

Complementary and alternative medicine use among people with multiple chronic conditions in Saudi Arabia

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Abstract

Background: There is a high prevalence of chronic disease in Saudi Arabia. In fact, it is a leading nation in the world when it comes to chronic diseases. Many people use complementary and alternative medicine (CAM) to treat various conditions in different regions of Saudi Arabia.

Material and Methods: An online survey was used for this cross-sectional study. The sample included 500 patients with chronic diseases in Saudi Arabia. Data were collected on participants' sociodemographic information, knowledge about CAM and their sources of that knowledge, and attitudes toward CAM practices.

Results: Of the participants, 83.8% were females and 16.2% were males. A majority (62.6%) had some knowledge about CAM, which they acquired from the Internet (24.8%) and family (20%). On the other hand, 37.4% lacked any knowledge of CAM. Hijama and herbal medicine are used equally (21.8%). Regarding participant satisfaction with CAM treatments, 271 reported feeling good, while 218 did not know.

Conclusion: The outcome of this cross-sectional study showed that 62.6% have knowledge of CAM and 76.6% use it, either alone or in combination with modern medicine. Our findings in this study may guide the direction of future research and have practical implications for family practitioners treating patients with chronic diseases.

Keywords: alternative medicine, complementary medicine, knowledge, attitude, chronic diseases, Saudi Arabia

Introduction

According to the Saudi ministry of health in 2013, screening of chronic diseases result was 14.8% and 11.7% for diabetic males and females respectively. About 17.8% and 12.5% for hypertensive males and females respectively. For hypercholesterolemia, 9.5% of males and 7.3% of females [1].

There is a high prevalence of chronic disease in Saudi Arabia, no wonder it is the leading nation in the world when it comes to chronic diseases [2]. Complementary and alternative medicine (CAM) is Group of different practices and tools that are not considered part of modern medicine used to treat some medical conditions [3]. CAM has become more well-known over the past few years [4, 5, 6]. The use of CAM has always been very common among some countries [7, 8, 9] such as China and other Asian countries including Saudi Arabia which there are at least half of people uses CAM [10].

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The most popular method use among Saudi population are 26.7% spiritual healers, 23.2%

Herbalists, 14.9% providers of honeybee products and 13% hijama (wet cupping) [11].

Despite all studies that discussed CAM, few studies discussed the association between CAM use and chronic diseases worldwide, and our study is one of them. In addition, our study discussed some aspects that do not exist in other studies such as the feeling of person when he uses CAM and attitude towards CAM.

In this study, we aim at measuring the prevalence of CAM use among patients with chronic diseases like: Diabetics, Hypertension, Hypercholesterolemia and Bronchial Asthma. In addition, we assessed the perception of CAM among these patients.

Objectives

- To estimate the prevalence of complementary and alternative medicine (CAM) users among patients with chronic diseases.
- To assess knowledge and experience on CAM.
- To know the source of information among the patients who use the CAM.

Methods

We carried out a cross-sectional study from March to May 2020 to identify the belief of the general population who

had a chronic disease (both sexes) in Saudi Arabia regarding the use of CAM. Ethical approval for this study was obtained from the College of Medicine, Qassim University. The calculation of the sample size was based on the assumption that respondents who have chronic disease among Saudi population will constitute $50\% \pm 5\%$ of the target population. Assuming a 95% confidence interval ($= 0.05$), we calculated a sample size of 380, which was increased to 500 to account for the design effect.

The questionnaire regarding belief about CAM in chronic patients was developed based on previous studies on the most common methods used as CAM in Saudi Arabia⁽²⁰⁾. Feedback from community leaders was also taken into consideration after piloting 30 questionnaires to assess the administrative and procedural logistics; the Google Form questionnaire was translated into Arabic and distributed through social media (WhatsApp, Twitter). The author also asked acquaintances to distribute the questionnaire among staff inside their workplaces. The questionnaire included sections on social-demographic information (age, sex, education, etc.). Data entry and analysis were carried out using SPSS (version 21). We used cross tabulation with Chi-squared test to detect statistically significant.

Results

The data comprised by 500 chronic diseases patients. As chronic disease patients, 313 (62.6%) of participants had knowledge about complementary and alternative medicine (CAM). The demographic characteristics of the participants such as age, gender, region, marital status, smoking, education level and type of chronic diseases are given in table (1), which shows the majority of the participants were females 419 (83.8%). 96 (19.2%), 372 (74.4%) have secondary and university education, respectively. In addition, 13 (2.6%) patients with HTN and DM, 4 (0.8%)

patients with HTN and OA, 3(0.6%) patients with DM and OA, 9 (1.8%) patients with DM and hypercholesteremia, 14 (2.8%) patients with hypercholesteremia and sinusitis, 10 (2%) patients with hypercholesteremia and OA, 21 (4.2%) patients with sinusitis and OA, 20 (4%) patients with HTN, DM and hypercholesteremia, 10 (2%) HTN and sinusitis, 14 (2.8%) patients asthma and sinusitis, 3 (0.6%) patients with HTN and hypercholesteremia, 5 (1%) patients with DM, hypercholesteremia and OA. 42 (8.4%) patients with DM alone, 41(8.2%) patients with hypercholesteremia alone, 28 (5.6%) patients with asthma alone, 89 (17.8%) patients with sinusitis alone. 64 (12.8) patients with OA alone, 41 (8.2%) patients with HTN alone, 69 (13.8%) patients with other chronic diseases. Knowledge and experience of CAM in patients with chronic diseases showed in table (2), internet was the resource for 124 (24.8%), while 100 (20%) had family as their resource, on the other hand 187 (37.4%) they lack knowledge of CAM. Around 170 (34%) of participants use CAM in combination with modern medicine while 330 (66%) use it alone. As expected, doctors suggested to using CAM therapy to 82 (16.4%). The vast majority of participants, 219 (43.8%) had been used it for less than 1 year, while 141 (28.2%) never used in their lifetime. In figure (1), 5.80% strongly disagree that treatment with CAM is safer than modern medicine while 39.60% don't know. In addition, 2.20% strongly disagree that CAM have less side effects than modern medicine while 39.60% don't know. Also, 3.60% strongly disagree that CAM can work only for the treatment of simple disorders while 33% don't know. As expected, 50% disagree that there is a no need for CAM therapy while 1.40% strongly agree. Also, 42.20% disagree that CAM therapy alone is good while 2% strongly agree. Lastly, 44.20% agree that integration of CAM therapy with modern medicine is good while 3.60% strongly disagree.

Table 1: Demographic data among study sample (N= 500)

		N (%)	Mean \pm SD	P value
Age	15-20	16 (3.2%)	3.76 \pm 1.14	<0.001
	21-30	53 (10.6%)		
	31-40	121(24.2%)		
	41-50	183 (36.6%)		
	51-60	101(20.2%)		
	>61	26 (5.2%)		
Gender	Male	81 (16.2%)	1.84 \pm 0.37	<0.001
	Female	419 (83.8%)		
Region	Central region	419 (83.8%)	1.50 \pm 1.20	<0.001
	Southern region	6 (1.2%)		
	Northern region	13 (2.6%)		
	Western region	30 (6%)		
	Eastern region	32 (6.4%)		
Marital statuses	Single	65 (13%)	1.95 \pm 0.51	<0.001
	Married	407 (81.4%)		
	Divorce	15 (3%)		
	Widowed	13 (2.6%)		
Smoking	Smoker	39 (7.8%)	1.92 \pm 0.27	<0.001
	Non-smoker	461 (92.2%)		
Education level	Illiterate	4 (.8%)	4.65 \pm 0.70	<0.001
	Primary	6 (1.2%)		
	Intermediate school	22 (4.4%)		
	Secondary	96 (19.2%)		
	University	372 (74.4%)		

Type of chronic disease	HTN	41 (8.2%)	6.97 ± 4.98	<0.001
	DM	42 (8.4%)		
	Hypercholesteremia	41 (8.2%)		
	Sinusitis	89 (17.8%)		
	OA	64 (12.8%)		
	Asthma	28 (5.6%)		
	HTN+DM	13 (2.6%)		
	HTN+OA	4 (0.8%)		
	HTN+ Hypercholesteremia	3 (0.6%)		
	HTN+ DM + Hypercholesteremia	20 (4%)		
	HTN + Sinusitis	10 (2%)		
	DM+OA	3 (0.6%)		
	DM+ Hypercholesteremia +OA	5 (1%)		
	DM+ Hypercholesteremia	9 (1.8%)		
	Hypercholesteremia + OA	10 (2%)		
	Sinusitis + OA	21 (4.2%)		
	Sinusitis + Hypercholesteremia	14 (2.8%)		
Asthma + Sinusitis	14 (2.8%)			
Other	69 (13.8%)			

Table 2: Knowledge and experience on complementary and alternative medicine (CAM) in patients with chronic diseases

		N (%)	Mean ± SD	P value
Sources of knowledge of CAM	Family	100 (20%)	4.09 ± 2.43	<0.001
	Book	54 (10.8%)		
	Internet	124 (24.8%)		
	Advisement	19 (3.8%)		
	Hospital	14 (2.8%)		
	Other	2 (.4%)		
	Non	187 (37.4%)		
Using CAM in combination with modern medicine	Yes	170 (34%)	1.66 ± 0.47	<0.001
	No	330 (66%)		
Doctor suggest to use CAM therapy	Yes	82 (16.4%)	1.84 ± 0.37	<0.001
	No	418 (83.6%)		
Frequency of usage of CAM	<1Y	219 (43.8%)	2.70 ± 1.74	<0.001
	1-2Y	54 (10.8%)		
	3-4Y	24 (4.8%)		
	>4Y	62 (12.4%)		
	Never used	141 (28.2%)		

Table 3: Association between gender and type of complementary and alternative medicine (CAM) and feeling about usage of CAM

	Gender		Feeling about usage of CAM		
	Male	Female	Good (3) *	Bad (1) *	Don't know (2) *
Acupuncture	3	17	13	1	6
Green tea	2	36	24	1	13
Herbal medicine	15	94	78	6	25
Hijama	18	91	79	2	28
Massage	2	1	3	0	0
Honey	8	71	56	1	22
Fruit juices	4	6	7	0	3
Camel milk	8	6	10	0	4
Other	0	1	1	0	0
Never use	21	96	0	0	117
P value Chi-square	(<0.001) Significant				
*indicates grade of feeling					

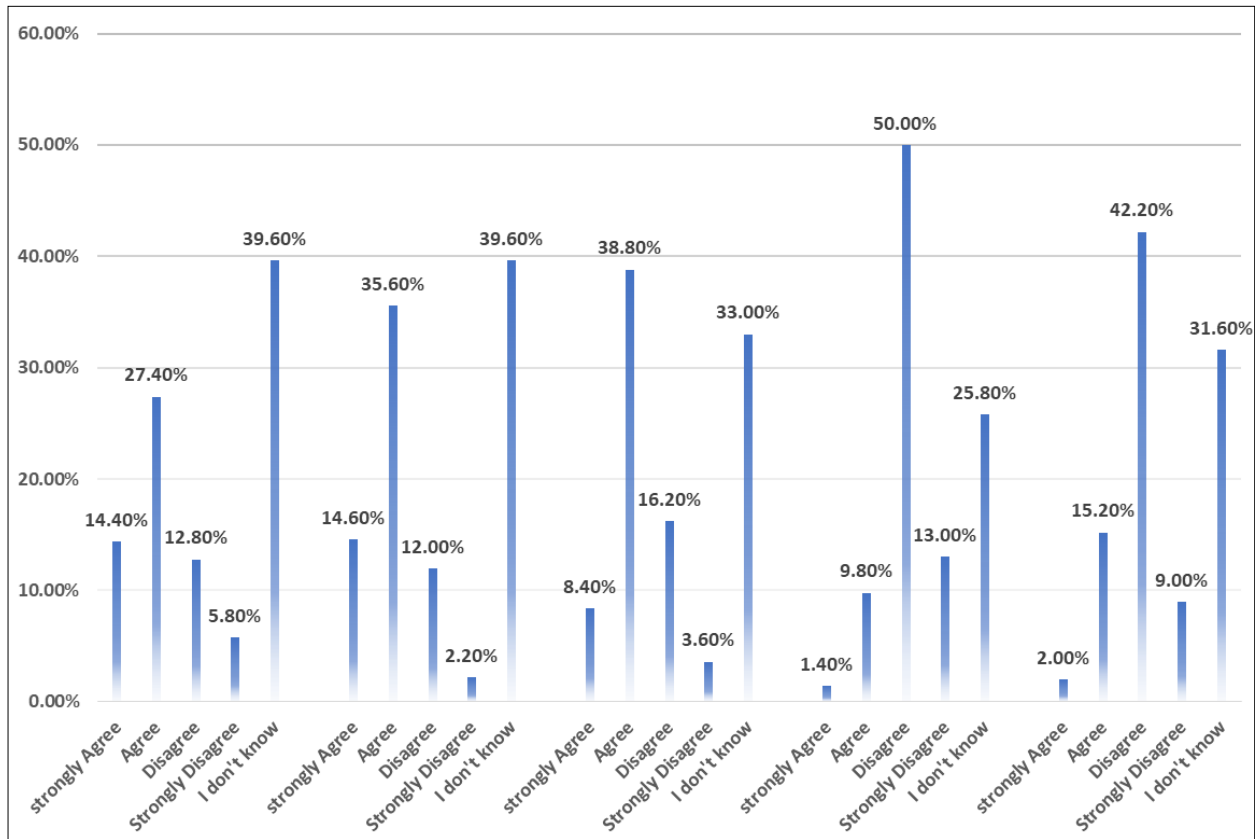


Fig 1: Attitude of chronic patients towards complementary and alternative medicine (CAM)

Discussion

We found that 62.6% have knowledge about CAM. This is lower than the reported prevalence rate of CAM knowledge among health professionals in the Riyadh region, Saudi Arabia; according to Albedah *et al.*, 88.9% of Riyadh health professionals have some knowledge about CAM [12]. According to a study conducted in the United states, in 2007, almost 4 out of 10 adults had used CAM therapy in the past 12 months [15]. The vast majority of our participants were females and this is similar to another study conducted in Qassim region [14].

The association between gender and type of CAM and feeling about use of it showed in table (3), and it was significant (P <0.05). Of the female participants, 94 uses herbal medication, while 18 male participants use Hijama. Our study is one of the few studies that discussed the feelings of using CAM and as expected, reported feeling good about their chosen treatment (s), while 218 do not know. Breaking these numbers down, 79 Hijama users feel good about it, 2 feel bad and 28 do not know. Similarly, 78 herbal medicine users feel good, 6 feel bad and 25 didn't know. On the other hand, 56 of honey users feel good, 1 feel bad and 22 didn't know. Only 24 green tea users feel good, 1 feel bad and 13 didn't know.

When it comes to association between type of chronic diseases and type of CAM; 4 patients with HTN and DM use Hijama, 2 patients with HTN and OA use acupuncture, 1 patient with DM and OA uses honey and another uses Hijama, 4 patients with hypercholesteremia and OA use acupuncture, 7 patients with sinusitis and OA use herbal medicine, 4 patients with HTN, DM and hypercholesteremia use Hijama, 3 patients with HTN and sinusitis use Hijama, 4 patients with sinusitis and hypercholesteremia use Hijama, 4 patients with asthma and sinusitis use honey, 2 patients with

HTN and hypercholesteremia use honey, 2 patients with DM, hypercholesteremia and OA uses herbal medicine, 3 patients with DM and hypercholesteremia use Hijama, 15 patients with only hypertension use Hijama, 10 patients with DM only use

Hijama, 14 patients with only hypercholesteremia use Hijama, 8 patients with only asthma use herbal medicine, 24 patients with sinusitis use herbal medicine, 14 with OA alone use Hijama and another 14 use herbal medicine and 22 patients with other chronic diseases use herbal medication. These findings can be compared to another study conducted in Britain showed that 11 arthritis patients use acupuncture, 14 patients with DM alone use traditional Chinese medicine. 21 patients with HTN alone use diet modification, 1 asthma patient use Yoga, 5 patients with hypercholesteremia alone use diet modification [13]. Other study conducted in Qassim region, 86% of the participants had used CAM. The Holy Quran was the most frequently used CAM (50.3%), then honey (40.1%), black seed (39.2%) and myrrh (35.4%) [14].

Limitation

Since the vast majority of the Saudi population have multiple chronic diseases instead of only one disease, categorizing chronic diseases was an obstacle. Also, despite that we distributed the online questionnaire equally between both genders in different platforms such as twitter and What's App, most of our participants were females.

Conclusion

The outcome of this cross-sectional study showed that 313 (62.6%) of patients with chronic diseases have knowledge of CAM and 383 (76.6%) use it, either use it alone or in combination with modern medicine.

Most of patients with chronic diseases use herbal medicine and hijama irrespective of the type of chronic disease(s) they have.

Our findings in this study may guide the direction of future research and have practical implications for family practitioners treating patients with chronic diseases.

Recommendation

- Establish a national research center for CAM.
- Encourage doing RCT on CAM.
- Increase the awareness of the population toward the side effects of CAM.

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