WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 12, Issue 19, 1149-1158. Research Article ISSN 2277–7105

KNOWLEDGE, ATTITUDE AND PRACTICE OF PRIMARY HEALTH CARE PHYSICIANS IN JAZAN PROVINCE ABOUT COMPLEMENTARY AND ALTERNATIVE MEDICINE

Dhaifallah Almalki*, Khalid Alamer, Mohammed Alghazwani, Muhannad Many, Yahya Ghazwani, Mosa Hakami, Khaled Awlaqi, Waleed Mahlawi, Mohammed Alqahtani, Ali Khardali, Abdulmajeed Mahlawi, Ahmed Drbsh, Amjad Dighriri, Awaji Bakkari, Ahmed Idris and Abdulaziz Moafa

Jazan Health Affairs, Ministry of Health, Saudi Arabia.

Article Received on
15 September 2023,

Revised on 05 Oct. 2023,
Accepted on 26 Oct. 2023

DOI: 10.20959/wjpr202319-30168

***Corresponding Author**
Dhaifallah Almalki
Jazan Health Affairs,
Ministry of Health, Saudi Arabia.

ABSTRACT

Background: Complementary and alternative medicine is defined as a group of health care systems, practices, and products that are not part of conventional medicine. It was found that the use of CAM is increasing among different population. Physicians are the personnel responsible for providing medical treatment and medical care for patients, so it is important to have knowledge about this strategy that people widely use. **Objectives**: The aim of this study was To assess knowledge, attitudes, and utilization of complementary and alternative medicine among PHC physicians in Jazan Region. **Methods:** This is cross sectional study which was conducted among 367 physicians of PHC centers in Jazan region. The study used a self-administrated questionnaire which involved for parts to investigate demographics of physicians, knowledge, attitude and practice. **Results**: The mean score of knowledge was 45.25±15.5, while that of attitude was 15.89±4.25 and CAM was used by 37.6% of physicians. The most familiar modalities of CAM were dietary supplements (27.8%), massage (22.1%) and relaxation (17.7%). Qualification was the factor that influenced both knowledge (P-value=0.04) and attitude (P-value=0.001). **Conclusion and Recommendation**: There were low knowledge and practice of CAM among physicians, however there was a positive attitude toward it. The most common modalities of CAM used were dietary supplements, massage and relaxation. The findings of this study is in accordance with that reported previously from different areas from Saudi Arabia which reflect the need for establishing training programs and encourage

physicians to attend them to increase their knowledge about CAM as this strategy is widely increased among public.

KEYWORD: Physician, Knowledge, Practices, Complementary, Alternative Medicine.

1. INTRODUCTION

Complementary and alternative medicine (CAM) refers to "a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine" as defined by the National Centre for Complementary and Alternative Medicine (NCCAM) in the USA.[1] The World health organization (WHO) estimated that 36% of adults use CAM and it rose to 60% when praying was involved.[2] It was found that 11.8% of children and 40% of adults in US in 2008 had used CAM therapies[3], while in 2008 in Saudi Arabia, it was found that there were 68% using CAM, and the number of patients seeking for CAM is increasing.[4] A close percent was reported from Australia, where 69% of population was found to use one or more forms of CAM.[5] Another study from Saudi Arabia[6], Showed that more than 70% of population in Riyadh were practicing activities related to prophetic medicine. Complementary and alternative medicine curriculum is widely incorporated as an elective or mandatory course in many universities around the world to teach students about CAM practice.[7,8] Health care workers may become the source of information for their patients about CAM, there is a wide variation in the level of knowledge, attitude and practice of physicians about CAM.[9]

A study from Riyadh demonstrated that 88.9% of physicians knew about CAM.[10] A study from Trinidad and Tobago showed that the knowledge about CAM was low among health care providers.[11] Also, other studies from industrialized and developing countries reported that knowledge was poor among health care providers.[12.13] The attitude toward CAM is influenced by several factors including; ready availability of CAM services, whereas there is lack in access to health care services.[14] and dissatisfaction with conventional care.[15] A study conducted on medical students in Saudi Arabia showed that 74% had positive attitude toward CAM to be integrated to provide better health care outcome.[16] A previous study from Riyadh showed that there was a positive attitude among physicians regarding CAM and more than half used it for themselves and their families.[17] Another study from Riyadh[10], showed that 80% of physicians were ready to talk about CAM with their patients. However, according to Canadian and US data base search physicians showed more negative attitude

toward CAM than other health care providers.[18] Regarding practice of CAM, it was found that pharmacy and medical students used herbal medicine the most.[19,20]

2. METHODS

2.1 Study design: This study was a cross-sectional study design.

2.2 Study area: Jazan Region stretches 300 km along the southern Red Sea coast, just north of Yemen. It covers an area of 11,671 km² and has a population of 1,365,110 at the 2010 census. The region has the highest population density in the Kingdom.

2.3 Study setting and target population

There are 443 primary health care physicians serving at 178 PHC centers in Jazan Region distributed within 14 governorates (Saudi Ministry of Health Statistical Yearbook, 2017).

2.4 Sample size and sampling technique

All health care providers within selected PHC center and satisfied the inclusion criteria was enrolled in the study. The sample size for the research include all PHC physicians who agreed to participate at the time of conducting the field study, after the exclusion of 20 PHC physicians who participate in the pilot study.

2.5 Data collection Tool: Based on relevant literature, a self-administered questionnaire was constructed by the researcher. It revised and validated by two experts of Family Medicine in Jazan College of Medicine. The questionnaire supposed to four parts, as follows.

1. Socio demographic and personal characteristics including age, gender, nationality, highest qualification, years of experience in PHC practice, and attending any workshops or training courses on CAM.
2. Two groups of questions to assess residents' knowledge about CAM. The first group of questions covers 16 modalities of CAM therapy while the second covers 9 CAM medicinal herbs.
3. eleven statements to identify residents' attitude toward CAM. Possible responses are "Agree"; "Uncertain"; or "Disagree".
4. Three Questions to explore residents' practices related to CAM. Responses were either "Yes"; or "No".

2.6 Scoring system and statistical analysis: Regarding knowledge part, the correct answer was assigned for 1, whereas the incorrect one was assigned for 0, the total of attained

knowledge scores was summed up for each physician and the percentage of the total was evaluated, those with knowledge grade above median were considered having sufficient knowledge, while those with knowledge score less than median were considered having insufficient knowledge. The scores for attitude were as follow; 2 for positive, 1 for in-between and 0 for negative, the total scores were calculated for each physicians and whose with score above the median were considered with positive attitude and the opposite was considered for negative attitude. Regarding practice questions, 1 was given for yes response and 0 for no response, the total scores were calculated and good practice was considered when the score was above the median, whereas poor practice was considered when the score was below the median. Data were manually collected in an excel sheet, then analyzed using the Statistical Package for the Social Sciences (SPSS version 22). Descriptive statistics including frequency and percentage were calculated for qualitative variables, whereas mean and standard deviation were used for quantitative variables. The appropriate tests of significance; chi Square was applied and Pvalues less than 0.05 was considered as statistically significant.

2.7 Ethical consideration: Approval was obtained in August 2017 from Research Ethic Committee of Jazan Health Affairs. Before start of the study, the researcher fulfilled all the necessary official approvals by the pertinent ethical committee. Potential participants were clearly and briefly informed about the objectives of this study. A covering page has been added to inform primary care physicians about the study and ask them to agree to participate. Participants were assured regarding the full confidentiality of any collected data.

3. RESULT

The present study included 367 physicians, most of them 222 (60.5%) were males, whereas there were 145 (39.5%) females. 258(70.3%) were nonSaudi, while 109 (29.7%) were Saudi. The range of physicians age was 25- 63 years old with a mean of 36.46 ±8.07 years and the experience duration of them ranged from 1 month to 30 years with a mean of 6.67±5.37 years. The majority of physicians 261 (71.1%) had MBBS, followed by those who had master 72(19.6%), doctorate and diploma 18(4.9%) and 15(4.1%) respectively, whereas only 1(0.3%) had fellowship. Regarding knowledge, the large majority of physicians 320(87.2%) reported that they didn't attend any lectures, workshops or received training in the use of CAM therapy, while 47(12.8%) only reported attending such lectures.

Table1 summarizes the CAM therapies familiar to physicians. The most unfamiliar modalities to physicians were aromatherapy 286(77.9%) and ozone 285(77.7%) while herbal medicine 121(33%) and dietary supplements 118(32.2%) were limited, other modalities were understood by physicians, but they felt uncomfortable about counseling them to patients, the most common including cauterization 76(20.7%), cupping 72(19.6%) and herbal medicine 68(18.5%), the most common modalities understood by physicians and they felt comfortable to counseling patients were dietary supplements 102(27.8%) and massage 81(22.1%).

Table1: knowledge about CAM modalities among Primary health care physicians in Jazan Province

CAM therapy	Unfamiliar		Limited		Feel uncomfortable		Feel comfortable	
	N	(%)	N	(%)	N	(%)	N	(%)
Acupuncture	192	52.3	101	27.5	33	9.0	33	9.0
Chiropractic	259	70.6	71	19.3	29	7.9	8	2.2
Massage	134	36.5	106	28.9	46	12.5	81	22.1
Homeopathy	273	74.4	53	14.4	22	6.0	19	5.2
Herbal medicine	134	36.5	121	33.0	68	18.5	44	12.0
Dietary supplements	95	25.9	118	32.2	52	14.2	102	27.8
Cupping	145	39.5	105	28.6	72	19.6	45	12.3
Cauterization	166	45.2	95	25.9	76	20.7	30	8.2
Aromatherapy	286	77.9	43	11.7	28	7.6	10	2.7
Energy therapy	254	69.2	70	19.1	30	8.2	11	3.0
Reflexology	261	71.1	10	27.8	23	6.3	13	3.5
Relaxation	143	39.0	117	31.9	42	11.4	65	17.7
Apitherapy	187	51.0	106	28.9	33	9.0	41	11.2
Hypnotherapy	237	64.6	99	27.0	21	5.7	10	2.7
Ozone	285	77.7	54	14.7	19	5.2	9	2.5

The range of knowledge score was 25-94 and the mean of score estimated was 45.25± 15.57. Age and duration of experience didn't influence the knowledge of physicians (P-value= 0.7 & r = -0.02, Pvalue= 0.9 & r = -0.002 respectively). Regarding attitude, the range of attitude score was 3-22 with a mean ± SD of 15.89± 4.25. Age and duration of experience significantly influenced attitude score (P-value= 0.000 & r=0.2, P-value= 0.002 & r =0.16 respectively) as well as knowledge score (P-value= 0.000 & r=0.32). The correlation between Knowledge and attitude is shown in Fig-1.

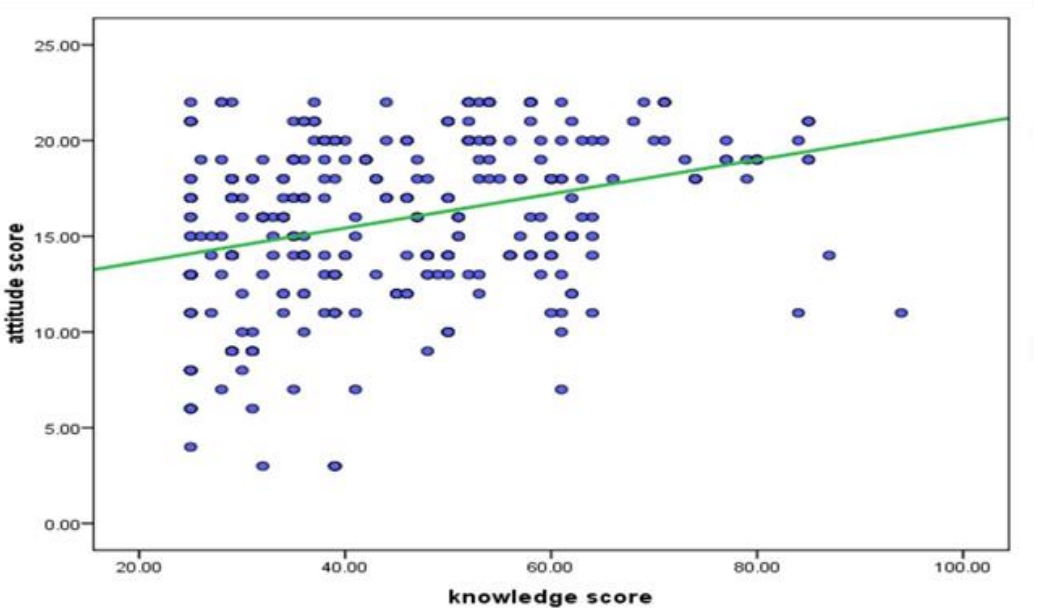

Figure 1: Correlation Between Knowledge & Attitude Score.

In comparing the mean scores of knowledge and attitude according to different variables; there were no significant differences in the mean score of knowledge regarding sex (P-value= 0.1) and nationality (P-value= 0.3), while mean score of knowledge significantly differed with qualification of physicians (P-value= 0.04), the same was found regarding attitude, where sex and nationality didn't influence the attitude mean score (P-value= 0.7, 0.1 respectively), whereas qualification significantly affected attitude mean score (P-value= 0.001).

Regarding practice of physicians, there were 138(37.6%) only reported using CAM for themselves or their families and the most common type used was herbs 55(39.8%), followed by cauterization 50(36.2%). The large majority of physicians 326(88.8%) didn't discuss CAM with their patients and only 3(0.8%) referred patients CAM practitioner.

Table (2): Physician's practice of CAM among Primary health care physicians in Jazan Province.

Practice items	Response	No.	%
Have you ever used CAM for yourself or your family?	**Yes**	138	37.6
	No	229	62.4
Do you usually discuss CAM with your patients?	**Yes**	41	11.2
	No	326	88.8
Have you ever referred a patient to CAM practitioner?	**Yes**	3	0.8
	No	364	97.2

4. DISCUSSION

In the present study the large majority of participants 87.2% mentioned that they didn't attend any lecture or training in the use of CAM therapy, only 12.8% did. A previous study from Riyadh reported that only 0.08% of participants had attended 1 or more CAM lectures or received training about CAM[17], this means that physicians in Jazan are more caring about training and lectures about CAM than in Riyadh region. The opposite was reported from Japan, where the number of physicians who attend training or lectures about CAM was increased significantly within 6 years from 29% to 37%.[21] Another study from Riyadh[10], showed that 88.9% of health care professionals had some knowledge about CAM and there were 87.5% of physicians had knowledge and only 29.08% had their knowledge from health educational institutions. A study from Kuwait demonstrated that there was poor knowledge among 78.4% of general practitioners.[22] In the current study, the most common modality of cam that was familiar to physicians and they felt comfortable about counseling it to patients were dietary supplements (27.8%), massage (22.1%). These modalities were also more common in Riyadh as it was reported in a study from Riyadh that dietary supplements and massage (34.9%, and 34.4% respectively) were the most common modalities of CAM used.[17] Although the current study and the previous one[17] were conducted in different regions, the CAM modalities are the same to be used.

In the present study, there was a positive attitude of physicians toward CAM, where the mean score of attitude was 15.89, the same was reported by a study from Riyadh region, where there was a positive attitude among physicians toward CAM.[17] A study from Kuwait showed that the attitude of general practitioners was supportive for CAM.[22] In this study, there was a positive significant correlation between knowledge and attitude (P-value=0.000, r=0.32) and both of knowledge and attitude significantly influenced by qualification, however the highest knowledge was found among physicians with doctorate (52.05), whereas the highest attitude was found among those with diploma (19.66). This can be explained by the fact that physicians with doctorate have read more than physicians with other qualifications, while the physicians who had diploma wanted to explore the CAM effect and use more than those with doctorate who prefer the medical and conventional therapy. Also, attitude was significantly influenced by age and duration of experience, while these factors didn't influence the knowledge. A study from Riyadh showed that similar results to ours, where age, sex, nationality and experience didn't influence knowledge, whereas qualification significantly affected the knowledge of participants (P-value=0.004) and those with doctorate and

bachelor‘s degree were the most knowledgeable.[10] In contrast to our results, it was reported that years of experience of general practitioners was significantly affected the attitude.[22] In our study the practice of physicians was low, where there were only 37.6% of physicians in this study used CAM before for themselves or their families and the most common used modalities were herbs (39.8%) and cauterization (36.2%). Also, 11.2% discussed CAM with their patients and 0.8% only referred patients to CAM practitioner, whereas 97.2% denied that. Higher percent 51.7% of physicians was reported to use CAM for themselves or their families in a study from Riyadh.[17] Similar to our findings high percent of physicians 85.5% didn’t refer any patient to CAM practitioners, whereas higher percent than ours (59.1%) discussed CAM with their patients.[17] Other studies reported different percent about referral, in US, the referral rate was 44%.[23] while it was 93% in Australia.[24] Higher percent of physicians 80% discussed CAM with their patients as reported by a previous study from Riyadh region.[10]

5. CONCLUSION

There were low knowledge and practice of CAM among physicians, however there was a positive attitude toward it. The most common modalities of CAM used were dietary supplements, massage and relaxation.

6. ACKNOWLEDGEMENT

We would like to express our sincere thanks and deepest gratitude to my supervisor for his great support during the whole research work. We would like to express our sincere thanks to the physicians who participated in this study.

REFERENCES

1. National Center for Complementary and Alternative Medicine (NCCAM). (2007). What Is CAM? Available from: http: //nccam.nih. gov/health/whatiscam/. [Last accessed on 2008 Sep 22]
2. A new portrait of CAM use in the United States. Complementary and Alternative Mediine at the NIH, 2004; 11: 1-4.
3. Herman PM, Poindexter BL, Witt CM, Witt CM, Eisenberg DM. Are complementary therapies and integrative care cost-effective? A systematic review of economic evaluations. BMJ, 2012; 2: e001046.

4. Al-Faris EA, AlRowais NA, Mohamed AG, Al-Rukban Mo, AlKurdi A, AlNoor MAB, et al. Prevalence and pattern of alternative medicine use: the result of a household survey. Ann Saudi Med, 2008: 28: 284-10.
5. Xue CC, Zhang AL, Lin V, Da Costa C, Story DE. Complementary and alternative medicine use in Australia: A national populationbased survey. J Altern Complement Med, 2007; 13: 643-50.
6. AlBedah MN, El-Olemy A, Khalil MK. Knowledge, attitude and practice of public in Riyadh region, Saudi Arabia, about complementary and alternative medicine. Egypt J Community Med, 2010; 28: 39-52.
7. Levine SM, Weber-Levine ML, Mayberry RM. Complementary and alternative medicalpractices: training, experience, and attitudes of a primary care medical schoolfaculty. J Am Board Fam Pract, 2003; 16(4): 318–326.
8. Bhattacharya B. Programs in the United States with complementary and alternative medical education opportunities: an ongoing listing. J Altern Compl Med. 2000; 6: 77–90+Carlston M. The revolution in medical education: complementary medicine joins the curriculum. Healthcare Forum J, 1998; 41(6): 25–29.
9. El-Olemy AT, Radwan NM, Dawood W, Abu Ali I, Fouda LM. Complementary and Alternative Medicine use among Health Workers in Mid-Delta, Egypt. Majmaah Journal Health Sciences, 2013; 1: 2.
10. AlBedah AM, El-Olemy AT, Khalil MK. Knowledge and attitude of health professionals in the Riyadh region, Saudi Arabia, toward complementary and alternative medicine. Journal of family & community medicine, 2012; 19(2): 93.
11. Bahall M, Legall G. Knowledge, attitudes, and practices among health care providers regarding complementary and alternative medicine in Trinidad and Tobago. BMC complementary and alternative medicine, 2017; 17(1): 144. 26.
12. Suchard JR, Suchard MA, Steinfeldt JG. Physician knowledge of herbal toxicities and adverse herb-drug interactions. Eur J Emerg Med, 2004; 11: 193-7.
13. Adisa R, Fakeye TO. Assessment of knowledge of community pharmacists regarding common phytopharmacueticals sols in south western Nigeria. Trop J Pharm Res, 2006; 5: 619-25.
14. Moga MM, Mowery B, Geib R. Patients are more likely to use complementary medicine if it is locally available. Rural Remote Health, 2008; 8: 1028.
15. Bishop EL, Yardley L, Lewith GT. A systematic review of beliefs involved in the use of complementary and alternative medicines. J Health Psychol, 2007; 12; 851-67.

16. Ahmed SM, Al-Mansour MA, Mohamed EY, Medani KA, Abdalla SM, Mahmoud WS. Medical students' opinion toward the application of complementary and alternative medicine in healthcare. Saudi Journal of Medicine and Medical Sciences, 2017; 1; 5(1): 20.
17. Al-Rowais NA, Al Bedah AM, Khalil MK, El Olemy AT, Khalil AA, Alrasheid MH, Al Khashan H, Al Yousef M, Fart AA. Knowledge and attitudes of primary health care physicians towards complementary and alternative medicine in the Riyadh region, Saudi Arabia. Complementary Medicine Research, 2012; 19(1): 7-12.
18. Sewitch MI, Cepoiu M, Rigillo N and Sproule D. A Literature Review of Health Care Professional Attitudes Toward Complementary and Alternative Medicine Studies. Complementary Health Practice Review, 2008; 13(3): 139-154.
19. Awad, A.I., Al-Ajmi, S., Waheedi, M.A. Knowledge, perceptions and attitudes toward complementary and alternative therapies among Kuwaiti medical and pharmacy students. Med. Principles Pract, 2012: 21: 350–354.
20. James, P.B., Bah, A.J. Awareness use attitude and perceived need for complementary and alternative medicine (CAM) education among undergraduate pharmacy students in Sierra Leone: a descriptive cross-sectional survey. BMC Complement Altern Med, 2014; 14.
21. Fujiwara K, Imanishi J, Watanabe S, Ozasa K, Sakurada K. Changes in attitude of Japanese doctors toward complementary and alternative medicine: comparison surveys in 1999 and 2005 in Kyoto. Evid Based Complement Altern Med, 2011.
22. Alrashidi FE, Sarkhou NN, Alotaibi MS. Knowledge and attitudes of complementary and alternative medicine among general practitioners in Farwaniya health region, Kuwait. Greener J Med Sci, 2013; 3(7).
23. Wahner-Roedler D, Vincent A, Elkin PL, Loehrer LL, Cha SS, Bauer BA. Physicians' attitude toward complementary and alternative medicine and their knowledge of specific therapies: A survey at an Academic Center. Evid Based Complement Altern Med, 2006; 3: 495-501.
24. Pirotta MV, Cohen MM, Kotsirilos V, Farish SJ. Complementary therapy: have they become accepted in general practice?. Med J, 2000: 172: 105-109.