 28.8% were non-Saudi having

different nationalities. Females constituted 51.3%. Mean age was 36.5±9.3 years and no other related variables were considered in this study.

3.2 Outcome

Out of 182, 168 patients answered the questionnaire. Concerning Integrative Medicine Outcome Scale; 17.7% reported a complete recovery, 47% reported a major improvement and 26% reported a slight to moderate improvement (Fig. 1).

3.3 Satisfaction

In response to the Integrative Medicine Patient Satisfaction Scale; 39.2% were very satisfied, and 49% were satisfied (Fig. 2). Comparing satisfaction with outcome, although 64.7% reported complete plus major improvement, 88% were collectively very satisfied and satisfied with the integrated medicine model (p<0.0001).

3.4 Participants' Attitudes

Patients agreed (agreed-strongly agreed) that integrated hijamah clinics satisfy patient needs

(38%-57%), improves healthcare system (44%-48%) and help patient to avoid unqualified practitioners (32%-59%). They disagreed (strongly disagree-disagree) that the Ministry of Health should provide only modern medicine (28%-54%) or that cupping can replace modern medicine (19%-53%) (Table 1).

4. DISCUSSION

The current study was a pilot study to evaluate the first integrated model of developing and implementing integrative care that combines mainly conventional medical treatment with complementary therapy in Ministry of Health hospitals in Saudi Arabia. However, the model involved not only the hospital IM clinic's setting but a wider concept of IM system that included a referral system, multidisciplinary teams, protocol development and supported by regulatory decisions making. These necessary steps were considered during the planning and development phases of the integrative initiative. Notably, the current study evaluated only the reflections of patients concerning the integration model using two simple reliable scales, which is highly recommended research activity across the board.

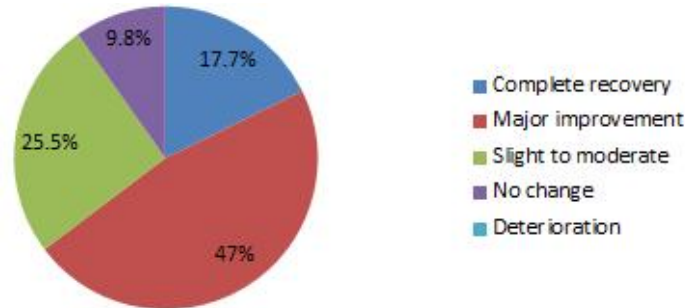


Fig. 1. Patients' outcome concerning integrative medicine

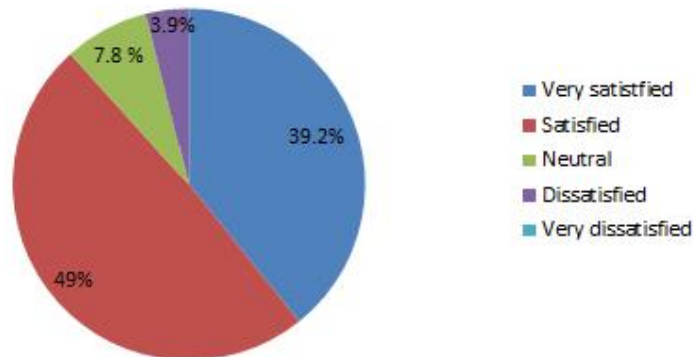


Fig. 2. Patient satisfaction concerning integrative medicine

Table 1. Patients attitudes towards integrative medicine in governmental hospitals

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	missing	Mean
Response to patient's need	2 (1.2)	1 (0.6)	3 (1.8)	64 (38.1)	96 (57.1)	2 (1.2)	4.51
Improves offered healthcare	3 (1.8)	2 (1.2)	6 (3.6)	74 (44.0)	81 (48.2)	2 (1.2)	4.37
Avoids dealing with unqualified traditional practitioners.	2 (1.2)	3 (1.8)	5 (3.0)	54 (32.1)	100 (59.5)	4 (2.4)	4.51
Cupplings is an alternative to modern medicine	33 (19.6)	89 (53.0)	27 (16.1)	11 (6.5)	7 (4.2)	1 (0.6)	2.22
We need research to prove its effectiveness	8 (4.8)	29 (17.2)	15 (8.9)	70 (41.7)	42 (25.0)	4 (2.4)	3.66
MOH should offer only modern medicine	47 (28)	92 (54.8)	10 (6.0)	10 (6.0)	8 (4.8)	1 (0.6)	2.04
Holistic care should include all useful services; modern, complementary or traditional	2 (1.2)	3 (1.8)	5 (3.0)	59 (35.1)	99 (58.9)	0 (0)	4.49
Patient choice should be respected even in traditional medicine	0 (0)	19 (11.3)	2 (1.2)	68 (40.5)	78 (46.4)	1 (0.6)	4.23
Only evidenced based traditional medicine should be integrated in public hospitals	8 (4.8)	13 (7.7)	14 (8.3)	55 (32.7)	78 (46.4)	0 (0)	4.08

There have been many studies about the wider use of traditional practices in Saudi Arabia, and the need to respond to this phenomenon in order not to marginalize the traditional healing practices [6,21,22]. There is also a further need to understand at length why patients are still going to traditional healers despite the availability of the modern medical institutes in Saudi Arabia [4,5]. However, several studies in the past have responded that the modern medicine is expensive, does not cure all diseases especially chronic conditions, access to the services very difficult, long waiting time, lack of holistic model, unsafe clinical profile, choices of natural medicinal products and most importantly cultural beliefs. [3,23,24] The integrative cupping model evaluated in the current study was an attempt to respond to patients' reasonable needs and combining evidence-based complementary medicine with the modern medicine in one setting considering integrated model.

Combining patients' outcome with their satisfaction is an essential paradigm in integrative medicine that blends both conventional and complementary medicine together to produce the best of each for combined, integrative therapy. However, measuring the outcome of integrative medicine should be broader and multi-dimensional [9,25].

Integrative medicine is usually used in chronic illnesses like cancer [8], where complete or major recovery is not expected. The current study showed that patient satisfaction was higher than the self-reported improvements. Published studies showed that patient high satisfaction rates observed were coincident [26] with less impressive changes on outcome score, suggesting that patients were significantly satisfied with offered healthcare. Nonetheless patients did not achieve complete physical recovery [27]. The holistic approach and longer consultation time, interalia, may be contributing factors to their greater satisfaction [28]. In the current study, the outcome and satisfaction were comparable to NSLBP patients who tend to achieve pain relief for a period and marked functional improvement, unlike cancer patients. According to the present study, based on a mean >4 as an indication for strong agreement, the participants' responses to the attitude statements (Table 1) were consistent and reflected not only positive attitudes but also high level of awareness about an ideal evidence-based model of IM. This was also found in countries with relatively similar cultures [29].

Saudi Arabia is witnessing a healthcare transformation as a part of the Saudi 2030 vision. The key aim of this transformation is to improve the quality of healthcare services and patient safety with the key aim of expanding privatization of governmental healthcare services [30]. However, health is not merely the absence of disease or infirmity but a state of complete physical, mental and social well-being. This definition of health cannot be achieved without focusing the patient as a whole, i.e., patient-centered, and make use of all appropriate and evidence-based therapeutic and lifestyle approaches, healthcare professionals and different disciplines to achieve optimal health and healing through an integrated healthcare system [31].

The current pilot study has some limitations. This research has relatively a small number of participants with nonrandom selection technique and the use of simple outcome and patient satisfaction scales. Another caveat is that the interviews took place in the health units, this might influence the answers. However, in light of illiteracy rate face to face interview is the ideal method to collect the data. Some investigators may recommend more complex outcome measures to compare physical and mental outcome in one combined scale [27]. However, the integrative medicine outcome scale used (IMOS) in the current study was comparable to the overall outcome score used in the clinical study [15], where we used disease's specific Oswestry Disability Questionnaire to evaluate the functional outcome of NSLBP patients treated in the integrated cupping clinic. Also, evaluating integrated models should include mixed methods of evaluation. Qualitative studies are fundamental especially in evaluating organizational and interprofessional collaboration [32]. The most critical challenge is to sustain this simple model by developing clinical guidelines to support clinicians to deal with difficult decisions and considerable uncertainty when treating patients and to inform them about safe and effective therapies [11]. Furthermore, future studies should replicate the model in additional hospitals and primary care settings. Complementary and traditional medicine therapies should be prioritized mainly based on their efficacy, cost-effectiveness, and safe side-effect profile to be assimilated into the integrated model. Advocacy among healthcare policy makers is a major factor in creating a supportive environment to assure the success and

sustainability of integrative medicine across Saudi Arabia.

5. CONCLUSION

In conclusion, this study found that most of the patients expressed higher satisfaction than the improvement or outcome and positive attitudes towards healthcare services provided by Integrative Medicine clinics newly established in two governmental hospitals. Though unidimensional outcome and satisfaction scales can be used effectively to give a quick evaluation of participants' satisfaction and outcome of integrated model services, the model of integrative medicine should be replicated in Saudi governmental hospitals using multidimensional outcome and satisfaction scales in order to provide a comprehensive scope of integrative medicine paradigm.

CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard, written approval of Ethics committee has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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