

Perception, Attitude and Practice of Doctors towards Complementary and Alternative Medicine in a Tertiary Care Teaching Hospital: A Cross-sectional Questionnaire-based Study

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ABSTRACT

Introduction: The use of Complementary and Alternative Medicine (CAM) is increasing worldwide, including in India. People who are not satisfied with conventional medicine often turn to CAM. The World Health Organisation (WHO) also encourages the integration of CAM into modern medicine, which is possible only with the right perception and attitude of modern practitioners toward CAM.

Aim: To assess the perception, attitude, and practice of modern practitioners toward CAM.

Materials and Methods: A cross-sectional, non interventional, questionnaire-based study was conducted at Sathagiri Institute of Medical Sciences and Research Centre (SIMS & RC), Chikkabanawara, Bengaluru, Karnataka, India, from August 2024 to December 2024. A total of 107 consultants, including senior residents, assistant professors, associate professors, and professors working at SIMS and RC and willing to participate, were enrolled in the study. The final sample size considered for analysis was 98. Participants were provided with an offline questionnaire related to the perception, attitude, and practice of CAM. Their responses were recorded using a five-point Likert scale ranging from “strongly agree” to “strongly disagree” and analysed using descriptive statistics. Statistical analyses were conducted using IBM Statistical Package for the Social Sciences (SPSS) Statistics version 26.0.

Results: A total of 107 questionnaires were analysed. The demographic parameters included name, gender, designation, and department of the consultants. Males (71, 66.4%) outnumbered females (36, 33.6%), and most participants were professors (50, 46.7%). The majority belonged to the departments of Surgery (20, 18.7%), Orthopaedics (19, 17.8%), Medicine (13, 12.1%), and Anaesthesiology (13, 12.1%). A total of 82 out of 107 (76.6%) practitioners believed that CAM is not reliable in acute conditions. Only 26 (24.3%) doctors believed that CAM is quite safe. Sixty-seven (62.6%) believed that the therapeutic response in CAM is slow to develop, and 76 (71%) agreed that a change in the patient's lifestyle is necessary to obtain maximum benefit from CAM. Fifty-five (51.4%) doctors believed that CAM mainly focuses on disease prevention rather than cure. The majority (93, 87%) agreed that more scientific studies are required to substantiate the use of CAM. Almost half of the participants (52, 48.6%) reported using or considering the use of CAM in their clinical practice, with Yoga being the most commonly practiced branch (51, 47.7%). Additionally, 45 (42%) expressed willingness to undergo training in CAM.

Conclusion: Modern practitioners' perception and attitude toward CAM are generally positive. Nearly half (52, 48.6%) are open to incorporating CAM into their clinical practice. The most commonly used branch was Yoga (51, 47.7%), followed by Ayurveda (19, 17.8%). Many participants (45, 42.1%) also expressed willingness to undergo future training in CAM.

Keywords: Clinical practice, Integrative health, Modern practitioner, Traditional medicine

INTRODUCTION

The CAM, as defined by the National Centre for CAM, is “a group of diverse medical and healthcare systems, practices, and products that are not presently considered to be part of conventional medicine” [1]. If such a healthcare system is used along with conventional medicine, it is regarded as complementary medicine, whereas if it is used in place of conventional medicine, it is regarded as alternative medicine [2]. When conventional and complementary health approaches are used together in a coordinated way, it is referred to as integrative health [2].

Common and popular varieties of such health systems include traditional healing practices as well as indigenous systems of medicine such as Ayurveda, herbal preparations, Unani, homeopathy, and naturopathy [3]. The advantages of CAM over conventional medicine — including relatively lower cost, fewer side-effects, easy accessibility, mostly non invasive nature, and other favourable benefits during terminal stages of certain diseases —

have made it increasingly popular worldwide [3,4]. Furthermore, the treatment of lifestyle diseases through conventional medicine often remains unsatisfactory [4].

Studies have shown that the use of CAM has been increasing globally, particularly in industrialised nations [4-6]. According to recent statistics, nearly half of the world's population relies on CAM, including 42% in the USA, 48% in Australia, 70% in Canada, and 49% in France [3]. Moreover, to improve the quality of healthcare, the World Health Organisation (WHO) also encourages the integration of traditional systems of medicine into modern medicine [1].

This integrated approach to healthcare is yet to be fully developed in India [4]. India has initiated the implementation of integrated medicine in recent years to provide optimal healthcare at relatively lower costs. However, the success of these efforts depends largely on the perception and attitude of modern practitioners toward CAM [7,8]. To optimise the benefits of integrating CAM into

modern medicine, it is essential that practitioners not only have the right perception but also develop a positive attitude toward its implementation.

In alignment with the WHO's efforts to integrate CAM with modern medicine, this study was undertaken to assess the perception, attitude, and practice of modern practitioners toward CAM. The primary objective was to determine the perception and attitude of doctors toward CAM. The secondary objective was to determine the practice patterns of these doctors regarding CAM.

MATERIALS AND METHODS

A cross-sectional, questionnaire-based study was carried out by the Department of Pharmacology, Sathagiri Institute of Medical Sciences and Research Centre, Bengaluru, Karnataka, India, from August 2024 to December 2024. The study was initiated after obtaining approval from the Institutional Ethics Committee (IEC) (Ref. No. SIMS & RC/EC-13/Staff-01/2023-24, dated 26-03-2025).

Inclusion criteria: All consultants, including senior residents, assistant professors, associate professors, and professors working at SIMS and RC who were willing to participate, were included in the study.

Exclusion criteria: All interns and postgraduate students working at SIMS and RC were excluded from the study.

Sample size: Using the formula $n = 4pq/d^2$, where p =prevalence=56.5, q =100 - p =43.5, and d =allowable error=10, the calculated sample size (n) for this study was 98.31 [7].

Study Procedure

A validated questionnaire was administered offline to doctors, and their responses were recorded on a 5-point Likert scale ranging from strongly agree, agree, neutral, disagree to strongly disagree. The questionnaire comprised a total of 22 questions divided into three sections. The first section included demographic details of the doctors (name, gender, designation, and department). The second section assessed their perception and attitude toward CAM, and the third section related to their practice.

The internal consistency of the questionnaire was assessed using Cronbach's alpha. The overall 19-item scale demonstrated good reliability ($\alpha=0.81$). Subscale reliability analysis revealed $\alpha=0.78$ for the 14-item perception and attitude section, and $\alpha=0.83$ for the 5-item practice section, indicating acceptable to good internal consistency across domains.

Content validity was evaluated through expert review. Three experts rated each item for relevance on a 4-point scale. The Item-Level Content Validity Index (I-CVI) values ranged from 0.67 to 1.00. The overall Scale-Level Content Validity Index (S-CVI/Ave) was 0.77, supporting acceptable content validity. Subscale-wise, the S-CVI/Ave was 0.76 for perception and attitude, and 0.80 for practice. As all items met the acceptable criteria, content validity was considered established.

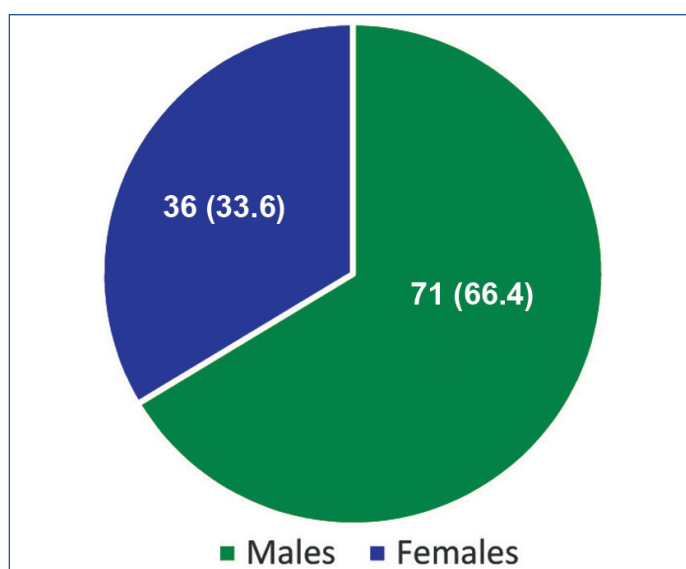
STATISTICAL ANALYSIS

Data entry was performed using Microsoft Excel, and statistical analyses were conducted using IBM SPSS Statistics version 26.0. Descriptive statistics (mean $\pm$ SD for continuous variables, and frequencies and percentages for categorical variables) were used to summarise participant characteristics. Appropriate pictorial representations were included. Since inferential statistics were not used, p -values were not considered.

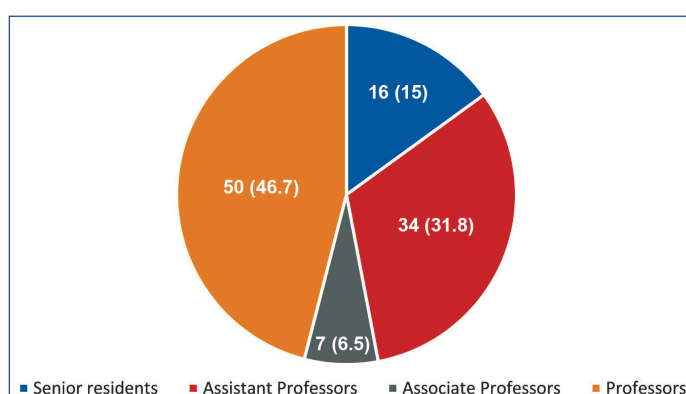
RESULTS

After the questionnaire was distributed to 150 consultants in the institution, 107 of them responded and returned completed forms, yielding a response rate of 71.3%. The demographic details of the respondents are shown in [Table/Fig-1].

Designations details are shown in [Table/Fig-2].

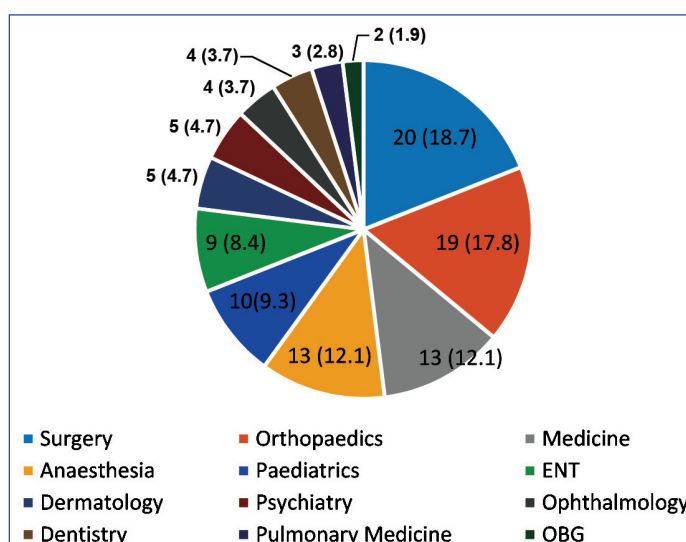


[Table/Fig-1]: Demographic details of respondents (Gender distribution).



[Table/Fig-2]: Demographic details of respondents (Designation).

Most participants were from the departments of Surgery (20; 18.7%), Orthopaedics (19; 17.8%), Medicine (13; 12.1%), and Anaesthesia (13; 12.1%) [Table/Fig-3].



[Table/Fig-3]: Demographic details of respondents (Department).

The responses of the practitioners regarding their perception and attitude toward CAM are presented in [Table/Fig-4], and those regarding their CAM practice are presented in [Table/Fig-5].

The responses related to perception and attitude varied among practitioners, whereas regarding CAM practice, almost half of them (52; 48.6%) reported that they were using or had at least considered using CAM for their patients. The most commonly used branch of CAM was Yoga (51; 47.7%), followed by Ayurveda (19; 17.8%).

S. No.	Question - Part 2	SAG	AG	NU	DA	SDA
Perception						
1.	CAM is based on spirituality	3 (2.8)	29 (27.1)	39 (36.4)	25 (23.4)	11 (10.3)
2.	Authentic information on CAM is not available to modern medicine practitioners	26 (24.3)	59 (55.1)	18 (16.8)	2 (1.9)	2 (1.9)
3.	CAM can be beneficial in only few clinical conditions	12 (11.2)	59 (55.1)	28 (26.2)	4 (3.7)	4 (3.7)
4.	CAM is quite safe	2 (1.9)	24 (22.4)	46 (43.0)	23 (21.5)	12 (11.2)
5.	CAM leads to permanent cure even without modern medicine	2 (1.9)	6 (5.6)	35 (32.7)	39 (36.4)	25 (23.4)
6.	CAM mainly focuses on prevention of diseases rather than cure	6 (5.6)	49 (45.8)	31 (29.0)	21 (19.6)	0
Attitude						
7.	CAM is not reliable in acute clinical conditions	34 (31.8)	48 (44.9)	16 (15.0)	4 (3.7)	5 (4.7)
8.	CAM is more effective than modern medicine in few clinical conditions	6 (5.6)	30 (28.0)	29 (27.1)	24 (22.4)	18 (16.8)
9.	CAM can be tried only when modern medicine fails	7 (6.5)	20 (18.7)	36 (33.6)	38 (35.5)	6 (5.6)
10.	In CAM, therapeutic response is delayed as compared to modern medicine	14 (13.1)	57 (53.3)	34 (31.8)	2 (1.9)	0
11.	With implementation of appropriate guidelines, CAM can be as effective as modern medicine	1 (0.9)	24 (22.4)	37 (34.6)	30 (28.0)	15 (14.0)
12.	For optimum benefit in CAM, a change in patients' lifestyle is required	12 (11.2)	64 (59.8)	26 (24.3)	3 (2.8)	2 (1.9)
13.	More number of scientific studies are required to substantiate use of CAM	47 (43.9)	46 (43.0)	13 (12.1)	1 (0.9)	0
14.	Adding CAM to the MBBS curriculum will be beneficial to the future doctors	2 (1.9)	30 (28.0)	39 (36.4)	17 (15.9)	19 (17.7)

[Table/Fig-4]: Perception and attitude of modern medicine practitioners towards CAM.
SAG: Strongly agree; AG: Agree; NU: Neutral; DA: Disagree; SDA: Strongly disagree; Note: values in brackets - %, outside values - frequency

S. No.	Questions - Part 3	Yes		No		NA
1.	You use/ consider use of CAM for your patients in chronic diseases	52 (48.6)		55 (51.4)		0
2.	Addition of CAM has added value to your clinical practice	33 (30.8)		32 (29.9)		42 (39.3)
3.	You have tried CAM for yourself/ your family anytime	36 (33.6)		71 (66.4)		0
4.	You would like to get trained about CAM practice	45 (42.1)		62 (57.9)		0
5.	The branch of CAM you commonly use in your clinical practice is	Yoga	Ayurveda	Homeopathy	Unani/ sidha/any other	NA
		51 (47.7)	19 (17.8)	5 (4.7)	3 (2.8)	41 (38)

[Table/Fig-5]: CAM practice of modern medicine practitioners.
NA: Not Applicable; Note: values in brackets - %, outside values - frequency

DISCUSSION

In this study, assessing the perception of doctors revealed that out of 107 respondents, 39 (36.4%) practitioners held a neutral opinion regarding the statement that CAM is based on spirituality, while 32 (29.9%) agreed with it [Table/Fig-4]. This contrasts with the study by Wahner-Roedler DL et al., which demonstrated that 52% of physicians believed that a physician's spiritual beliefs and practices play a major role in patient healing, and as many as 87% felt that the patient's spiritual beliefs and practices are more important in this regard [9].

In the present study, the majority (85; 79.4%) felt that authentic information on CAM is not available to modern medicine practitioners, with 26 (24.3%) strongly agreeing with this statement. According to the study by Mohith N et al., most doctors (60%) agreed that traditional medicine practitioners (TMPs) do not undergo adequate training before starting practice [8].

A majority (71; 66.4%) of the practitioners in the present study also felt that CAM is beneficial only in a few clinical conditions. While 8 (7.5%) disagreed with this statement, the remaining respondents were neutral. A total of 46 (43%) of practitioners were neutral regarding the statement that CAM is quite safe, whereas 35 (32.7%) disagreed. According to Lewith GT et al., one of the major concerns among physicians was the safety of CAM [5].

Common drug toxicity was reported as one of the disadvantages of Traditional Medicine (TM) in the study by Mohith N et al., which also stated that many modern medicine practitioners do not recommend TM to their patients due to unfamiliarity with it [8]. Additionally, Sayyad AS et al., reported that 22% of primary healthcare doctors believed that most CAM therapies were safe [1].

In the present study, 64 (59.8%) doctors, including 25 (23.4%) who strongly disagreed, did not accept that CAM leads to permanent cure without modern medicine, while only 8 (7.5%) agreed with this statement. Furthermore, 55 (51.4%) of doctors opined that CAM

focuses on the prevention of diseases rather than cure, while 21 (19.6%) held the opposite view. In contrast, physicians in the Lewith GT et al., study did not generally consider CAM as preventive in nature [5].

While assessing the attitude of doctors toward CAM, out of the 82 (76.7%) practitioners in this study who felt that CAM is not reliable in acute conditions, 34 (31.8%) strongly agreed with this view. According to Narayana S et al., the majority of doctors accessing traditional medicine believed that TM is more beneficial in chronic diseases, particularly those with poor prognosis under modern medicine, rather than in acute conditions [7]. Similarly, Mohith N et al., reported that TM is primarily used to treat chronic conditions [8].

Almost 42 (39.2%) practitioners disagreed that CAM is better than modern medicine in certain clinical conditions, and 44 (41.1%) disagreed with the statement that CAM should be tried only when modern medicine fails. The study by Lewith GT et al., revealed that while physicians consider CAM less effective than conventional medicine, they do not generally view it as a therapy of last resort [5].

A majority, 71 (66.4%), of the consultants in the present study believed that the therapeutic response to CAM is delayed compared to modern medicine, whereas only 2 (1.9%) disagreed. 45 (42%) of practitioners felt (including 15; 14% who strongly agreed) that even with appropriate guidelines, CAM can never be as effective as modern medicine.

This study also revealed that 76 (71%) of practitioners believed that patients must change their lifestyle to obtain maximum benefit from CAM, whereas only 5 (4.7%) opposed this statement. According to Lewith GT et al., physicians do not consider CAM merely a fashionable trend or an unreliable option [5].

In the current study, 93 (86.9%) practitioners, including 47 (43.9%) who strongly agreed, believed that more scientific studies are needed to substantiate the use of CAM. Similarly, Lewith GT et al., suggested that practitioners believe CAM should undergo further scientific testing [5]. Likewise, Liu L et al., reported that a major

concern among doctors regarding CAM is the lack of scientific evidence [6].

While 32 (29.9%) consultants opined that adding CAM to the MBBS curriculum would benefit future doctors, 39 (36.4%) were neutral. According to Sayyad AS et al., 70% of primary healthcare doctors believed CAM should be included in the undergraduate medical curriculum [1]. Many countries have implemented TM sensitisation programs in their medical curricula [10], and a few medical and pharmacy schools in the US and Europe have incorporated TM courses [11,12].

This study showed that regarding the practice of modern medicine consultants, 52 (48.6%) of them reported actually utilising or considering the use of CAM in their clinical practice [Table/Fig-5]. Among them, 33 (30.8%) acknowledged that they found CAM valuable and incorporated it into their practice. In Sayyad AS et al., 41% of doctors had used CAM, while 55% had considered using it for their patients [1].

Only 36 (33.6%) of practitioners had tried CAM for themselves or their families. Similarly, in Sayyad AS et al., 39% of doctors had personal experience with CAM [1]. In Lewith GT et al., 32% of doctors were either involved in CAM treatment or used it personally [5]. Several studies reported that many physicians were satisfied with CAM after practicing it and were willing to recommend it to patients, friends, and family [13-19].

Interestingly, 45 (42.1%) of consultants in the present study were willing to undergo training in CAM. In Sayyad AS et al., 89% of doctors expressed willingness to attend future courses in CAM [1].

Among various branches of CAM, 51 (47.7%) of doctors recommended Yoga to their patients, while 19 (17.8%), 5 (4.7%), and 3 (2.8%) used Ayurveda, Homeopathy, and other branches, respectively. According to Narayana S et al., Yoga/Naturopathy was the most commonly practiced TM in India [7]. As reported in Liu L et al., acupuncture was the most commonly practiced CAM modality [6]. In Deolekar P et al., 31% of practitioners suggested Ayurveda to their patients [4].

Limitation(s)

The knowledge of doctors regarding CAM was not assessed in this study, which could be considered a limitation.

CONCLUSION(S)

Although modern medicine practitioners' perception and attitude toward CAM were satisfactory, almost half of them were using or considering the use of some branch of CAM. Yoga, followed by Ayurveda, was the most commonly practiced branch. Since many doctors are willing to undergo training in CAM, open approaches such as CAM sensitisation programs could further increase its use and facilitate integration into modern medicine by practitioners.

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