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Interest and practice of complementary and alternative medicine among the physicians working at primary health care centres of Qassim Province

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ABSTRACT

Background: In the recent past, there is increase demand of alternative and complimentary medicine (CAM) use increased among the patients globally. During our regular practice at Primary health care centres (PHCC), some patients are requesting us to prescribe and discussing about certain products of CAM. This could be due to advertisements on the television and information from other sources. The present study was planned with the objective of opinions, interest and practice of physicians about CAM use for their patients. *Methodology:* A cross sectional study was conducted among the physicians working at the PHCC and all family medicine residents enrolled at Family Medicine academy. During COVID 19 pandemic, questionnaire distributed through google forms and 261 physicians responded. Data was analysed with statistical package for social sciences (SPSS). Necessary statistical tests were applied. *Results:* In the present study, female physicians were 85%. About 75% of PHC physicians up to the age of 30 years and mean age were 29 years. In the current study, about 61.7% were prescribing CAM to their patients at PHCC and also observed 40.6% were prescribed CAM for the self purpose. There was no significant association was observed with CAM practice with gender, qualification of physician, position of physician, marital status and nationality (P>0.05). *Conclusions:* There was increased use of CAM to their patients in the study. One of the limitations of the study was type of CAM product, duration and frequency such product details not taken. Need further studies are required to substantiate the present study findings.

Keywords: PHC physicians, CAM, Physician opinions about CAM, Saudi Arabia.

1. INTRODUCTION

Throughout the globe non communicable diseases prevalence is increasing and increased prevalence can result in high mortality and morbidity. As the

disease is longer duration and its relation to prevention and control of the disease, people tend to go for the better therapeutic control, cost factors and interest to navigate towards different treatment type's availability, including complementary and alternative medicine (CAM) strategy.

CAM can be defined as a several varieties of medical and health care systems, practices and products or substances which are not having any chemical substances like allopathic medicines, that are not presently considered to be part of conventional medicine can be labelled as Complimentary and Alternative Medicine (Ventola et al., 2010; Kwan et al., 2006). There are several classifications were used for existing term about the definition of CAM and it's classified into the following categories. Certain systems are included in CAM categoriesas medical systems (Naturopathic, Homeopathic, Chinese and Ayurvedic medicine), mind body interventions (meditation, prayer, music and dance therapy), biologically based therapies (herbs, foods, vitamins and other dietary supplements), manipulative and body-based methods (massage and osteopathic manipulation) (Ventola et al., 2010).

A study conducted among medical students about knowledge, attitude and practice of complementary and alternative medicine at Majma University (Al Mansour et al., 2015) and shown medical students' knowledge significantly improved and exhibited positive trend towards CAM practice. Another study conducted among the households in and around the Riyadh city, stated that the perceptions about 89% of the participants had knowledge about complementary and alternative medicine (Elolemy et al., 2012). An international study conducted in Australia by Mac Lennan et al., revealed that overall use of alternative medicine increased over the period of time and their study revealed that surprisingly many old and perimenopausal women were taking more non medically prescribed alternative medicines was 48.5% (Mac Lennan et al., 1996). Almost half of the people were using CAM in United states of America about 42% (Eisenberg et al., 1998), CAM use in Australia was 48% (Mac Lennan et al., 1996), Canada 70% (Health Canada et al., 2001) and considerably more use exists in African countries up to 80% (WHO et al., 2002). Based on the above percentage of population usage about CAM, it denotes that CAM users will be increased and well documented.

In view of the above circumstances, we aimed to conduct the study among the physicians, to find how many physicians are interested to prescribe the CAM to their patients for the reduction of morbidity of the disease as the time and resources are limited hence limited the components of inclusion of substances in our questionnaire of CAM study, as it has vast variety of modalities.

2. MATERIALS AND METHODS

The current cross-sectional study was conducted among the general physicians, Family Medicine Residents and Family physicians were working at the Primary health care centres of Qassim during the period from June 2021 to June 2022.

Questionnaire and Data Collection tool

Questionnaire was designed with supervisor and research team members. The questionnaire was pre tested with pilot study and few minor changes were done in the form of organization of questions and sequence of the questions. After pilot study, the questionnaire was distributed to the physicians who are working at primary health care centres through the Qassim Health Cluster official WhatsApp groups. After initial communication to the physicians, reminder communication also, done to the same physicians once in 3 days to obtain maximum participation in our study. About 3-4 doctors discussed about the questionnaire while, filling the answers. For their clarification of doubts in the questionnaire, about 3 physicians called and discussed with principal investigator. Questionnaire comprised of two parts. First part covered with demographic variables information like gender, education, qualification, marital status and nationality.

Second section dealt with knowledge questions including awareness about CAM, type of disease prescription, duration of prescription, number of episodes, experience of side effects while on treatment, overall satisfaction from the physician and also patient satisfaction. Similarly, some attitude questions like preference of physicians about CAM as it is scientific, dangerous, traditional treatment fails, along with traditional treatment, palliative care, improve immunity and permanent care questions.

Sample size and sampling method

Based on the study conducted in Saudi Arabia in the year 2015 and mentioned in Saudi Arabia CAM use was 25%. Same prevalence was taken for the calculation of sample size (Alrowais et al., 2017). At the confidence interval was 95%, absolute precision was 0.05, as per the WHO statistical software for sample size estimation, the sample size arrived was 289.

Inclusion Criteria

Physicians were present on the day of collection of our visit. Family Medicine Residents (R1 to R4 levels).

Exclusion Criteria

Physicians who were on vacation were excluded and those physicians not interested for the study participation.

Ethical Considerations

After obtaining the Institutional Ethical certificate clearance from the Regional Ethics Committee, data collection process was started. Oral Informed consent was taken from each and every participant. Confidentiality of the information was maintained and personal information not shared to anyone and privacy was protected.

Statistical Analysis

Data transferred from Google forms to MS-Excel and then same Excel data transferred to Statistical package for Social Sciences. Percentages and means were calculated for the descriptive variables. Chi square test was applied for categorical analysis and Fisher exact test was also applied for the expected count less than 5 in any one of the cells (>25% in any one of the tables). Necessary statistical tests were applied, based on the distribution of the data. Significance of the statistical test was taken as Probability (P) value less than or equal to 0.05.

3. RESULTS

In the current study 261 participants were involved. Mean and standard deviation of age in the study population was 28.85 ± 3.619. About 75% of primary health care physicians up to the age of 30 years and 50% of the physicians were at below the age of 29 years range of the age in the study population from the age of 24 years to 61 years. We distributed questionnaire through Google link approximately 300 physicians and 261 physicians responded. The response rate in the present study was 87%. In the present study, 69.3% (181/261) of participants were married.

Table 1 Demo-graphic characteristic among the physicians in the Qassim PHCC.

Nationality	Number of participants	Percentage
Saudi	256	98.1
Non-Saudi	5	1.9
Age (n-260): 24-40 years	258	99.2
41-60 years	01	0.4
> 60 years	01	0.4
Gender – Male	38	14.6
Female	222	85.4
Qualification: MBBS	53	20.3
MBBS + Diploma	176	67.4
PG Board and above	32	12.3
Position of Doctor: Consultant	25	9.6
Specialist doctor	96	36.8
FM Resident doctor	111	42.5
General Physician	29	11.1

Table 1 depicted that the about 98.1% of physicians were Saudi Physicians and 99.2% of study population were in the age group of 24-40 years. Out of 261 physicians, about 67.4% were completed MBBS + Diploma as a qualification and also participated good number of Family Medicine doctors about 42.5% in the current study.

Table 2 Physicians opinions about Complementary and Alternative Medicine (CAM) uses for self, referral and interest areas.

CAM Parameters	Yes	No	Total
Ever Recommended CAM	161 (61.9%)	99 (38.1%)	260 (100%)
Referral CAM Practitioner	92 (35.3%)	168 (64.7%)	260 (100%)

CAM used for personal purpose	106 (40.6%)	155 (59.4%)	261 (100%)
CAM Used for psychological practice	100 (38.3%)	161 (61.7%)	261 (100%)

Table 2 revealed that in the current study, about 61.9% of physicians were recommended CAM to their patients. About 40.6% of physicians were used CAM for their personal purpose.

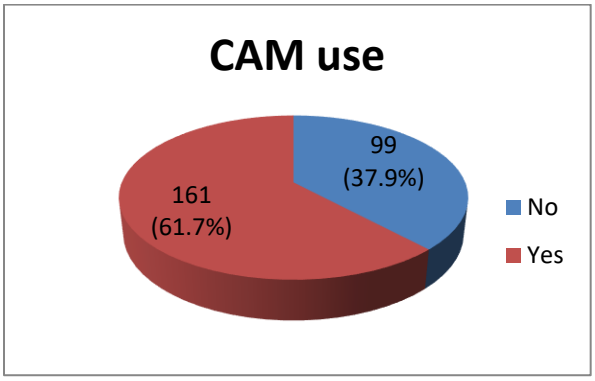

Figure 1 Complimentary and Alternative Medicine use by the Physicians in the study population.

Figure 1 stated that about 61.7% of physicians were recommended the CAM in their practice, 37.9% were not recommended and 0.4% was not answered.

Table 3 Source of information about CAM by physicians and side effects status after CAM prescriptions in the study population.

Source of information about CAM	Number	Percentage
Books and Magazines	59	22.6%
Books, Magazines and internet	05	1.9%
Books, Magazines and others	04	1.5%
Friends and family	57	21.8%
Friends, family and internet	65	25%
Friends, family, internet and others	09	3.4%
Internet alone	58	22.3%
Internet and others	04	1.5%
Total	261	100%
Opinions Side effects		
Yes	98	37.5%
No	161	61.7%
Not answered (NA)	02	0.8%
How often experienced side effects		
Once a month	44	16.9%
> 1 month	159	60.9%
Rarely	51	19.5%
NA	07	2.7%
Frequency of prescription by a Physician		
Daily	25	9.6%
Once a week	43	16.5%
Once a month	81	31%
Once a year	64	24.5%
Once in 5 years	31	11.9%
Rarely	13	5%
NA	4	1.5%

Table 3 stated that the about 25% of physicians got information through friends, family and internet source internet alone as a source of information to the physicians (22.3%). On the whole internet has become major role in the areas of access of information followed by books and magazines contributing 22.6%. In current study, about 37.5% of physicians observed side effects among CAM users. Among them in relation to experience about side effects, about 159 (60.9%) were experienced side effects more than 1 month. 9.6% of Physicians were prescribing CAM to their patients on daily basis in the present study.

Table 4 Physicians opinions about CAM satisfaction status

Variables	Excellent	Good	Average	Poor	Extremely poor
Overall satisfaction about CAM	2 (0.8%)	42 (16.1%)	101 (38.7%)	95 (36.4%)	21 (8%)
Overall satisfaction against CAM	3 (1.1%)	37 (14.2%)	90 (34.5%)	104 (39.8%)	27 (10.3%)

Table 4 revealed that about 42 (16.1%) of physicians were given opinion as good to prescribe CAM and only 37 (14.2%) were given as good to prescribe against CAM use to their patients.

Table 5 Physicians opinions about CAM scientific nature and other background status in the study population.

CAM nature	Strongly Agree	Agree	Average	Disagree	Strongly Disagree
CAM more specific	18 (6.9%)	63 (24.1%)	96 (36.8%)	80 (30.7%)	4 (1.5%)
CAM Dangerous	27 (10.3%)	73 (28%)	94 (36%)	62 (23.8%)	5 (1.9%)
CAM used when traditional treatment fails	27 (10.3%)	79 (30.3%)	96 (36.8%)	53 (20.3%)	6 (2.3%)
CAM is suitable at palliative care	21 (8%)	64 (24.5%)	109 (41.8%)	56 (21.5%)	11 (4.2%)
CAM in permanent care	26 (10%)	62 (23.8%)	101 (38.7%)	60 (23%)	11 (4.2%)
CAM improves immunity	15 (5.7%)	60 (23%)	113 (43.3%)	64 (24.5%)	9 (3.4%)

Table 5 stated that in the study population, about CAM is more specific question only 6.9% physicians gave opinion as strongly agrees. CAM is suitable for palliative care, about 8% of physicians gave strongly agree opinion. CAM improves immunity question, 43.3% of physicians were responded as neutral.

Table 6 Some demographic variables associations with Complimentary Alternative Medicine use.

Variables	CAM Not used	CAM Used	Total	P value
Male	16 (42.1%)	22 (57.9%)	38 (100%)	X2 - 0.344, 1df, P - 0.557.
Female	82 (37.1%)	139 (62.9%)	221 (100%)	
MBBS	19 (35.8%)	34 (64.2%)	53 (100%)	X2 - 0.558, 2df, P - 0.756.
MBBS + Diploma	66 (37.7%)	109 (62.3%)	175 (100%)	
PG Board and above	14 (43.7%)	18 (56.3%)	32 (100%)	
Position Consultant	9 (36%)	16 (64%)	25 (100%)	X2 - 0.193, 3df, P - 0.978.
Specialist doctor	36 (37.5%)	60 (62.5%)	96 (100%)	
FM Resident	42 (38.1%)	68 (61.9%)	110 (100%)	
Physician	12 (41.3%)	17 (58.7%)	29 (100%)	

Marital status Married	63 (35%)	117 (65%)	180 (100%)	X2 - 2.349, 1df, P - 0.125.
Not Married	36 (45%)	44 (55%)	80 (100%)	
Saudi	96 (37.6%)	159 (62.4%)	255 (100%)	X2 - 1.039, 1df, P - 0.308.
Non-Saudi	03 (60%)	02 (40%)	05 (100%)	

Table 6 revealed that the CAM practice among the females was 62.9% and in males was 57.9%. Similarly, among the married people, the CAM practice was 65% whereas in unmarried people was 55%. There was no statistically significant association was observed between CAM practice with gender as well as marital status (P-0.557, P- 0.125).

Table 7 Names of the supplements/herbs used and CAM modalities used besides supplements in the study population (n-261).

Name of the supplements	Number (%)
Bahrzaf	12 (4.6%)
Duba free	05 (1.9%)
Damakese	01 (0.38%)
Lemon	02 (0.76%)
Kosso/Metere	03 (1.14%)
Ginger	08 (3.1%)
Itan/Kerbe	06 (2.3%)
Dingetegna	21 (8.0%)
Flaxseed	19 (7.3%)
Moringa	21 (8.0%)
Garlic	10 (3.8%)
Spirits	01 (0.38%)
More than one supplements/herbals taken with different combinations	144 (55.1%)
CAM modality besides supplements	
Acupuncture/massage	8 (3.1%)
Chiropractor	26 (10%)
Holy water	29 (11.1%)
Traditional manipulation with Acupuncture	11 (4.2%)
Traditional manipulation with Chiropractor	32 (12.3%)
Prayer	21 (8.0%)
Incense (Itan)	31 (11.9%)
More than 1 CAM modality besides supplements	115 (44.1%)

In the present study, about 8% of the participants received Dingetegna and Moringa substances and less proportion (0.38%) of people took Damakese and Spirits alone. About 55.1% of the study people took more than 1 supplement with different combination. In the current study, about 12.3% were practiced as CAM modality as traditional medicine with Chiropractor and as an Incense (Itan) was 11.9% besides supplements/herbals. Less proportion received as a CAM modality as Acupuncture/ massage was 3.1%. Majority of the people (44.1%) were received more than 1 CAM modality in addition to CAM supplements/herbals (Table 7).

4. DISCUSSION

The present study was conducted with the objective of CAM practice among the physicians working at the primary health care centres in Qassim. There are many definitions for the complementary and alternative medicine used in different countries till date

and also people tend to go for CAM treatment for their chronic condition relief such as Diabetes, cancers and also for some acute respiratory infections. Ministry of Health, Saudi Arabia provided the free treatment and comprehensive care to the all-Saudi nationals with free of cost and providing best efforts to the citizens presently same free health care services to all Saudi and non-Saudi nationals residing at Qassim, through Health Cluster in Qassim province. In primary health care centres still not included the CAM substances prescription and its practice. Saudi Arabia was pioneered in best scientific evidence and given priorities to research and development in modern medicine practice. In addition to that there is a need for the scientific promotion of CAM in the field of health care practice in addition to existing modern medicine practice (Alrowais et al., 2017; Kamel et al., 2017).

In the present study, about 61.7% of physicians were recommended the CAM in their practice. This CAM could be an any simple nutritional or non nutritional substance like ginger, or any herbal medication or any substance that will be used for the improvement of the patient sickness. A study conducted in Jeddah in the domains of knowledge, attitude and beliefs about herbal medicine practice among the diabetic patients revealed that about 55.1% were using CAM practice for their relief. Another study conducted by Al Sayyad et al., in Bahrain among the PHCC physicians about opinions of CAM, physicians shown interest as 72.5% and among them 59.5% were practiced CAM to their patients in regular practice and also 73.9% were agreed as CAM is beneficial (Al-Sayyad et al., 2015).

A systematic review study in Cameroon, conducted by Nsagha et al., (2020) at primary health care centres studies, adjunct to Universal health coverage revealed that about two thirds (67%) were satisfied with CAM medicine and remaining one third dissatisfied due to their complaint persisted with due course of treatment. A similar study conducted in Doha and the study published in the year 2010 stated that 83.8% of PHCC physicians were welcoming CAM, 97.5% were shown interest towards CAM and only 30.1% of physicians were practiced the CAM to their regular patients at primary health care centres (Al-Shaar et al., 2010). Even in the WHO report stated in the year 2001, about 50-80% of the developed and developing countries population were used CAM respectively. In the United States of America also revealed that 36% of the adult's used CAM and we include the prayer, the figure climbed to 62%. A local study conducted in Qassim, Saudi Arabia also mentioned as CAM use varies from population to population and also region to region. The authors revealed that these days population out of pocket expenditure towards the CAM increased and also stated in their study as 8.2 billion US dollars spent in Saudi Arabia for CAM (WHO et al., 2001; NIH et al., 2004; Al-Bedah et al., 2013; CDSI et al., 2010).

A study conducted by Hillenbrand E et al., mentioned as the traditional medicine or CAM practice to be integrated with existing PHCC practice based on opinions from the health seeking behaviour of the community members and also depends upon the scientific rationality (Hillenbrand et al., 2006). Regarding the opinion of CAM with existing modern health care system, about 30% of physicians gave their opinion as other health systems with allopathy system to be integrated and mentioned in the journal of National journal of Integrated research in Medicine in the year 2015 (Shashikumar et al., 2015).

In our present study, about more than 55% of study population were taking more than herbs (ginger, honey, Moringa and Dingetegna etc) for their health problems. Similarly in addition the herbs consumption, nearly 44% were taking more than one CAM modality (Acupuncture/Massage, Holy water, Chiropractor, Traditional manipulation with massage and Traditional manipulation with Chiropractor and Prayer etc). High percentage of Herbs consumption (Diet and supplements 68.1% and Acupuncture alone was 45.2%) and also more percentage of CAM modality practice was observed in the study conducted by Al-Shaar et al., (2020) among General physicians in DOHA in the year 2010.Another study conducted in Gulf region from patient perspectives about CAM practice and revealed that most commonly provided CAM practice by physicians (71%) and spiritual healers through 29%. The type of CAM modality treatments through physicians and common practice adopted was massage therapy about 51% (Out of 71% of CAM) (Kebede et al., 2021).

Regarding CAM practice, a study conducted in Saudi Arabia from paediatricians' perspectives from whole kingdom sample working at different provinces and different levels of hospitals through online questionnaire among 140 samples. This study revealed that majority of paediatric physicians expressed mixed expressions (mostly negative and some positive) about the use and practice of CAM and majority of Saudi paediatric physicians were showing slightly negative attitude about the use of CAM practice in paediatric patients. This could be due to specially child age less than 5 years generally rely on parents and lack of interaction with the parents about cure, knowledge deficit regarding CAM and also child hood problems may be different from the adults (Alnafia et al., 2021; Al-Rumayyan et al., 2020; Jan et al., 2009). In the current study, there was no significant difference between the physicians' characteristics like gender, nationality, marital status, qualification and position of physicians with CAM use. Similar non-significant association were observed with CAM use with gender and position of doctors in the studies conducted at different places of Saudi Arabia, Oman as well as in western world (Alnafia et al., 2021; Al-Saadoon et al., 2015; Hurvitz et al., 2003).

Limitations of the study

During the data collection, because of 3rd wave COVID-19 period, the questionnaire distributed online that limited the face to face interview. Qassim region has no CAM centre as like big cities like Riyadh, this also another limitation for the more data collection. In spite of that we succeeded the data collection from the PHCC physicians and completed the study.

5. CONCLUSIONS

Based on the study results, more than half of the physicians were using the CAM during their practice. Close to half of the people mentioned their source of information about CAM as internet alone, books and magazines. More than half of the physicians recommended more than one supplements/herbals taken with different combinations such as ginger, honey and lemon and CAM modality such as prayer and holy water.

Recommendations

Based on the study findings, CAM can be practiced with more clear guidelines to be incorporated at primary health care centres based on literature support and taking patient aspects such as drug interactions and existing chronic diseases.

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Author Contributions

Hala Saleh Mohammed AlZuyaydi involved from research idea, in the design of the study, data collection and writing of the manuscript. Chandra Sekhar Kalevaru contributed in every step of research process from the beginning of the study, reviewing and editing the manuscript and supervision.

Ethical approval

The study was approved by the Qassim Regional Research Ethics Committee at concordance with National Committee of Bio & Medical Ethics (NCBE), Kingdom of Saudi Arabia (ethical approval number: 1443-276098).

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Conflict of interest

The authors declare that there is no conflict of interests.

Data and materials availability

All data sets collected during this study are available upon reasonable request from the corresponding author.

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