



Original Research Article

ATTITUDE AND PRACTICES OF MEDICAL STUDENTS TOWARDS COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM): A CROSS SECTIONAL STUDY IN KERALA

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ABSTRACT

Background: Complementary and Alternative Medicine (CAM) encompasses various health practices rooted in traditional beliefs and experiences. Despite CAM's increasing use for managing chronic conditions in India, limited research exists on medical students' attitudes and practices regarding CAM, particularly in Kerala. **Aim:** This study aimed to assess the attitudes and practices of medical students towards CAM in a Private Medical College of Kerala.

Material and Methods: A cross-sectional study was conducted among 323 MBBS students from four academic years (2020–2023). Data were collected using a pretested self-administered questionnaire covering attitudes and practices related to CAM. Positive and negative attitudes were scored based on responses. Practices were assessed through CAM usage patterns. Data were analyzed using SPSS software, employing descriptive statistics and Chi-square tests, with $p < 0.05$ considered statistically significant.

Results: All participants had heard of CAM, primarily through friends and family (35%). While 47% believed CAM to be effective in specific conditions like orthopaedic and skin issues, 39% were skeptical. CAM usage was reported by 73%, with Ayurveda (65%) and Homeopathy (34%) being the most popular modalities. Reasons for non-use included doubts about efficacy (36%) and prolonged treatment duration (31%). Most participants (85%) recognized CAM's public health benefits, with 61% intending to recommend its use alongside modern medicine. Positive attitudes significantly correlated with higher CAM usage and professional recommendations ($p < 0.01$).

Conclusion: The study revealed widespread awareness and mixed perceptions of CAM among medical students. Integrating CAM knowledge into medical education may foster informed decision-making in clinical practice.

Keywords: Complementary and Alternative Medicine, Ayurveda, Medical Students, Attitudes and Practices.

INTRODUCTION

Complementary and Alternative Medicine (CAM) refers to a broad range of medical practices and therapies not traditionally integrated into conventional medical systems. According to the World Health Organization (WHO), CAM includes practices based on cultural traditions and indigenous

knowledge, aimed at promoting health, preventing diseases, and treating illnesses holistically.^[1]

In India, systems like Ayurveda, Siddha, Homeopathy, and Unani have been practiced for centuries and remain integral to the healthcare landscape.^[2] These systems emphasize natural and holistic approaches, focusing on the body's intrinsic ability to heal itself.^[3] Globally, the popularity of

CAM has grown due to dissatisfaction with conventional medicine, concerns about the side effects of modern treatments, and a desire for personalized healthcare.^[4] Studies indicate that CAM is often used in managing chronic conditions such as diabetes, hypertension, arthritis, and mental health disorders.^[5]

The Indian government actively promotes CAM through its Ministry of AYUSH (Ayurveda, Yoga, Unani, Siddha, and Homeopathy), which has led to increased institutional support and public awareness.^[6] Kerala, known as the cradle of Ayurveda, has a long history of CAM use and integration, making it an ideal setting for studying attitudes and practices towards these systems.^[7] Despite the widespread use of CAM, little is known about how future healthcare providers—medical students—perceive and engage with these therapies.^[8]

Medical students' attitudes and practices towards CAM are critical, as their perceptions influence the integration of CAM into clinical practice and its acceptance among patients.^[9] Studies conducted internationally have highlighted mixed attitudes among medical students, with some showing enthusiasm and others expressing skepticism due to limited exposure or scientific evidence.^[10] In India, however, there is limited research exploring medical students' perspectives on CAM, particularly in regions like Kerala where traditional systems of medicine are widely embraced.^[11]

This study aims to evaluate the attitudes, and practices of medical students towards CAM in Kerala. Understanding these aspects can provide insights into how CAM can be effectively integrated into medical education and future clinical practice, bridging gaps between traditional and modern medicine.^[12]

Aims and Objectives

Aims

The aim of this study is to assess the attitudes and practices of complementary and alternative medicine (CAM) among medical students in a Private Medical College of Kerala.

Objectives

1. To evaluate the attitude of medical students towards CAM.
2. To assess the practices of CAM among medical students

MATERIALS AND METHODS

A cross-sectional study was conducted to assess the attitudes and practices of medical students towards Complementary and Alternative Medicine (CAM) at KMCT Medical College, Kozhikode, Kerala. The study took place from 2023 May till August 2023. The study population consisted of all MBBS students enrolled in the academic years 2023, 2022, 2021 and 2020 at the college, totalling 400 students. A universal sampling method was used. This

approach ensured that the sample represented a broad range of students without exclusion based on academic year.

To collect data, a pretested self-administered questionnaire was used. The questionnaire was divided into two sections. The first section assessed the student's attitudes towards CAM, comprising seven questions. Each question had two possible responses, with positive responses being scored as 1 and negative responses scored as 0. A total score of 3 or less was considered indicative of a negative attitude, while a score of 4 or more reflected a positive attitude towards CAM. The second section of the questionnaire focused on the practices of CAM among the students, with questions exploring their actual engagement with various CAM therapies.

Before completing the questionnaire, an introductory outline about CAM was provided to ensure that participants had a basic understanding of what CAM entailed. After the students filled out the questionnaires, the forms were collected for further analysis. The data was then entered into Microsoft Excel and analyzed using SPSS software. Descriptive statistics were used to summarize the results, and the Chi-square test was applied to determine any significant associations between socio demographic factors and the student's attitudes or practices towards CAM. A p-value of less than 0.05 was considered statistically significant.

Ethical Considerations: The study was ethically approved. To maintain confidentiality, personal identifying information was not collected from the participants. Informed consent was obtained from all students, who were made aware of the voluntary nature of their participation and the confidentiality of their responses

RESULTS

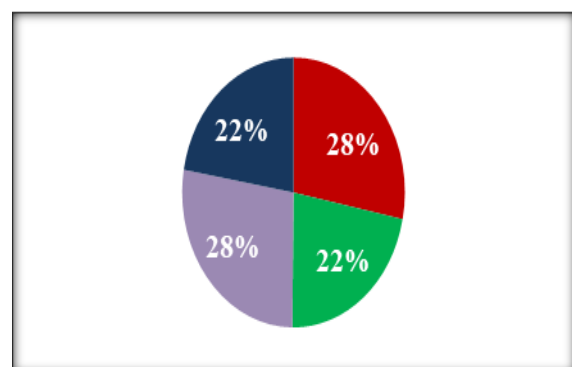


Figure 1: Batch wise distribution of Study Population

The study explored the attitudes, and practices related to complementary and alternative medicine (CAM) among 323 MBBS students from a Private Medical College of Kerala. The findings are summarised below:

Knowledge and Sources

All participants had heard about CAM. The primary source of knowledge was friends and family (35%), followed by general reading (26%), and social media (15%). Other sources, such as classes, camps, and combinations of social media and general reading, contributed minimally.

Majority of the study population was from 2020 and 2021 batches.

Attitudes Toward CAM

Nearly half (47%) of the participants believed CAM was effective compared to modern medicine. Among these, 72% noted its utility in specific conditions like orthopedics (25%), skin (17%), and hair-related conditions (12%). Conversely, 39% felt CAM was less effective, and 14% were uncertain.

Most respondents (85%) considered CAM beneficial to public health, although 67% acknowledged its benefits were context-dependent. Two-thirds (66%) supported the inclusion of CAM in medical curricula, while the remaining 34% opposed it, citing reasons like study load (40%) and differences in concepts (15%).

When asked about their professional approach, 61% expressed intentions to suggest CAM alongside modern medicine.

The majority of the participants who did not want to include CAM in medical curriculum was of the opinion that they already had enough to study (40%), it was not effective as modern medicine (24%) and that both the therapies deal with different concepts (15%).

Practices and Preferences

The majority (73%) of participants had used CAM, primarily for treating illnesses (55%) and promoting health (19%). Ayurveda (65%) and Homeopathy (34%) were the most commonly used forms, with minimal adoption of other CAM types like naturopathy (1%). Among the non-users, 36% doubted CAM's efficacy, 31% cited the long duration of treatment, and 26% had no prior

exposure. Majority (73%) of the students felt that Government should promote CAM clinics.

Discontinuation and Challenges

Out of those who used CAM, 61% discontinued its use during treatment. The main reason was the prolonged treatment duration (77%), followed by perceived inefficacy (19%). Additionally, 95% of users did not use CAM regularly.

Influencing Factors

Family influence was the dominant factor for initial CAM usage (86%), with peers and advertisements playing lesser roles. CAM was often used when modern medicine failed (34%) or alongside it (29%).

Areas of Interest

The most significant area of interest was finding optimal combinations of CAM and modern medicine (38%), followed by exploring its safety and side effects (29%) and understanding its mechanisms of action (23%).

Specific Use Cases

CAM therapies were most commonly used for hair-related conditions (69%), skin issues (56%), and aches and pains (55%). They were also employed for gastrointestinal problems (50%), fever and common cold (51%), and migraine (31%).

Associations

Statistical analyses revealed significant associations:

- Positive attitudes toward CAM's efficacy correlated with higher usage (88%) and professional recommendation (81%) ($p < 0.01$).
- Students with positive perceptions of CAM's public health benefits were more likely to use it (76%) ($p < 0.01$).
- Junior batch students demonstrated greater usage (75%) and more favorable attitudes compared to seniors ($p = 0.003$).
- Gender did not significantly affect CAM usage or attitudes, although females showed slightly more positive attitudes (80%).

Table 1: Reasons for not favouring the inclusion of CAM in Medial curriculum

Reason for not including	Frequency	Percent
Study load will further increase	44	40%
Not effective as modern medicine	27	24%
Both deal with different concept	16	15%
No scientific base	12	11%
Not interested	7	6%
Get confused	4	4%
Total	110	100%

DISCUSSION

The present study aimed to evaluate the attitude and practice of Complementary and Alternative Medicine (CAM) among medical students of Private Medical College, Kozhikode, Kerala, conducted as a cross-sectional study between May and August 2024. The study population comprised MBBS students from the 2020, 2021, 2022, and 2023 batches, with data collected using a pretested self-administered questionnaire.

Out of 323 participants, the majority were in the age group of 21–24 years, with females constituting 76% of the study population. All participants had heard about CAM, with 35% gaining knowledge through friends and family. Nearly half (47%) of the students believed CAM to be more effective than modern medicine in certain conditions such as orthopaedic ailments (25%), skin disorders (17%), hair problems (12%), migraines (10%), bronchial asthma (9%), and psychiatric conditions (8%). Furthermore, 85% of the participants considered

CAM beneficial to public health, although 67% believed it was beneficial only in specific circumstances.

Interestingly, attitudes towards the inclusion of CAM in the medical curriculum varied between junior and senior students. While 53% of junior students supported its inclusion, 56% of senior students opposed it. This finding aligns with a study conducted at JNMC University, Belgaum, Karnataka, where first-year students expressed positive attitudes toward incorporating CAM topics into the curriculum.^[13] The observed decline in positive attitudes among senior students in this study could be attributed to their increasing exposure to and deeper understanding of modern medicine.

A majority (61%) of the participants expressed willingness to recommend CAM alongside modern medicine in their professional practice. This finding parallels results from a study conducted among medical students in Turkey, where most participants showed a positive attitude toward CAM, demonstrated an interest in receiving training, and expressed a likelihood of recommending CAM in future practice.^[14] The area of greatest interest among participants in the present study was achieving an optimal combination of CAM with modern medicine (38%).

Regarding gender differences, 80% of female participants demonstrated a more positive attitude toward CAM compared to males, a trend similar to findings from the Turkish study.^[14] While 27% of participants reported not using CAM, 36% of this group attributed their non-use to perceptions of ineffectiveness. It is noteworthy that home remedies were not included as part of CAM in this study, which may explain the higher percentage of non-users. Among the 235 participants who used CAM, the majority (54%) did so for treating illnesses, while 19% used it for health promotion.

Family influence played a significant role in initial CAM usage, with 86% of users reporting that their first experience with CAM was due to family recommendations. This finding aligns with a survey conducted at a tertiary care hospital in Karnataka, where physicians reported that most patients adopted CAM based on recommendations from friends and relatives.^[15] The most common reason for CAM use was the perceived failure of modern medicine (34%). Ayurveda emerged as the most frequently used CAM therapy (65%), followed by Homeopathy (34%) and Naturopathy (1%). This trend resonates with a study conducted at Maulana Azad Medical College, where Ayurveda and Homeopathy were also popular among both doctors and patients.^[16]

However, 61% of CAM users discontinued treatment during its course, primarily due to the prolonged duration of treatment (77%) or perceptions of ineffectiveness (20%). Among CAM users, the most common applications were for hair

conditions (69%), skin conditions (56%), and aches and pains (55%).

The study revealed that 88% of participants with a positive attitude toward CAM effectiveness had practiced it, whereas 59% of those with a negative attitude also reported CAM usage, likely influenced by family members. Notably, 67% of CAM users indicated a likelihood of recommending CAM alongside modern medicine in their professional lives.

These findings underscore the mixed attitudes and practices regarding CAM among medical students. While CAM is perceived as beneficial in specific contexts, factors such as treatment duration, effectiveness, and integration with modern medicine influence its acceptance and practice. Future efforts should focus on fostering balanced knowledge and training to enable students to make informed decisions about CAM in their professional practice.

CONCLUSION

The study highlights widespread awareness and varied perceptions of CAM among medical students, underscoring the need for balanced education to equip future doctors with informed perspectives on its integration with modern medicine.

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