

PATTERNS OF COMPLEMENTARY MEDICINE PRACTICES AMONG ATTENDANTS OF PRIMARY HEALTH CARE CENTERS IN ABHA CITY

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DOI: 10.5455/ijmsph.2014.160720141

Received Date: 11.07.2014

Accepted Date: 16.07.2014

ABSTRACT

Background: Despite all the marvellous advancements in modern medicine, traditional medicine (TM) has always been practiced. More than 80% of the developing world's population still depends on the complementary and alternative systems of medicine (CAM).

Aims & Objectives: To assess proportion of CAM practices, distinguish types of CAM practiced, identify personal characteristics associated with practicing CAM and recognize satisfaction of attendants towards CAM outcome.

Materials and Methods: It was a cross-sectional analytic study including a representative sample of PHCC attendee in Abha, KSA. Following a simple random sampling technique, "Al-Manhal" PHCC was selected. Adult attendants of this PHCC constituted the study population. Based on thorough review of literature, a data collection questionnaire was developed in simple Arabic language. It comprises personal characteristics and details of CAM practice.

Results: The study included 400 participants. Their age ranged between 16 and 79 years with a mean of 38.1±12.4 years. Slightly more than half of them (50.5%) were females. Almost one-quarter of the participants (99; 24.8%) had a history of complementary and alternative medicine practice. Out of them, 53.5% visited faith healers. Almost half of participants (50.5%) treated with CAM were improved, 15.2% were deteriorated while 34.3% of them claimed that there was no change after CAM therapy for their disease status. In the multivariate analysis, older (>50 years), females, low educated, manual workers, housewives and unemployed participants were at higher probability of visiting traditional medicine (TM).

Conclusion: CAM therapies are practiced by a considerable proportion of patients in Abha city. Older, females, less educated patients as well as manual workers, house wives and unemployed participants utilized CAM more than other groups of patients. There is a need to implement an effective population-based educational program about this type of therapy.

Key Words: Complementary Medicine; Traditional Medicine; Alternative Medicine; Saudi Arabia

Introduction

For centuries, people have been using traditional means for treating ailments, and continued to use them alongside modern medicine. Despite all the marvellous advancements in modern medicine, traditional medicine (TM) has always been practiced. Traditional medicine refers to health practices, approaches, knowledge and beliefs incorporating plant-, animal- and mineral-based medicines, spiritual therapies, manual techniques and exercises, applied singly or in combination to treat, diagnose and prevent illnesses or maintain well-being.^[1]

This domain has taken the new name "complementary and alternative medicine" (CAM). CAM refers to those therapeutic and diagnostic disciplines that exist largely outside the institutions where conventional health care is provided.^[2]

TM/CAM constitutes any treatment or therapy that is not routinely and universally available to patients via the national health care system. These definitions are often blurred, and the list of what is considered to be CAM changes as therapies that are proven to be safe and effective are adopted into conventional medicine.^[3]

More than 80% of the developing world's population still depends on the complementary and alternative systems of medicine, while about half of the population in industrialized countries uses CAM.^[4] It has always been an 'invisible mainstream' within the health care delivery system.^[5] The World Health Organization noted that there has been an unprecedented increasing interest in these systems of therapeutics on a global level.^[6]

Most users of alternative medicine also use conventional medical treatments, since alternative medicine is used as a complementary treatment to conventional health care rather than as a substitute.^[7] The use of multiple forms of health care (e.g., traditional or complementary medicine beside that of the national health care system) is called "Medical pluralism". Most consumers all-over the world practices multiple forms of health care, irrespective of whether integration between forms of health care is officially present.^[8]

The reasons for medical pluralism were explained by Kale, who noted that traditional healers (THs) are very caring people, and extraordinarily skilled in communication, psychotherapy and counselling.^[9] In

spite of the fact that there are certain horrible ones who poison their patients at every turn, THs are usually respected within their own communities, and they are often their opinion leaders. Elgaili et al.^[11] added that THs are generally viewed by the public as problem-solvers of individual health and social problems, such as marriage and social conflicts. They are also perceived by visitors as community leaders with a range of abilities and skills.

A traditional healer (TH) is a person who claims certain ability or a healing power to cure ailments, or a particular skill to treat specific types of complaints or afflictions and who might have gained a reputation in his own community or elsewhere. He may base his/her powers or practice on religion, the supernatural, experience, apprenticeship or family heritage.^[12]

The wall between mainstream medicine and alternative medicine used to be impenetrable. The American Medical Association's Principles of Medical Ethics forbade physicians from collaborating with all varieties of alleged quacks, including chiropractors, and osteopaths. It aggressively worked to suppress such associations through its Committee on Quackery.^[12]

Reasons for this rejection include the characteristics of THs which include the lack of education, training, regulation and the evidence base for THs. Moreover, lack of accountability in the medical profession, both modern and complementary, continuously results in the increasing emergence of untrained quacks practicing medicine in different names.^[1]

This study aims to assess the patterns, magnitude, determinants and outcome of using CAM among attendants of primary health care centers.

Materials and Methods

This is a cross-sectional study conducted in the city of Abha, which is the capital of Aseer region in KSA. There are 301 primary health care centers (PHCCs) in Aseer region, which provide both preventive and curative services.^[13] Following a simple random sampling technique, the researcher selected "Al-Manhal" PHCC. All attendants of this PHCC constituted the study population. The minimum sample size for this study has been decided according to Swinscow^[14], as follows:

$$N = (Z^2 \times P \times Q) / D^2$$

Where, N: Calculated sample size; Z: The z-value for the selected level of confidence (1- α) = 1.96; P: Estimated

prevalence in the population = 50%, i.e., 0.5; Q: (1 - P) = 50%, i.e., 0.5; D: The maximum acceptable error = 0.05.

So, the calculated minimum sample size was:

$$N = [(1.96)^2 \times 0.5 \times 0.5] / (0.05)^2 = 384$$

Following a consecutive sample, the researcher interviewed 400 patients attending the Al-Manhal PHCC. Based on thorough review of literature, the researcher constructed a questionnaire in Arabic language. It comprised the following two parts: personal characteristics: Age, sex, residence, nationality, occupation, marital status, and education status and CAM practice: Going to a non-medical practitioner (traditional healer) for an advice about a health problem within the last year, reason for that, type of traditional healer provided prescription/advice, outcome, and personal satisfaction. The researcher conducted a pilot study on 40 subjects to test the wording, clarity and reliability of the questions. The results of this pilot study helped in rephrasing, adding or omitting some questions. The collected data within the pilot study were not included in the main study.

All potential participants were briefed by the interviewers as regard the objectives of this study. They were assured that no harm is ever expected to occur if they decide to participate in this study. They were also being assured about the anonymity and full confidentiality of their responses. Verbal consent to participate in the study was obtained from every participant.

Statistical Analysis

Statistical Package for Social Sciences (SPSS) software version 19.0 was used for data entry and analysis. Descriptive statistics (number, percentage for categorical variables and mean, standard deviation and range for continuous variables) and analytic statistics using Chi Square tests (χ^2) to test for the association and/or the difference between two categorical variables were applied. P-value equal or less than 0.05 was considered statistically significant.

Visiting traditional healers was treated as dependent variable in multivariate logistic regression analysis. Age, gender, nationality, marital status, educational level, occupation and tribe were treated as independent categorical variables. Multiple associations were evaluated in multiple logistic regression model based on the backward stepwise selection, where significant

variables from the univariate analysis were included. This procedure allowed the estimation of the strength of the association between each independent variable while taking into account the potential confounding effects of the other independent variables. The covariates were removed from the model if the likelihood ratio statistic based on the maximum likelihood estimates had a probability of > 0.10 . Each category of the predictor variables was contrasted with the initial (reference) category. The adjusted measure of association between predictor factors and visiting THs was expressed as the odds ratio (OR) with 95% Confidence Interval (95% CI). Adjusted or crude ORs with 95% CI that did not include 1.0 were considered significant.

Results

Table 1 presents the socio-demographic characteristics of PHCC attendee in Abha who participated in the study. Their age ranged between 16 and 79 years with a mean of 38.1 years and standard deviation of 12.4 years. Slightly more than half of them (50.5%) were females. The majority of them were Saudi (89.0%). Almost two-thirds of them (66.8%) were residing in rural areas. More than half of them (51.8%) were married. Approximately one third of the participants (34.5%) were secondary school graduate and another one-third (36.5%) were university graduate. More than half of them (51.3%) were professional workers e.g. teachers, engineers, nurses ...etc. while 13.5% and 15.3% were manual workers and house wives respectively. Tribes of Aseer (20%), Quahtani (17.3%), Shahrani (10.5%) and Shehri (9%) represent most of the participants.

As obvious from figure 1, almost one-quarter of the participants (99; 24.8%) had a history of complementary and alternative medicine practice. Out of them, 53.5% visited faith healers, 23.2% visited herbalist, 11.1% visited chiropractor and 11.1% visited osteopath. Acupunctures were visited by only 4% of them.

Figure 2 illustrates that most of PHCC attendees (74.8%) visited traditional healer for themselves only while 21.2% of them visited transitional healers for other relatives and 4% visited traditional healers for both themselves and other relatives. Forty-three patients (43.4%) of those visited traditional healer claimed that ineffective medical management was the reason while almost one-third of them (36.4%) mentioned that their visits were due to their strong belief in traditional healers and 20.2% were unsatisfied with physicians' advice.

Table-1: Socio-demographic characteristics of the participants (n=400)

Socio-Demographic Data		N	%
Age in years	≤30	113	28.3
	31-50	235	58.7
	>50	52	13
Gender	Male	198	49.5
	Female	202	50.5
Nationality	Saudi	356	89
	Non-Saudi	44	11
Residence	Urban	133	33.2
	Rural	267	66.8
Marital status	Single	95	23.8
	Married	207	51.8
	Divorced	42	10.5
	Widowed	56	14
Educational level	Illiterate	33	8.3
	Primary	37	9.2
	Intermediate	46	11.5
	Secondary	138	34.5
	University	146	36.5
	Professional	205	51.3
Occupation	Manual	54	13.5
	Student	33	8.3
	House wife	61	15.3
	Military	26	6.5
	Retired	11	2.8
	No	10	2.5

Table-2: factors associated with practicing complementary and alternative medicine (CAM) among PHCC attendee, Abha, KSA

	CAM practice		χ ² -value	p-value	
	Yes N (%)	No N (%)			
Age in years	≤30 (n=113)	20 (17.7)	93 (82.3)	6.97	0.031
	31-50 (n=235)	60 (25.5)	175 (74.5)		
	>50 (n=52)	19 (36.5)	33 (63.5)		
Gender	Male (n=198)	41 (20.7)	157 (79.3)	3.44	0.041
	Female (n=202)	58 (28.7)	144 (71.3)		
Nationality	Saudi (n=356)	99 (27.8)	257 (72.2)	16.26	<0.001
	Non-Saudi (n=44)	0 (0.0)	44 (100.0)		
Residence	Urban (n=133)	40 (30.1)	93 (69.9)	3.03	0.086
	Rural (n=267)	59 (22.1)	208 (77.9)		
Marital status	Single (n=95)	19 (20.0)	76 (80.0)	14.08	0.003
	Married (n=207)	42 (20.3)	165 (79.7)		
	Divorced (n=42)	15 (35.7)	27 (64.3)		
	Widowed (n=56)	23 (41.1)	33 (58.9)		
Educational level	Illiterate (n=33)	14 (42.4)	19 (57.6)	15.25	0.004
	Primary (n=37)	16 (43.2)	21 (56.8)		
	Intermediate (n=46)	11 (23.9)	35 (76.1)		
	Secondary (n=138)	29 (21.0)	109 (79.0)		
Occupation	University (n=146)	29 (19.9)	117 (80.1)	43.66	<0.001
	Professional (n=205)	33 (16.1)	172 (83.9)		
	Manual (n=54)	10 (18.5)	44 (81.5)		
	Student (n=33)	10 (30.3)	23 (69.7)		
	House wife (n=61)	26 (42.6)	35 (57.4)		
Tribe	Military (n=26)	12 (46.2)	14 (53.8)	8.34	0.214
	Retired (n=11)	8 (72.7)	3 (27.3)		
	No (n=10)	0 (0.0)	10 (100.0)		
	Shahrani (n=42)	8 (19.0)	34 (81.0)		
	Ahmari (n=30)	10 (33.3)	20 (66.7)		
	Shehri (n=36)	8 (22.2)	28 (77.8)		
	Asseri (n=80)	18 (22.5)	62 (77.5)		
	Quahtani (n=69)	21 (30.4)	48 (69.6)		
Asmari (n=21)	9 (42.9)	12 (57.1)			
Others (n=122)	25 (20.5)	97 (79.5)			

Table-3: Predictors for visiting traditional healers: Results of multivariate Logistic Regression Analyses

Variables	B	SE	Adjusted OR	95% CI
Age in years	≤30 (n=113)		1	
	31-50 (n=235)	0.029	0.477	1.03 0.4-2.6
	>50 (n=52)	-2.698	0.934	2.7 1.01-5.4*
Gender	Male †		1	
	Female	1.438	0.461	4.2 1.7-10.4*
Nationality	Saudi		1	
	Non-Saudi	1.374	5705.25	NA NA
Educational level	Illiterate (n=33)		1	
	Primary (n=37)	-2.241	0.938	0.12 0.02-0.7*
	Intermediate (n=46)	-2.108	0.881	0.12 0.02-0.7*
	Secondary (n=138)	-1.063	0.885	0.35 0.06-2.0
	University (n=146)	-2.372	0.965	0.09 0.01-0.6*
Occupation	Professional (n=205)		1	
	Manual (n=54)	1.347	0.609	3.8 1.2-12.7*
	Student (n=33)	0.247	0.684	1.3 0.3-4.9
	House wife (n=61)	2.598	0.616	13.4 4.0-44.9*
	Military (n=26)	0.984	0.77	2.7 0.6-12.1
	Retired (n=11)	-21.193	1.321	28.2 21.2-375.4*
No (n=10)	5.641	11253.6	NA NA	

SE: Standard Error; 95% CI: 95% Confidence interval

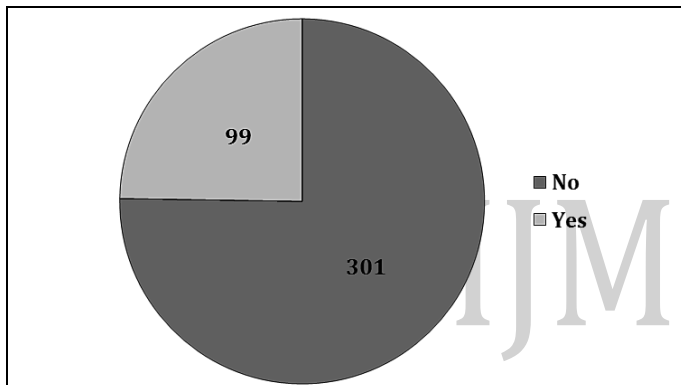


Figure-1: Proportion of complementary and alternative medicine practices among PHCC attendee, in Abha, Aseer Region, KSA

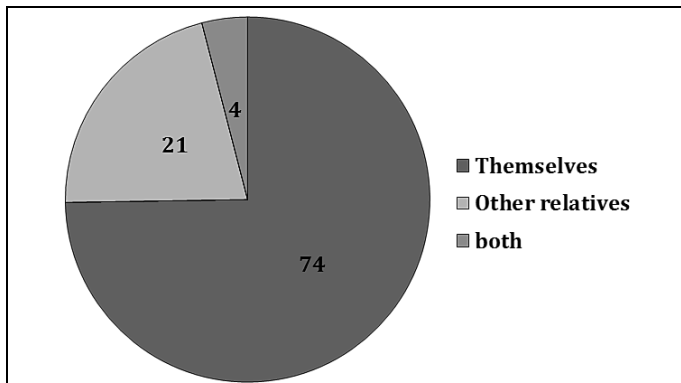


Figure-2: For whom PHCC attendee visited traditional healer?

Regarding the type of treatment received by traditional healers among PHCC attendee, Abha, KSA, 45.4% received medical treatment while 36.2% and 4% received zikr and advice respectively as displayed in figure 3. Approximately two-thirds (67.7%) of those asked the advice of traditional healers visited them more than three times. The duration of treatment advised by traditional healer was more than one month among

61.6% of PHCC attendee, Abha, KSA. Slightly more than one-third of patients visited traditional healers (37; 37.4%) reported that they received additional medical treatment accompanied with CAM and slightly more than half of them (19; 51.4%) were satisfied with that treatment.

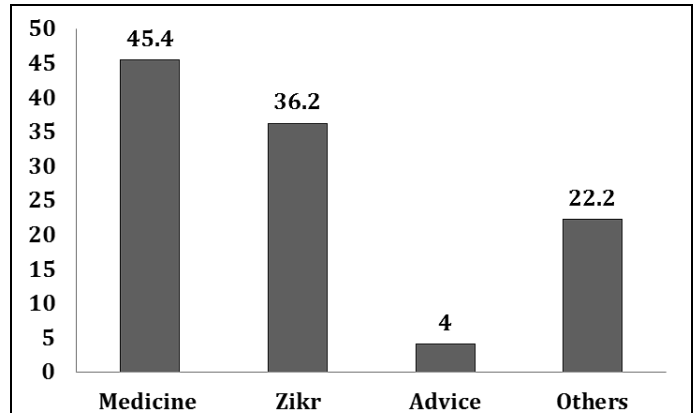


Figure-3: Type of treatment received by traditional healers among PHCC attendee, Abha, KSA (n=99)

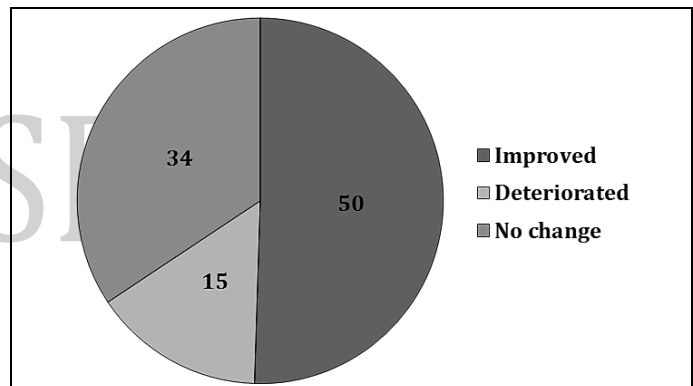


Figure-4: Outcome of complementary and alternative medical therapy among PHCC attendee, Abha, KSA (n=99)

Figure 4 demonstrates that almost half of patients treated with CAM were improved (50.5%), 15.2% were deteriorated while 34.3% of them claimed that there was no change after CAM therapy for their disease status. The cost of CAM was described as affordable by almost two-thirds (68.7%) of those practiced it. More than half (57.4%) of those visited THs were satisfied with CAM.

Factors associated with CAM Practice

As shown in table 2, More than one-third (36.5%) of patients aged more than 50 compared to only 17.7% of those aged 30 years or less practiced CAM. This difference was statistically significant (p=0.031). Table 2 demonstrates that 28.7% of female patients compared to 20.7% of male patients practiced CAM with statistically significant difference (p=0.041). More than one-quarter (27.8%) of Saudi patients compared to none of non-Saudi

patients practiced CAM. This difference was statistically significant ($p < 0.001$).

Table 2 shows that there was no significant association between patient's residence and practicing CAM, $p = 0.086$. As seen in the same table, widowed and divorced women were more practicing of CAM (40.1% and 35.7% of them respectively) than single and married women (20% and 20.3% of them respectively). This association between marital status and practicing CAM was statistically significant, $p = 0.003$. As clear from table 2, lower educated patients (illiterate or primary school graduated) were more practicing of CAM than higher educated patients as 42.2% of illiterate patients compared to 19.9% of university graduated patients were practicing CAM. This difference was statistically significant, $p = 0.004$.

Regarding occupation, 72.7% of retired patients, 46.2% of military patients and 42.6% of house wives compared to none of not working patients and 16.1% of professional patients were practicing CAM. This association between patient's occupation and CAM practice was statistically significant ($p < 0.001$). Regarding tribe, 42.9% of patients from tribe of Asmari and 30.4% from tribe of Quahtani compared to 19% from tribe of Shahrani practiced CAM. However, this difference was not statistically significant, $p = 0.214$.

Multivariate Logistic Regression Analysis of Predictors for Visiting Traditional Healers

In the multivariate analysis, older patients (>50 years) had significant higher probability of visiting THs as opposed to younger patients (≤ 30 years) (adjusted OR= 2.7; 95%CI= 1.01-5.4). Females had four-folded probability of visiting THs compared to males (adjusted OR= 4.2; 95%CI= 1.7-10.4). Regarding educational level, considering illiterate patients as reference category, higher educated patients had less probability of visiting THs. Considering professional patients as a reference category, manual workers had approximately four-folded probability of visiting THs (adjusted OR= 3.8; 95%CI= 1.2-12.7), house wives had 13 folded probability of visiting THs (adjusted OR= 13.4, 95%CI= 4.0-44.9) and those retired were at higher probability of visiting THs (adjusted OR=28.2, 95%CI=21.2-375.4). Nationality and marital status were removed from the final logistic regression model. (Table 3)

Discussion

The increasing trend of complementary and alternative medicine (CAM) use is likely to continue as physicians and patients search for new therapies to improve quality of life or identify alternative and less-toxic forms of therapy while remaining congruent with personal values and beliefs.^[15,16]

We found that women are more likely to use CAM than men. This finding was consistent with other local studies^[17] as well as internationally^[18-21]. More investigation is needed to identify the factors that lead to this observed difference.

In agreement with Al-Faris et al.^[17] this study showed more CAM use among older population. Although not significant in multivariate analysis, widowed and divorced women practiced CAM more than single and married women. This finding is in agreement with what has been reported by Foltz et al.^[19] and Peleg et al.^[18] This could be attributed to emotional instability of such group of patients.

The main reason for attending complementary medicine clinic among patients in our survey was ineffective medical management, strong belief in traditional healer and lack of satisfaction with physicians' advices. Moreover, in our study, a third of our study population who visited traditional healer had additional medical therapy. It is known, that only a minority of patients report CAM use to their physicians.^[20,21] Thus, there is an increasing need to improve efforts and communication between conventional physicians and complementary therapists.^[22]

Younis explained how people are totally convinced with their supernatural complaints.^[23] He stated that many people believe that from fire, the almighty Allah created the 'jinn' who invisibly live with and share human activities. Like jinn, the evil eye and magic have disastrous effects on human health and behaviour. The study of these forces has epidemiological, etiological, diagnostic, and psychotherapeutic and health promotion implications. To the FHs the possessed patients often report that they had perceived jinn entering their bodies and moving in different organs. This is followed by bizarre and odd movements that may imply psychotic and non-psychotic disorders.^[24] In Sudan, TM is closely related to religion and other powerful beliefs. Islamic mystics (Sufi) aimed to spread and strengthen the

principles of Islamic beliefs by advising Muslims to follow certain moral and psychological methods in simple ways, such as repeating the Lord's name (zikr) in combination with the five prescribed prayers. Followers visit the religious leader (sheikh), who becomes a FH, for the purpose of religious education, advice and treatment. The degree of influence of the FH depends on their religious morals and piety (wara'), asceticism (zuhd), miracle working (karamat) and spiritual power. They believe that the FH, whether dead or alive, is capable of rescuing them and pleading on their behalf for help and release from illness. Thus FHs, in the people's eyes, are true representatives of spiritual power and a source of good for the poor and downtrodden.^[14] In accordance with that, more than half of patients in the present study visited faith healers seeking for treatment and in more than one-third of them the treatment was zikr (supplication).

In the current study, almost one-quarter of the participants had experience of CAM either personal or in relatives. Half of them reported improvement after practicing CAM. In a study conducted by Kaleem U, et al, there was statistically significant difference between the levels of pain, well-being and range of motion for patients with anterior knee pain pre and post Cupping.^[25]

In the present study, almost two-thirds of the patients have mentioned that the cost of THs is affordable and more than half of them were satisfied with the outcome of CAM. In Zambia, Stekelenburg et al.^[26] reported that prolonged waiting time, for being clinically examined or operated upon, turned out to be an encouraging factor for going to THs. In the hospital, 48% of the respondents are not helped within time, while only 28% are not helped in time by the TH. Demon possession and infertility are typical health problems for which people visit a TH. The cost of treatment from a TH is affordable, but paid only if the patient is cured.

Eisenberg et al.^[27] stated that the majority of users of CAM do not discuss this therapy with their medical doctors. This suggests a deficiency in current patient-doctor relations. Perhaps this lack of communication derives from medical doctors' mistaken assumption that their patients do not routinely use CAM for serious medical problems. Perhaps medical doctors do not discuss the use of CAM because they lack adequate knowledge of these techniques. In either case, this failure to communicate is not in the best interest of the patients,

since the use of CAM, especially if it is totally unsupervised, may be harmful.

Although CAM is well known in the Islamic history, up to our knowledge, there is no medical school in the Islamic world that provides CAM courses whereas some US and Japanese medical schools provide courses related to CAM.^[28,29]

Some Arab countries have started the experience of integrating THs into their PHC system. For example, in Egypt and Sudan traditional birth attendants were trained and utilized in a family planning program. The same approach might be utilized to facilitate the role of THs in improving mental health services. An atmosphere of understanding, trust and respect should be created between modern health workers, THs and the communities they serve.^[14]

This study has two major limitations. It recruited patients from only one PHCC in Abha so study subjects may not represent the target population. In addition, because this was a cross-sectional survey, more attention should be paid to arriving at definitive conclusions regarding cause-and-effect relationships. Further studies with a prospective design may clarify this kind of temporal ambiguity between attitudes, beliefs, and practice of CAM variables.

Conclusion

CAM therapies are practiced by a considerable proportion of patients in Abha city. Older, females, less educated patients as well as manual workers, house wives and unemployed participants utilized CAM more than other groups of patients. There is a need to implement an effective population-based educational program about this type of therapy.

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Cite this article as: Al-Shehri IA. Patterns of complementary medicine practices among attendants of primary health care centers in Abha city. *Int J Med Sci Public Health* 2014;3:1272-1278.

Source of Support: Nil

Conflict of interest: None declared