

Attitudes and practices of complementary and alternative medicine among patients attending primary care center in Saudi Arabia: A prospective cross-sectional study

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ABSTRACT

Introduction and objectives: Estimated complementary and alternative medicine (CAM) usage in Saudi Arabia is 70%. The Saudi Food and Drug Authority, National Center for Complementary and Alternative Medicine (NCCAM) regulates the license-based practices of various CAM modalities including procedures, herbs, and devices. As an aid to help primary care physicians for understanding CAM practices among general population, this study aimed to explore the prevalence of CAM along with its most common modality, and to understand attitude and practices among patients attending primary care center in Riyadh (Saudi Arabia). **Methods:** A prospective cross-sectional study was conducted among 403 literate patients aged more than 18 years, coming to the primary care center for regular check-up from 1st April 2019 to 1st April 2020 Saudi Arabia. Data was collected using self-administered questionnaire. **Results:** Around 44.5% participants had practiced one method of alternative medicine in their life. Majority of participants who attended primary care centers belonged to the age group of 18–39 years (71.1%). The most common used method of alternative medicine was honey healing. More than half of the study participants had heard about the CAM from their family and friends. Nearly 45.7% had stated that the CAM cannot be used without consulting a medical professional. Nearly 3/4th population used it for treating up to 3 ailments. **Conclusion:** Use of alternative medicine was found to be prevalent in Riyadh. Family and friends were recognized as gatekeepers for propagating information about CAM usage in the society. Primary healthcare physicians need to be trained on prevalent practices of CAM to understand the societal needs.

Keywords: Attitudes, complementary and alternative medicine, prevalence, primary health care physician, Saudi Arabia

Introduction

World Health Organization defines complementary and alternative medicine (CAM) as “practices of healthcare based on cultural beliefs and experiences that are not part of that country’s tradition or of conventional medicine, and are not fully incorporated into the current healthcare system.”^[1] Approximately 70%–80% of the population in developing countries use some form of CAM, accounting for International market of US\$

60 billion every year.^[2–4] Even in developed nations like USA and UK, about 40% of the population resort to some form of CAM.^[5–8] Prevalence of CAM is reported to be about 70% in Saudi Arabia with regional differences of 85%, 74%, and 63.3% in Riyadh, Qassim, and Majmaah, respectively.^[9–11] However, a latest study conducted among patients attending family medicine clinic in Riyadh reported its prevalence to be 59%.^[12]

The practice of CAM in Arab countries is prevalent for treating children, adolescents, and patients with specific medical conditions like liver problems, chronic illness, breast cancer, diabetes, etc.^[13–17] Other studies have found that middle aged, females, and low-income people often use herbs for self-medication.^[12]

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The National Center for Complementary and Alternative Medicine under the Saudi Arabia Ministry of Health regulates five licensed practices.^[13] These include cupping therapy, acupuncture, osteopathy, chiropractic, and naturopathy. The Saudi Food and Drug Authority regulates herbal medicine, food supplement products, and complementary medicine devices.^[14] Given that there are regulatory bodies for licensed practice of CAM in Saudi Arabia, it is certain that these treatments may have potential benefit for the patients. However, it is mandatory that these practices should be followed under the supervision of qualified medical practitioner of these therapies. For instance, looking at the benefits of CAM and its popularity, the Government of India deputed a qualified AYUSH doctor at every health facility, starting from primary health care center along with the allopathic health provider so that the benefits of CAM could reach the masses under supervision. This type of model is culturally acceptable to the society where CAM has deep roots and established benefits among the people. Second benefit is that it provides a window of opportunity to bring the patient to the hospital, though for CAM therapy. At any point of time, if the condition gets worsened of, the allopathic doctor can extend his services to save the patient. Third benefit is that the therapy is provided under the supervision of a qualified practitioner who is well trained on the indications and contraindications of the treatment, so the doctor can guide the patient according to the illness.

Thus, primary health care physicians must have an understanding about CAM practices among general public, to motivate the patients to utilize the facility of modern medicine, as needed. With this background, the current study was done to assess the prevalence, causes, attitude, and practices of CAM among patients attending the primary healthcare centers in Riyadh (Saudi Arabia).

Materials and Methods

This was a prospective cross-sectional conducted among patients attending primary health care center at Security Forces Hospital of Riyadh, Saudi Arabia from 1st April 2019 to 1st April 2020. Patients older than 18 years, visiting family medicine clinic, DCC, and specialized clinic in PCC constituted the study population. We excluded illiterate patients from this study as the data was collected using self-administered questionnaire.

The sample size was estimated to be 403 patients attending primary care center by using Rao software of sample size calculation. A self-administered questionnaire was used to collect data. The questionnaire was divided into three parts: 1-Items on demographics (age, gender, educational level, occupation, marital status, and income), 2-Items to assess the prevalence and pattern of use of CAM including health symptoms and reasons for using them and ways of acquiring information about CAM and 3-Items to assess the attitude toward CAM.

Statistical Software Package for the Social Sciences (SPSS) version 21.0 was used for data entry and analysis. Descriptive

analysis was done to present data as numbers and percentages for sociodemographic characteristics, prevalence of CAM, practices, and attitudes toward different CAM modalities.

This study was approved by the institutional review board (IRB) of Security Forces Hospital in Riyadh. Permission of Physician In-charge was taken prior to selecting the particular center for the study. Written informed patient consent was taken prior to questionnaire administration.

Results

Sociodemographic Characteristics

The total number of study participants was 403; 237 (59.7%) study participants were females. Around 71% (285) participants belonged to the age group of 18–39 years. Nearly 57% participants were married ($n = 230$). Around 49% of study participants were educated up to university level. A similar number of study participants was either a government employee (151, 38.0%) or jobless (149, 37.5%). Up to 40% participants were having salary less than 5000 SR [Table 1].

Prevalence of CAM ($N = 403$)

The prevalence of CAM was found to be 44.5% ($n = 179$). This is represented by the number of participants using at least one CAM modality as indicated in Figure 1. About one-fourth of the individuals had used at least two treatment modalities based on CAM [Figure 1].

Table 1: Sociodemographic characteristics of study participants

Sociodemographic characteristic	Number	Percent	
Age ($n=401$)*	18-39 years	285	71.1
	40-60 years	104	25.9
	> 60 years	12	3.0
Gender ($n=397$)*	Male	160	40.3
	Female	237	59.7
Marital Status ($n=400$)*	Married	230	57.5
	Single	147	36.8
	Divorced	12	3.0
	Widow/widower	11	2.8
Education level ($n=400$)*	Primary	18	4.5
	Secondary	28	7.0
	High School	141	35.3
	University	199	49.8
	Masters and PhD	14	3.5
Occupation ($n=397$)*	Government officer	151	38.0
	Nongovernment officer (institute or company)	27	6.8
	Businesses	4	1.0
	Student	66	16.6
Salary in SR ($n=359$)*	Jobless	149	37.5
	<5000	35.7	40.1
	5000-10000	34.0	38.2
	10000-20000	17.6	19.8
	>20000	1.7	1.9

Types of CAM used for different illnesses (N = 179)

Honey healing ($n = 110$, 61.5%) was most commonly practiced to treat health problem followed by use of vitamins and proteins ($n = 87$, 48.6%), bloodletting (hijama; $n = 61$, 34.1%), black cumin healing, and use of medicinal herbs ($n = 58$, 32.4%) [Figure 2]. The CAM was practiced most commonly to treat abdominal pain ($n = 104$, 58.1%) followed by diarrhea ($n = 62$, 34.6%) [Figure 3].

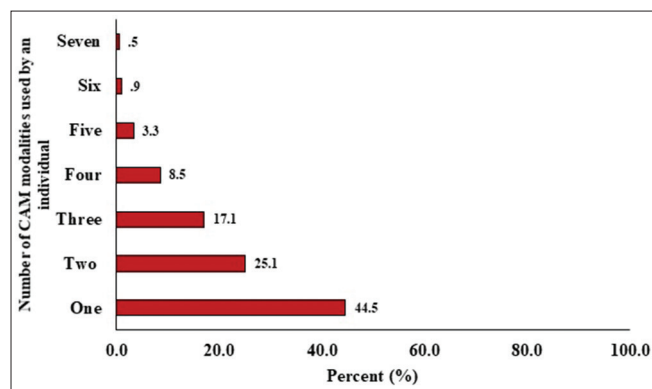


Figure 1: Number of CAM modalities used by the study participants (N = 403)

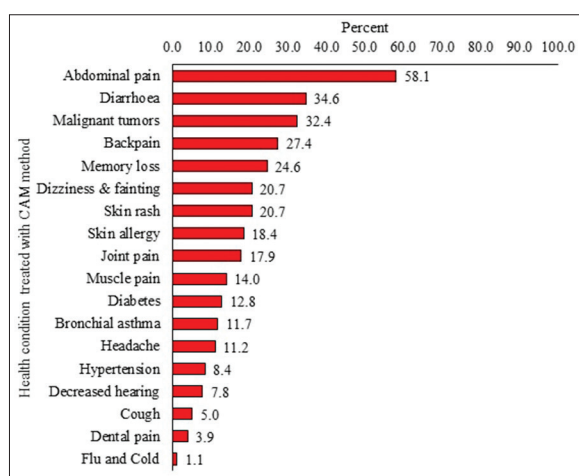


Figure 3: Illnesses treated by the use of alternative medicine among study population (N = 179)

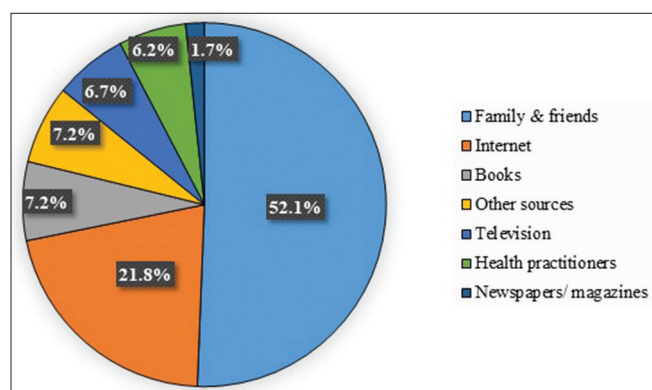


Figure 5: Sources of information regarding the alternative medicine among participants (N = 403)

Of the patients who had used CAM ever in life ($n = 179$), 74% reported to have used alternative medicine to treat up to three health conditions [Figure 4].

Source of information about CAM among participants (N = 403)

Nearly 52% of the study participants had heard about alternative medicine from their families and friends ($n = 210$) [Figure 5].

Majority of the participants had gained information on the same from single source (78.9%) [Figure 6].

Knowledge and beliefs of participants about CAM

Majority of the study participants believed that CAM should not be used without consulting the medical practitioner ($n = 169$, 45.7%), Also, they did not consider medicinal herbs to be more safer than

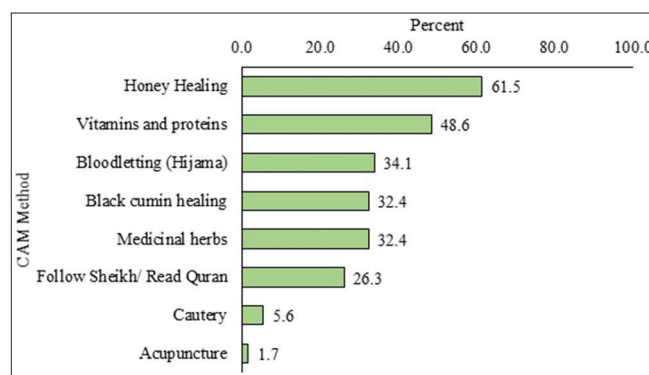


Figure 2: Methods of practicing alternative medicine among study population (N = 179)

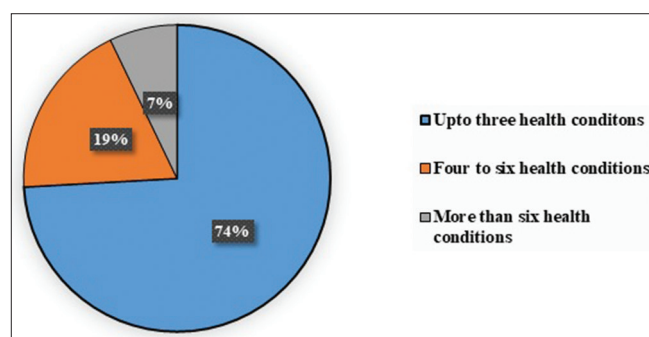


Figure 4: Number of health conditions treated by study participants using CAM (N = 179)

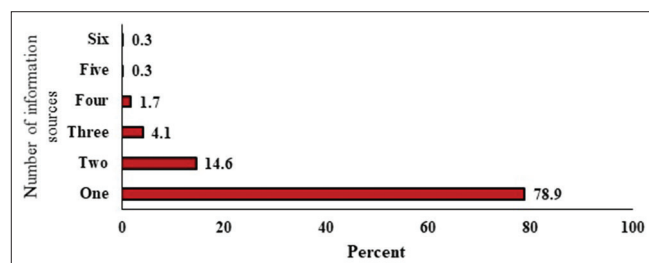


Figure 6: Number of sources of information about CAM for participants (N = 403)

conventional medicine ($n = 187$, 51.1%). Nearly 40% were not convinced about alternative medicine being better than traditional medicine based on personal or relatives' experience of using the same [Figure 7].

Discussion

In this prospective cross-sectional study, 44.5% ($n = 179$) participants had ever used the alternative medicine. Majority of study participants (71.1%) belonged to 18–39 years age group. The findings are similar to the studies conducted in Riyadh, where nearly 68% participants visiting the primary care center belonged to the age groups of 16 to 35 years.^[15,16]

The most common used method of alternative medicine was honey healing (61.5%) in our study. There are review articles which propagate about the benefits of using honey for medicinal purposes due to its antimicrobial properties.^[17] Similar results of practicing honey healing was reported among 56.6% diabetic patients to topically treat diabetic foot problems.^[18] The study conducted in a military hospital setting in Riyadh revealed that proportion of people using another method of alternative medicine, i.e., the visit to the Sheikh or Quran recitation, was almost similar to the findings of current study.^[19,20]

A tertiary care hospital study conducted among patients suffering from neurological disorders revealed that prevalence of practicing hijama (45.4%), herbs (42.3%), and skin cauterization (33.7%) was relatively higher as compared to the present study (hijama = 34.1%; herbs = 32.4%; skin cauterization = 5.6%).^[21-23] The reason for difference in prevalence could be related to the fact that the use of a certain kind of alternative medicine is dependent upon the type of ailment a person is suffering from.

The present study estimated that more than 50% of the study participants had heard about the CAM from their family and friends; similar to other studies.^[24,25] Learning the tales of curing an illness with CAM practices from family or friends can be a reinforcing factor in practicing CAM, as reflected in the present study (CAM usage backed by relatives' or friends' experience for 30.8% study participants).

However, the 2012 study had highlighted mass media to be the biggest source of information on CAM (46.5%), relatively

much higher than finding of the present study (television and newspapers collectively were source of information on CAM for nearly 8.4% participants).^[15] One of the reasons of this difference can be the extent to which the use of TV and newspapers was prevalent among the study participants of present study or less exposure to the channels and newspapers which shared such information.

Nearly 45.7% participants in the present study stated that the CAM cannot be used without consulting a medical professional. The findings get indirect leverage from evidence presented in a 2018 study of the same region, which states that around 76% individuals reportedly revealed that they did not trust the information broadcasted in the commercial channels about CAM.^[24] Our study reported that about 3/4th population use any CAM method for treating up to three ailments. However, the existing data could not present evidence on whether one or multiple CAM modalities were used for multiple illnesses. Further, the use of multiple methods of CAM in present study reflects the human behavior of delaying in seeking medical care by visiting a doctor. This delay can be attributed to the fact that information on many CAM modalities had been there for most of the individuals, as directly or indirectly shared by family members since their childhood. Also, the hearsay about side-effects of, say, the allopathic medicine may put a person in dilemma about the effectiveness of modern medicine. This can lead to nonadherence to the prescribed drug regimens. In order to avoid the patients landing up in a disease complication, the primary care centers can act as the portal to provide sound guidance to the patients on when it is beneficial to utilize the CAM, and the diseases where CAM can serve as an adjunct to the modern medicine. This could reduce the chances of patients denying the modern care at all because they are able to appreciate their doctor having the similar faith about the cultural practices. This in turn could increase the trust of patients in the primary care physicians.

The strength of study lies in the evidence it generated, i.e., the practice of CAM despite well-established modern healthcare delivery systems. This study can become basis for further qualitative studies with the individuals practicing CAM. This in turn should be backed by the scientific literature available about the mode of action of a particular CAM method (i.e., herbs, honey, etc.) on physical and psychological health. Such studies can also focus on the factors leading to “in-built” belief system about the use of CAM.

As already mentioned, gathering certain information like duration of illness for which a CAM modality was used, and types of CAM modalities used to treat a particular illness was beyond the scope of study. This limitation can be attributed to the choice of study setting and population. In a hospital, the patients already have to wait for their turn to see the doctor and they might as well be irritated, anxious, or depressed because of their illness. Thus, it became bit difficult to make them answer numerous questions. Methodologically, the study was restricted to literate population and missed gathering information on CAM use

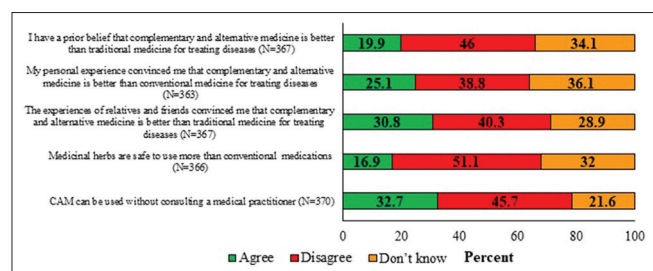


Figure 7: Study participants' attitude and beliefs toward CAM use

among the illiterate population because of mode of gathering data (self-administered questionnaire).

However, it helped controlling this confounding at the design stage of study. Also, it was difficult to obtain precise information on education status of patients via routine history taking at primary health care centers, making it difficult to account for proportion of literate versus illiterate population while calculating the sample size. This difference becomes important if we take into account the fact that it may affect the health literacy of an individual. Further, if the illiterate group were involved, the proportion of participants would reduce in various education categories as per the given sample size, increasing within group variability.

To conclude, CAM practice is prevalent in the Riyadh region. The perception about self-medication using CAM methods without consulting a health care professional is not favored by less than half the participants. Role of family and friends may be a potential factor favoring CAM practice throughout the generations.

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Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Key Findings:

1. CAM is a prevalent practice in Saudi Arabia
2. About 50% people were of the view that CAM should not be used without physician's prescription or consultation
3. Family and friends are the key stakeholders for transmitting knowledge about CAM in the society. Hence, they are important gate-keepers.

What this study adds?

1. This emphasizes upon the role of primary health care physician who is the first point of health system contact with the society.
2. Primary healthcare physicians should have knowledge about the prevalent CAM practices in his/her area. They should also be aware of the indications and contraindications of those practices in the absence of a qualified CAM physician.
3. They must try to gather relevant patient history on CAM use for rapport building as well as for guiding the patient for appropriate treatment modality (allopathic or CAM).

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Conflicts of interest

There are no conflicts of interest.

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