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A Study on Attitude and Perception of Medical Students Regarding Complementary and Alternative Medicine in Tertiary Care Centre: A Cross Sectional Study

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Abstract
Complementary and alternative medicine (CAM) has been gaining popularity among the public worldwide. The ignorance about CAM use by medical practitioner may create a communication gap with patients. Many problems have reported such as adverse effects and drug-herbs interaction regarding CAM use along with conventional medicine. This emphasises the need for healthcare professionals to acquired deep knowledge regarding CAM to provide better counselling to patients. To assess the attitude and perception of medical students towards alternative and complimentary medicines. A cross sectional study was conducted among 172 undergraduate medical students in Sree Mookambika institute of medical sciences, Kanyakumari. Informed consent was obtained from each volunteer prior to the study. Data was collected using pre-tested questionnaire for a period of 3 months and that were entered in MS Excel and analysed using SPSS. A total of 172 medical students participated in the study., among them, 57% were male and 43% female. Majority of participants uses CAM for their health and well being (96.5%) in which yoga was the most used CAM (94.8%). Further the students believe that clinical care should integrate the best of conventional and CAM use (93%). Majority (96.5%) thinks that knowledge about CAM would be useful for them as future doctors and wishes CAM to be offered as an elective course in our college. The study showed that most medical students have positive attitudes and perceptions towards CAM use with majority agreed knowledge of CAM is useful as a future healthcare professional. In general, medical students agreed CAM can be added in their education as electives.

INTRODUCTION

WHO has defined Complementary and Alternative Medicine (CAM) as the sum total of knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures that used in the maintenance of health and in prevention, diagnosis, improvement or treatment of physical and mental illness[1]. CAM use has growing rapidly among public and practiced in various medical aspects in many countries. Due to the diverse culture in India, the usage of CAM is expected to increase tremendously. The use of CAM is prevalent among patients with asthma, stroke, allergies, hypertension, rheumatoid arthritis and musculoskeletal problems such as joint, neck and back pain[2]. Although the basic tenets of any system of medicine are the same, the individualized as well as holistic approach of CAM has retained the confidence among the masses of its effectiveness. The National Center for Complementary and Alternative Medicine classifies CAM therapies into "alternative whole medical systems, mind-body interventions, biologically based therapies, manipulative and body-based methods and energy therapies"[2]. As per a report by the World Health Organization (WHO), 75% of the world's population still utilizes traditional systems of medicine. The reliance on CAM is estimated to increase further with population growth, especially in a country like India, where utilization of CAM for daily medical needs is common practice. This continuing reliance on CAM has been attributed to lack of availability of essential medicines uniformly at all geographic locations, absence of health services by a qualified professional of conventional medicine and poor socioeconomic status. This is particularly true in patients suffering from chronic illness[3]. Given the widespread use of CAM and the gradual increase in the availability of evidence of its effectiveness in a number of disease conditions, one would expect that a preliminary knowledge regarding the CAM practices be imparted in medical schools teaching evidence-based modern allopathic medicine. However, this has not been the case so far[3]. The attitudes and opinions the students and practitioners of modern medicine build are, hence, likely to be based on their personal experiences, information from media and views of their peers, teachers and mentors. This has been probably responsible for the scepticism or uncertainty among medical students regarding the utility of CAM[4]. The concern also relates to lack of adequate knowledge regarding the possible interactions between drugs when a patient utilizes CAM along with modern medicines[5]. However, there is no adequate data regarding the hierarchical change in attitudes, from medical students to practitioners, towards CAM., such data would provide some meaningful information on the possible influence of the modern medical curriculum as well as teachers on the students' attitudes[6-8].

MATERIALS AND METHODS

A cross-sectional study was conducted at Sree Mookambika Institute of Medical Sciences, Kulasekharam, located in Kanyakumari District, Tamil Nadu, South India. The study was carried out over a period of three months-June, July and August 2024-and included all undergraduate MBBS students enrolled in the institution. The participants were selected using a simple random sampling method. All undergraduate medical students present during the data collection period were included in the study, while those who were absent were excluded. The sample size was calculated using the formula $n=(Z-a/2)^2pq / d^2$, where p=87, q=13 and d=5%. Substituting the values, the sample size was computed as $n=(1.96)^2\times87\times13/25$ =173.7 and it was approximated to 170.

Data Collection Process: A pre-designed, semi-structured, validated questionnaire was used to collect data from the students. The questionnaire was pre-validated by a panel of senior faculty members. A pilot study was carried out and suitable modifications were carried out before finalizing the questionnaire. Questionnaire containing six sections carrying about attitude and perceptions of CAM among medical students in SMIMS. Data was collected through Google Forms and entered in Microsoft EXCEL. Data was analysed using SPSS version 20.

RESULTS AND DISCUSSIONS

Table 1: Define Gender Percentage

Characteristics	Frequency	Percentage
Age		
18-20	11	6.4%
21-23	96	55.8%
24-26	62	36%
>26	3	1.7%
Gender		
Male	98	57%
Female	74	43%
Year Of Study		
1st Year	4	2.3%
2nd Year	8	4.7%
3rd Year	31	18%
4th Year	74	43%
5th Year	55	32%

The study included participants aged 18-26, with the highest representation from 21-23 year-olds (55.8%), followed by 24-26 year-olds (36%) and 18-20 year-olds (6.4%). The gender distribution showed a higher proportion of males (57%) compared to females (43%). Regarding the year of study, the majority of respondents were 4th-year students (43%), followed by 5th-year students (32%), 3rd-year students (18%), 2nd-year students (4.7%) and the least representation from 1st-year students (2.3%). This distribution suggests a diverse participant pool, with a slightly

higher male participation and a notable concentration of responses from fourth-year students.

Table 2: Section a (Self Use/Awareness of Cam Modalities)

CAM modalities	Awareness of CAM	Use of CAM
Herbal medicine	163(94.8%)	8(4.7%)
Acupuncture and moxibustion	166(96.5%)	4(2.3%)
Ayurveda	99(57.6%)	72(41.9%)
Siddha	165(95.9%)	3(1.7%)
Unani	7(4.1%)	0(0%)
Yoga	8(4.7%)	163(94.8%)
Chiropractic	74(43%)	2(1.2%)
Physiotherapy	156(90.7%)	12(7%)

The study revealed that 94.8% of participants engaged in use of yoga, 72% of participants engaged in use of Ayurveda. Additionally, 94.8% were aware of Herbal medicine and only 4.7% have used it. Physiotherapy follows the same trend in which 90.7% people were aware of it but only 7% have only used it. Furthermore the use of Acupuncture, Siddha, Unani and Chiropractic modalities were relatively low, with only less than 3% has used those CAM modalities.

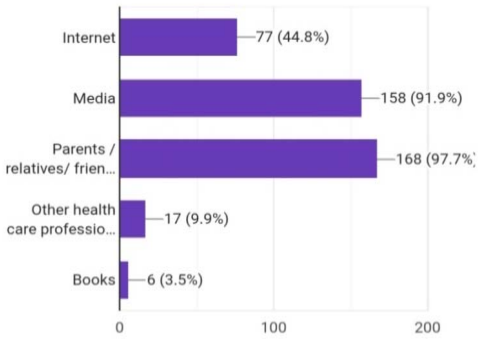

Fig. 1: Section-B (Sources of Information for Cam)

The study found that 97.7% of participants have got information about CAM from their parents, relatives and friends. Also 91.9% participants say media played an influential role in knowing about CAM. Additionally 77% participants got information from internet. Least information (<10%) was got from books and other health care professionals. The study found that 91.3% of participants use CAM for their minor ailments. 96.5% prefer the use of CAM for their health and well being. Only 3% thinks that CAM is free of side effects and 93.6% thinks CAM is not effective than conventional medicines. Additionally, only 4% participants doctors has suggested CAM modalities and only 4% talk to their doctors before taking any CAM therapies.Described in below table. The study found that 52.5% of participants disagrees that CAM is unsafe and also 71% believes CAM has fewer side effects as compared to conventional medicine. Additionally 94.2% participants think it is important to consult any health care professional before using any CAM.

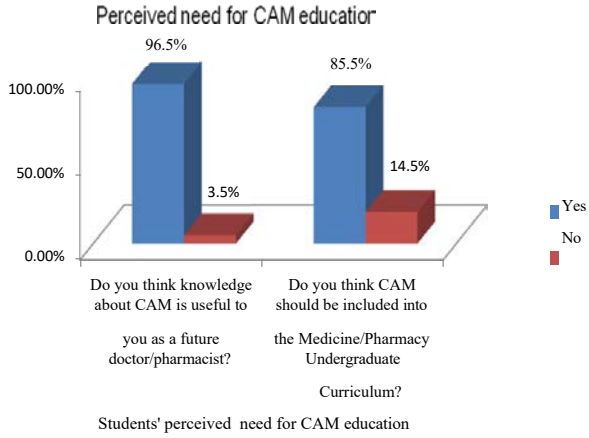

Fig. 2: Section-E (Students Percieved Need for Cam Education

Furthermore 93% participants thinks clinical care should integrate the best of conventional and CAM use and majority (88.4%) thinks as future doctors we should be able to council about CAM use. The study revealed that 96.5% of participants felt knowledge about CAM is useful to them as a future doctor. However, 85.5% participants also thinks that CAM should be included into the undergraduate curriculum. The study revealed that 44.8% of participants felt CAM knowledge is necessary to be a well rounded professional. Furthermore 94.8% thinks CAM can be offered as an elective course instead of compulsory course in our college.

The findings of this study on factors and patterns affecting physical activity among undergraduate medical students at Sree Mookambika Institute of Medical Sciences align with and expand upon existing literature. Similar to the study by Rajesh Venkataraman, which identified a positive mindset among the medical students towards CAM in Karnataka and the same follows in this study too which showed positive intent towards CAM. This shows a clear cut view of approach of CAM by medical students. Current study showed that SMIMS medical students have high awareness towards CAM modalities. Female and male students rated yoga as the most frequently used type of CAM modalities. This may be influenced by age and maturity as most participants are from 4th year. Besides that, family background have great influenced on students use of CAM as current study showed that students perceived family members is the main source of information about CAM. Geographical differences and diverse cultural background may contribute to awareness of

Table 3: Section-C (Attitude of Medical Students Towards Cam)

Statement	Frequency, n(%)				
	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
I use CAM therapies for my minor Ailments	5(2.9%)	4(2.3%)	4(2.3%)	157(91.3%)	2(1.2%)
I use CAM therapies for my health And well-being	0(0%)	1(0.6%)	3(1.7%)	166(96.5%)	2(1.2%)
I use CAM therapies because they Are free of side effects	0(0%)	2(1.2%)	167(97.1%)	3(1.7%)	0(0%)
I use CAM therapies because they are more effective than Conventional medicines	1(0.6%)	161(93.6%)	7(4.1%)	2(1.2%)	1(0.6%)
I generally talk to my doctor before Taking any CAM therapies	1(0.6%)	74(43%)	92(53.5%)	4(2.3%)	1(0.6%)
I always choose CAM therapies Because my doctor recommends	1(0.6%)	6(3.5%)	161(93.6%)	4(2.3%)	0(0%)

Table 4: Section-D (Perception of Medical Students Towards CAM)

Statement	Frequency ,n(%)				
	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
I believe that CAM use is unsafe	5(2.9%)	90(52.3%)	72(41.9%)	5(2.9%)	0(0%)
I believe that CAM use is not an Appropriate treatment in any disease	0(0%)	90(52.3%)	76(44.2%)	6(3.5%)	0(0%)
I believe that CAM use has fewer side Effects as compared to conventional medicine	1(0.6%)	3(1.7%)	96(55.8%)	71(41.3%)	1(0.6%)
I believe that it is important to consult Any health care professional before CAM use	0(0%)	3(1.7%)	6(3.5%)	162(94.2%)	1(0.6%)
I believe that clinical care should integrate the best of conventional and CAM use	2(1.2%)	1(0.6%)	8(4.7%)	160(93%)	1(0.6%)
I believe that pharmacists/doctors Should be able to counsel patients on CAM use	0(0%)	2(1.2%)	12(7%)	152(88.4%)	6(3.5%)

Table 5: Section-F (Students Opinion Towards Integration of Cam in Medical College

	Frequency ,n(%)				
Statements	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
CAM knowledge is necessary to be a well- Rounded professional	2(1.2%)	4(2.3%)	89(51.7%)	77(44.8%)	0(0%)
CAM can be offered as an elective course instead of compulsory course.	0(0%)	2(1.2%)	7(4.1%)	163(94.8%)	0(0%)
CAM course is not required at all as it is the job of CAM practitioner	1(0.6%)	4(2.3%)	90(52.3%)	74(43%)	3(1.7%)

different CAM modalities. Present study showed that race, gender and different study year have significant influence on students' attitudes towards CAM. Male participants showed more positive attitudes towards CAM compared to female participants. This is well supported by previous studies mentioned above. It is reported that male participants showed a higher tendency of using CAM therapies for minor ailments and to maintain health and well-being. Surprisingly, fourth year students have most positive attitude towards CAM as the highest percentage of them reported to use CAM for minor ailment. In general, students showed positive attitudes toward CAM which coincides with previous findings. In term of students' perceptions, most participants believed CAM use is an appropriate treatment for any disease.

CONCLUSION

This study underscores the attitude and perception of medical students towards alternative and complementary medicines. In the context of the current upsurge of CAM practice worldwide, a survey is the need of time to gauge attitude amongst medical students. In the present study, students have showed positive attitude favouring inclusion of CAM topics in the medical curriculum in India. Current study showed that Male and fourth year students have more positive attitudes towards CAM. Also many thinks that it can be taken up for minor ailments and would be better to consult a doctor before starting any CAM. Furthermore participants thinks clinical care should integrate the best of conventional and CAM use in view of betterment of patients health and well being. In light of the blooming popularity of CAM, medical students should acquired deep knowledge of CAM to provide better counselling to patients.

Recommendations: CAM can be kept as one of electives for undergraduate students to know better about it.

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