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Prevalence, Types and Determinants of Complementary and Alternative Medications among Health Clinic Clients

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Abstract

Complementary and Alternative Medicine (CAM) covers a wide range of over 100 healing approaches, philosophies and therapeutic modalities that are not provided by conventional medicine. Complementary and Alternative Medicine (CAM) covers a wide range of healing approaches not provided by conventional medicine. Objectives: The study was aimed at identifying the prevalence , types and determinants of CAM use, sources of information about CAM that patients usually depend upon and reasons of using CAM,

Methods: : A cross-sectional survey was used to collect data from random consecutive patients attending two PHC centres out of ten which was selected randomly in Abha city. All the patients more than 18 years attended to the clinic during two months (March & April) /2014 was included in the study. Results: The present study included 504 patients attending the PHC centres. The mean age of the participants was 47.6 ± 10.2 years. 232(46.0%) were Males and 272(54.0%) were females. The majority of participants were Saudi ((88.7%)) and Muslims (96.4%). Most of the participants were Illiterate or school level (82.1%) and less than half of them (42.9%) had enough family income > 10,000 SR. About three fourths of the participants were born in city, most of them were non smokers (81.9%) and about one third of them had self-perceived stress level more than 5. About one third (36.9%) of participants reported using CAM during the 12 months preceded the study. About half of the participants used CAM due to the personal and family beliefs and because of friends advice (63.4% & 46.8%) respectively. More than half of CAM users used it regularly. 58.6% of CAM users Feeling physically & psychologically better after using it and most of them did not reported any side effects after using CAM. Conclusions: Use of CAM is prevalent among patients attending health clinics in Abha City. CAM is commonly used by all age groups. The significant factors found to increase the likelihood of CAM use were Saudi nationality, Illiterate and the place of birth, there were a statistical significant increase of using CAM among participants born in village. However, factors like age, gender, income, religion, smoking and perceived stress level did not prove to be statistically significant and thus did not affect CAM prevalence significantly. Most families has strong personal belief on CAM Because of the Belief that CAM builds up the body's own defenses and promotes self-healing and has less side effects.

Key words: Prevalence, Determinants, Complementary, Alternative Medications, Clients

1. Introduction

Alternative medicine is increasing interest and acceptance among the general population. Although usage is thought to be widespread among patients, little studies have been done. Complementary and alternative medications (CAMs) have been broadly defined by the World Health Organization to include a wide range of medications, beliefs, techniques and exercises that have the potential to improve general health status. This definition highlights the importance of CAMs as a multi treatment approach to prevent illness and maintain well-being, rather than to treat or cure illness (1). Complementary and alternative medicine (CAM) is also defined as medical practices infrequently taught in medical schools nor widely available in hospitals, the latter being defined as "allopathic medicine" (2). According to the National Center for Complementary and Alternative Medicine (NCCAM), CAM can be described using broad categories: that is, natural products, mind body practices, manipulative and body-based practices, and other approaches (3). Alternative medicine is any practice that is put forward as having the healing effects of medicine but is not based on evidence gathered using the scientific method. It consists of a wide range of health care practices, products and therapies,(4) using alternative medical diagnoses and treatments which typically have not been included in the degree courses of established medical schools or used in conventional medicine. Examples of alternative medicine include homeopathy, naturopathy, chiropractic, and acupuncture. Complementary medicine is alternative medicine used together with conventional medical treatment in a belief, not proven by using scientific methods, that it "complements" the treatment. CAM is the abbreviation for Complementary and alternative medicine. Integrative medicine (or integrative health) is the combination of the practices and methods of alternative medicine with conventional medicine (5).

Over time, CAM practices may become accepted and integrated into allopathic medicine. Complementary and Alternative Medicine (CAM) has been around for hundreds of years and includes different approaches and techniques for treating the whole person. It is meant to be used as well as and not instead of modern medicine (6). It is based on the belief that a alternative care provider has to treat the whole person body, mind, and spirit (7, 8) .While Traditional medicine (TM) refers to the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, used in the maintenance of health and in the prevention, diagnosis, improvement or treatment of physical and mental illness. It is "a system in which medical doctors and other healthcare professionals (such as nurses, pharmacists, and therapists) treat symptoms and diseases using drugs, radiation, or surgery (9). The techniques used in alternative medicine are mostly less invasive than traditional medical practices meaning that they do not rely on surgery or conventional medications. The frequency of utilization of alternative medicine is increasing worldwide, and is well documented in both African and global populations to be between 20 – 80% (10,11). It has become more widely used, socially and politically accepted all over the world (4Several reasons have been given by researchers for the increased prevalence of alternative medicine utilization. These include failure of modern medicine to cure the underlying problems (12), and the perception that alternative medicines is cheaper than conventional medicines (13).Some other attractions to alternative therapies may be related to the power of the underlying philosophies they share, which involve closeness to nature, spirituality, and the fact that these therapies often go along with the cultural beliefs of the people. People often turns to alternative medicine when they have a long-lasting problem that conventional medicine has not completely cured e.g. patients with chronic condition as joint pain, cancer, depression, gastrointestinal and liver disorders, skin problems and "allergic" or "autoimmune diseases . Other people may also use alternative medicine when they're not sick; as they believe that alternative medicine techniques such as yoga can improve overall well being, and prevent illness or to ensure a healthier lifestyle (14).

The known determinants of alternative medicine use include socio-demographic and patient characteristics. Data on the influence of the sociodemographic factors on the use of alternative medicine are inconsistent and contradictory (15) .Many studies have found that education, income, and female gender are associated with increased alternative medicine use. It was reported that alternative medicine users tend to be women, middle-aged or have more education. Also, they were more likely to be in perceived poor health, and suffer from one or more chronic conditions, (16,17) especially mental, musculoskeletal and metabolic disorders. Understanding the types of alternative medicine therapies most frequently used and the patient socio demographic factors associated with alternative medicine use can help health care providers to address patients' needs more effectively, to achieve better adherence to treatment recommendations and to prevent harmful effects of alternative medicine use over time. The objectives of the current study were to determine the prevalence, types and predictors of Complementary & alternative medicine use among health clinic clients.

2- Study design and setting:

A cross-sectional survey was used to collect data from random consecutive patients attending two PHC centres out of ten which was selected randomly in Abha city. All the patients more than 18 years attended to the clinic during two months (March & April) /2014 were included in the study. A full explanation of the study was provided with the questionnaires given to each participant prior to their recruitment, explaining the purpose of this study. Participants were assured that all of their personal information was confidential.

The Sample size was determined by the formulae: $n = \frac{z\ 2\ x\ p\ x\ q}{d2}$

Where *n*: the minimum sample size, *Z* = constant (1.96) and *p* is the prevalence of CAM use assumed to be 0.55% on the basis of a previous study done in Riyadh, Saudi Arabia (18) and $q = (1-p)$ =0.45. Hence, the primary sample size was 381 subjects. The expected response rate is estimated to be 80%. Actual sample size = 381 *x* 100/80 =477. The sample size was increased to 504 during the fieldwork.

The study protocol was approved by the ethical committee in the College of Medicine, King Khalid University. Data were collected by face to face interview using a validated, constructed, anonymous, confidential questionnaire that include Socio-demographic including age, gender, religion, , nationality, educational level, monthly income, etc. Types and reasons for use of complementary and alternative medicine is also included in the questionnaire. Verbal consent was taken from the participants who accepted to participate in the study. Privacy was secured through enveloped questionnaires and responses.

Data were coded, validated, and analyzed using SPSS software package version 20. Both descriptive and analytic statistics were done. Univariate analysis methods were used at 5% level of significance. Binary logistic regression analysis was performed to identify potential risk factors for CAM use among participants including age, gender, nationality, religion, place of birth, and smoking.

3- Results:

The present study included 504 patients attending the PHC centres whom age was more than 18 years. Sociodemographic characteristics of the sample are summarized in Table 1. The mean age of the participants

was 47.6 ± 10.2 years. 232(46.0%) were Males and 272(54.0%) were females. The majority of participants were Saudi ((88.7%)) and Muslims (96.4%). Most of the participants were Illiterate or school level (82.1%) and less than half of them (42.9%) had enough family income > 10,000 SR. About three fourths of the participants were born in city, most of them were non smokers (81.9%) and about one third of them had self-perceived stress level more than 5. Table-I, also reveals that Saudi participants had a significantly higher prevalence of using CAM compared to Non Saudi ($p < 0.001$). The prevalence of use was also increased among Illiterate or school level compared to University or higher level of education (OR= 3.081 (2.004 4.739)). As regard to the place of birth, there were a statistical significant difference of using CAM among participants born in city or village (p= 0.037). On the other hand, there is no statistical significant difference between participants as regard age, gender, religion, monthly income, smoking and self-perceived stress level and use of CAM.

Figure 1 shows that diabetes mellitus was the most common comorbid condition among the participants (34.3%). This is

followed by hypertension (21.6%), neurological disorders (15.9%) and cardiovascular disorders (10.9%).

As shown in figure 2, more than one third (36.9%) of participants reported using CAM during the 12 months preceded the study.

Table 1 Demographic, lifestyle -related characteristics of users and non-users of CAM.

Variable	Users of CAM (n=186)	Non-users of CAM (n=318)	Overall (n=504)	P. Value	*OR (95%CI)*
Age: < 40 years > 40 years	 82 (44.1%) 104(55.9%)	 138 (43.4%) 180 (56.6%)	 220 (43.7%) 284 (56.3%)	0.767	0.96 (0.54-1.68)
Gender: Male Female	 81(43.5%) 105(56.5%)	 151(47.5%) 167(52.5%)	 232(46.0%) 272(54.0%)	0.061	1.84 (1.16-2.90)
Nationality: Saudi Non Saudi	 158(84.9%) 28 (15.1%)	 289 (90.9%) 29 (9.1%)	 447 (88.7%) 57 (11.3%)	< 0.001	1.540 (1.040 2.278)
Religion Muslim Non Muslim	 177 (95.2%) 9 (4.8%)	 309 (97.2%) 9 (2.8%)	 486 (96.4%) 18 (3.6%)	0.520	2.1(1.05-4.21)
Education level: Illiterate or school university or above	 146 (78.5%) 40 (21.5%)	 268 (84.3%) 50 (15.7%)	 414 (82.1%) 90 (17.9%)	0.001	3.081 (2.004 4.739)
Monthly family income (SR.) < 5,000 5,000 – 10,000 > 10,000	 37 (19.9%) 75 (40.3%) 39.8%)	 65 (20.4%) 111 (34.9) 142 (44.7%)	 102 (20.2%) 186 (36.9%) 216 (42.9%)	0.256	0.64 (0.42-0.98)
Place of birth: City Village	 137 (74.5%) 47 (25.5%)	 238 (74.8%) 80 (25.2%)	 375 (74.7%) 127 (25.3%)	0.037	1.84 (1.16-2.90)
Smoking: Yes No	 33 (17.7%) 153 (82.3%)	 58 (18.2%) 260 (81.8%)	 91 (18.1%) 413 (81.9%)	0.078	0.845 (0.514 1.389)
self-perceived stress level: ≤ 5 > 5	 124 (66.7%) 62 (33.3%)	 215 (67.6%) 103 (32.4%)	 339 (67.3%) 165 (32.7%)	0.186	0.93 (0.66-1.33)

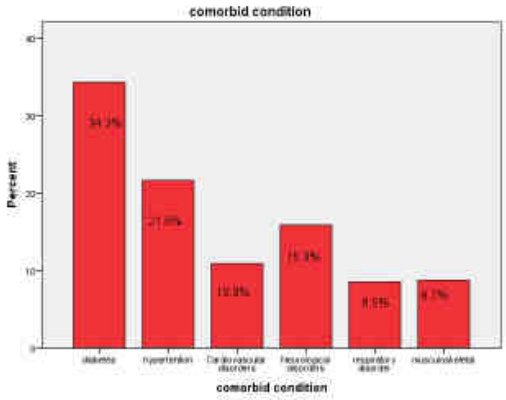

Figure 1: comorbid conditions among the attendants of the primary health care centers in Abha city

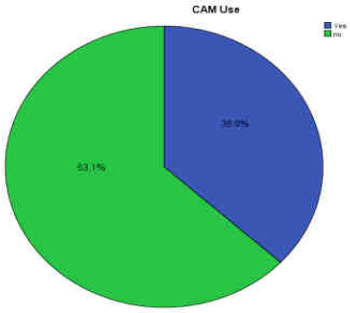

Figure 2: prevalence of using complementary and alternative medications among the participants

Table 2 shows that the most frequent Type of CAM modalities used was Vitamins and minerals (57.5%) followed by

Herbal therapies (54.8%), then Acupuncture & cupping (44.1%), then Aromatherapy (37.1%) and finally Chiropractic therapy (25.8%). As regard the reasons for CAM use, about two thirds (63.4%)use it as they believed that CAM builds up the body's own defenses and promotes self-healing while about half of them (52.2%) used it as it has less side effects. About half of the participants used CAM due to the personal and family beliefs and because of friends advice (63.4% & 46.8%) respectively. More than half of CAM users used it regularly. 58.6% of CAM users Feeling physically & psychologically better after using it and most of them did not reported any side effects after using CAM.

Table 2: Types and modes of CAM use among the attendants of the primary health care centers in Abha city

Variable	Frequency	%	
CAM use:			
Yes	186	36.9	
No	318	63.1	
Types of CAM modalities used:	107	57.5	
Vitamins and minerals	102	54.8	
Herbal therapies	82	44.1	
Acupuncture & cupping	69	37.1	
Aromatherapy	48	25.8	
Chiropractic			
Reasons for CAM use			
Belief that CAM builds up the body's own defenses and promotes self-healing	118	63.4	
less side effects	97	52.2	
Disappointment from			

conventional medicine	68	36.6	
How CAM was chosen Personal & family belief Friends Media (Internet, magazines, TV) Health practitioner Health food shop	 101 87 74 39 59	 54.3 46.8 39.8 20.9 31.7	
Frequency of CAM use Regularly (2 or more per week) Rarely	 99 87	 53.2 46.8	
Feeling after CAM use Feeling physically & psychologically better No change or worse	 109 77	 58.6 41.4	
Side effects from CAM use Yes No	 18 168	 9.7 90.3	

4-Discussion

This study investigated the prevalence, types and determinants of CAM use among patients attending the PHC centres in Abha city We found that 36.9% of patients used a form of CAM at least once as a treatment for their comorbidities which is similar to results from a recent survey carried out by AlGhamdi et al (19) in Saudi Arabia which revealed that the prevalence of CAM use was 40% and also another study in Jeddah (20) reported that the prevalence of CAM was 42%.

On the other hand, the prevalence of CAM use was higher in other studies in Saudi Arabia in Riyadh 2008, and 2012 (21, 22), the prevalence was 73% and 85% respectively and Al-Faris et al, 2008 in their household survey in Riyadh region, Saudi Arabia reported that 73% of the respondents used CAM before(23). as in these studies they include the prayer, spiritual and prophet medicine to the list of CAM, while in our study we did not include it. In contrast, the prevalence in our study seems higher than what has been reported by some other regional studies. For example, a study on diabetic patients in Jordan found a prevalence of 31.0%. [24] Two different studies concerning CAM use by cancer patients in Jordan and Turkey found a prevalence of 32.5% [25] and 31.1%, [26] respectively. Similarly, one study based in the United States, which looked at a similar population of interest, found a prevalence of 39.0%, which is considerably lower than the prevalence that we have found(27). Furthermore, in Denmark, a prospective observational cohort study reported a 31% prevalence of CAM use (28). Possible reasons for the discrepancy in prevalence estimates reported could be the heterogeneity of CAM practices, where there may be differences in what is defined as a CAM treatment and what types of CAM modalities are included in the studies. CAM seems to have wide acceptance in the Saudi population. This might be related to the strong religious views that many of the patients base their CAM use on, and also possibly the unawareness of the lack of scientific evidence and the potential for serious side effects and complications. The significant factors found to increase the likelihood of CAM use were Saudi nationality, Illiterate and the place of birth, there were a statistical significant increase of using CAM among participants born in village. However, factors like age, gender, income, religion, smoking and perceived stress level did not prove to be statistically significant and thus did not affect CAM prevalence significantly. These results of our study were in agree with the results of A study carried out in Riyadh 2015 (29) This is different from what has been reported in other studies. For example, Thomson et al. in a cross-sectional study showed that being female and being younger is a predictor for CAM use [30)

Comparing these factors to the US study, female gender is the only common significant factor in increasing the likelihood of CAM use. [27] In Turkish study shows that female sex, high income, and usage of multiple chemotherapy applications were determined as independent factors for CAM use (31). A study in Lebanon (32)showed that higher income was associated with lower use of CAM therapies. In previous studies of determinants of CAM use, household income was consistently positively correlated with CAM use [33,34,35]. This relationship between CAM use and a high income status in other studies could be attributed to the fact that couples of high income would be more likely to afford the cost of CAM[36].

Our study shows that the most frequent Type of CAM modalities used was Vitamins and minerals followed by Herbal therapies then Acupuncture & cupping , then Aromatherapy and finally Chiropractic therapy.

In a study in Saudi Arabia 2015(37) reported that Dietary supplements, mainly vitamins and minerals, were commonly used by Saudis. Dorsch and Bell (2005) in their review on use of dietary supplements by adolescents

(12–19 years), where usage ranged from 10–74% (38). Jan et al. (2009) in Saudi Arabia(39) found that The use of CAM by Saudi adolescents during their lifetime ranged from 1.6% for acupuncture to 58.6% for honey treatment. Spiritual therapy such as reading or hearing the voice of the Quran is commonly used by Muslim populations around the world for healing several chronic diseases and reducing stress. In many verses, the Quran focuses on the healing of disease (40).Personal and family members and friends were the main source of information on CAM for CAM users . This creates the need to educate the public, especially parents and peers, on the advantages and disadvantages of CAM. Media (Internet, magazines, TV) was the second source of information on CAM followed by health practitioner and health food shop these results were in agreement with Abdulrahman (37)who reported that Family members and friends were the main single source of CAM information and religious and herbal healers were the most visited by adolescents. Our study revealed that that the most frequent reasons for CAM use were Belief that CAM builds up the body's own defenses and promotes self-healing , had less side effects and Disappointment from conventional medicine . Abdulrahman et al (37) found that the most commonly cited reasons for use of dietary supplements by adolescents were: to maintain or improve health, to build muscle, to increase energy, to decrease or increase body weight. Faris et al, 2008(23) reported that The higher percentage of patientsagreed that CAM helps conventional medicine; it treated those diseases that were failed to be treated by conventional medicine and offer less waiting time and lower costs.. Lee et al, 2004 (41)found that patients may seek CAM treatment due to higher costs of conventional medicine and long waiting time to meet doctors. In our study, most of the CAM users reported no side effects however, Although CAM is perceived positively, several side-effects of this intervention have been reported, including death, anaphylaxis, renal failure, and malignancy. Adverse effects occur directly or from drug interaction (42). Our study showed that diabetes mellitus was the most common comorbid condition among the participants (34.3%). This is followed by hypertension (21.6%), neurological disorders (15.9%) and cardiovascular disorders (10.9%). Faisal etal 2012 found that Abdominal pain (48.9%) and common cold (48.9%) were the most commonly reported diseases for which CAM was used, followed by evil eye (27.6%). The patients also used CAM for treating diabetes in (6.5%), depression (5.01%) and tumours and malignancies 12 (3.0%) (43). CAM is used by the people in the management of chronic conditions that are costly to society, such as chronic pain and arthritis, and more life – threatening diseases, such as heart diseases and cancer(44). A study in Saudi Arabia revealed that Saudi adolescents used CAM for healing common health symptoms but not for chronic diseases(37). Information is the same for a house hold survey done in Riyadh by Al-Rowais et al, 2010.(45) Abdominal pain was followed by common cold; these are common conditions that people seek medical care for.

5- Conclusions: Use of CAM is prevalent among patients attending health clinics in Abha City. CAM is commonly used by all age groups. The significant factors found to increase the likelihood of CAM use were Saudi nationality, Illiterate and the place of birth, there were a statistical significant increase of using CAM among participants born in village. However, factors like age, gender, income, religion, smoking and perceived stress level did not prove to be statistically significant and thus did not affect CAM prevalence significantly. Most families has strong personal belief on CAM Because of the Belief that CAM builds up the body's own defenses and promotes self-healing and has less side effects.

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