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BELIEFS AND PRACTICES TOWARDS COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM) AMONG RESIDENTS OF AN URBAN AREA IN CHENGALPATTU DISTRICT, TAMIL NADU:

A CROSS-SECTIONAL STUDY

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Abstract

Background: Ayurveda, Yoga, Unani, Siddha and Homeopathy (AYUSH) are the commonly available and utilised Complementary and Alternative Medicines (CAM) in India. Though the integration of CAM with Modern Medicine (MM) services was implemented, the occurrence of health related events are yet to be interrupted and controlled due existing challenges. Lack of awareness about CAM is one of the major challenges.

Aim:

- To assess the beliefs, perceptions and practices of the study participants towards the CAM.

Setting: Maduranthakam, Chengalpattu district, Tamil Nadu

Study design: Community based cross – sectional study.

Participants: Individuals above 18 years of age residing in Maduranthakam.

Sample size: A sample of 298 study participants were selected using systematic random sampling.

Study variables: Demographic characteristics, knowledge, perceptions and practices regarding CAM.

Statistical analysis: Analysed by frequencies, percentages and chi – square test.

Results: 89.6% of the study participants were aware of CAMs available in India, out of which 49.7% were users of CAM and Siddha (48.6%) was the most commonly used CAM among users. 96 (32.2%) of them agreed that they would support the integration of CAM with MM for the improvement of healthcare coverage. The most common reason for preferring the CAM was mentioned as "no or less side effects" by 60 (40.5%) of users.

Conclusion: Though there was adequate awareness, positive attitude and utilization, a felt need for health education on risks and benefits of CAM is prevailing in the community.

Key words: AYUSH, Complementary/ Alternative Medicine, knowledge, attitude, practice.

Introduction

Indian subcontinent is a nation consisting of 1.428 billion population and a wide verity of socio – cultural, linguistic and demographic components [1]. Also, there exists an extensive health conditions such as communicable and non – communicable disorders related to nutrition, lifestyle, sanitation etc. [2]. In the midst of existing health infrastructure and manpower, rendering accessible and quality services nationwide is debateable. In India, an extensive variety of healthcare practices and therapies other than allopathic medicines in other words Complementary and Alternative Medicines (CAM) are also practiced. CAM comprises of health interventions and medical sciences or disciplines other than the modern or allopathic system of medicine [3]. They are called complementary when used along with the standard medical treatment or allopathic medicine and as alternative when used instead of the standard medical treatment or allopathic system medicine [4]. CAM are still the presiding system of medicines in some countries including rural India [4]. The CAM available

in India include Ayurveda, Yoga, Unani, Siddha and Homeopathy shortly known as AYUSH. These are evidence based sustainable indigenous systems of medicine practiced in different parts of the country since ages [2, 5]. The Modern Medicine (MM) which was introduced in India during the British rule gained popularity and legitimacy leading to discouragement of the public to seek the indigenous system of medicine [6]. In the view of strengthening the indigenous system of medicine, the government of India established the Department of Indian System of Medicines (ISM) in March 1995 and was renamed to AYUSH in November 1995 [6]. The present day expansion of AYUSH in India include establishment of separate Ministry in the Union government, central institute for AYUSH and many government initiated programs to reinvigorate the legacy of the Indian system of Medicine [6]. In India in the year 2010, it was estimated that there were seven lakh eight thousand hundred and eighty five (785,185) registered AYUSH practitioners [7]. Yet the utilization of the AYUSH practitioners and AYUSH use was only 6.5% and 13 % percentage only as per a nationwide survey conducted between 2017 and 2018 [7]. In this regard, integrating and mainstreaming the CAM with Modern Medicine (MM) and rendering services under one roof through primary health centres (PHC) and Community Health Centres (CHC) was envisioned under National Rural Health Mission (NRHM) [8]. Paradoxically, after a structured amalgamation and implementation, attaining the expected results were difficult. It indicated the presence of multiple obstacles such as difference in physiology of practice and approach to health conditions, lack of guidelines for cross referral, lack of logistics and infrastructure, lack of awareness among general public, ethical issues etc. [9]. These challenges sabotage the benefits of AYUSH, discourage the patients as well as the doctors leading to failure of providing intended support to the public health system. Hence this study was aimed to assess the beliefs and perceptions of the general population towards the complementary and alternative medicine in India.

The objectives are,

- To assess the knowledge of the study participants about complementary / alternative medicine.
- To determine their attitude and practices towards complementary/ alternative

medicine.

Experimental / Methodology

Study design and duration

A community based cross – sectional study was conducted at Melmaruvathur Adhiparasakthi Institute of Medical Sciences (MAPIMS) Urban Health and Training Centre (from 1st of April'23 to 31st of July '23) for four months.

Study Setting

Urban Health and Training Centre (UHTC) is located in Maduranthakam municipality area (Kadaperi, Ward No. 12) in Maduranthakam Taluk, Chengalpattu District, Tamil Nadu. It is located at a distance of 10 kms from MAPIMS. The centre caters around 18,411 population in urban areas of Madhuranthakam and also to population in peri-urban areas of Madhuranthakam municipality. It provides comprehensive care to the community and is equipped with basic medical facilities and laboratory services. The health care provided is free of cost. Field practice areas of the UHTC include Kadaperi, Sengunthar Pettai, Vanniar Pettai, Mocherry, Gandhi Nagar, Sathanoor and Maambakam of Maduranthakam taluk.

Study Participants

The study participants were individuals above 18 years of age residing in Maduranthakam.

Inclusion criteria:

- All individuals aged 18 years and above residing in Maduranthakam were included in the study.

Exclusion criteria:

- Individuals not available during data collection for two consecutive visits.
- Individuals those who were not willing to participate in the study were excluded.

Sample Size and Sampling procedure

The minimum required sample was calculated to be 255 based on the study done by Kavita Jaiswal et al [10], which reported 79.0% of the respondents were aware of CAM. Though the

minimum required sample was calculated to be 255, we were able to collect the data from 298 study participants. Systematic random sampling was done to select the study participants.

Study tool

The study tool comprises of four parts.

1. Socio demographic characteristics: It includes name, age, gender, residential address, marital status, total monthly family income, total number of family members, education and occupation of the study participants and family history of CAM use.
2. Knowledge about CAM: It comprises of questions related to assessing knowledge of the study participants such as their familiarity with CAMs available in their community, its affordability, safety, effectiveness, and adverse effects also whether they need a health education about the CAMs etc.
3. Attitude towards CAM: It comprises of questions related to assessing the attitude towards CAM such as acceptability, efficacy and integration of CAM with MM.
4. Practice: It comprises of questions pertaining to usage and non-usage of CAM and reasons for the same among the study participants.

Ethical Approval

This study was approved by the Institutional Ethics Committee, Melmaruvathur Adhiparasakthi Institute of Medical Sciences and Research, MGR University (ECR/1487/Inst/TN/2020, project No. 259(1)2023 approved on January 01, 2023). Written informed consent was obtained from all the participants involved in the study.

Study procedure

Line listing of households in the field practice area of Urban Health and Training Centre (UHTC), Maduranthakam was done and every third household (residents fulfilling the inclusion criteria) was selected using systematic random sampling. Lottery method was used to select the study participant in the selected household who was available while data collection. The Medical Social Worker (MSW) and the house surgeons who were posted in the UHTC during the study period helped in collecting the data.

A self – developed, self-administered, semi –structured (containing both open and close ended questions) questionnaire comprising of questions pertaining to demographic characteristics knowledge, perceptions and actual practices regarding complementary / alternative medicines among the participants was used to gather information. The questionnaire was translated into Tamil language and was explained in such a way that each of the participants understood the questions substantially for independent answers. The study participants were explained in detail about the study and after obtaining written consent they were invited to take part in the study. The response sheets were filled, collected and checked for completeness. Identification digits were used in place of names of the participants to maintain confidentiality.

Statistical Analysis

The data was entered in Microsoft excel 2013 and analysed using Statistical Package for the Social Sciences for windows (SPSS) version 20.0. Outcome variables were expressed as percentages and frequencies and any association with the demographic characteristics were analysed using chi-square test taking P value < 0.05 as statistically significant.

Results

Out of 298 study participants, 162 (54.3%) were > 40 years of age while 136 (45.6%) were < 40 years of age. There were 104 (34.9%) men and 194 (65.1%) women in the study group. 146 (48.9%) of the study group consisted of participants who were educated above higher secondary whereas 125 (41.9%) were educated up to or below higher secondary while 27 (9.2%) had no formal schooling. 129 (43.28%) comprised of employed population (govt. employee, non- govt. employee and self – employed) while 137 (56.2%) of the study group consisted of students, retired persons and house wives. As per modified BG Prasad's Classification, 201 (67.4%) belonged to the upper class (Class I) while 2 (0.7%) belonged to the lower class (Class V). Table 1 demonstrates the distribution of study participants based on their socio – demographic details.

Table 1: Distribution of Study Participants Based on their Socio-demographic Details (n=298)

Demographic details	n (%)
Age (years)	
18 – 30	77 (25.8)
31 – 40	85 (28.5)
41 – 50	49 (16.4)
51 – 60	34 (11.4)
>60	53 (17.8)
Gender	
Male	104 (34.9)
Female	194 (65.1)
Education	
No formal education	27 (9.2)
Primary school	17 (5.7)
Middle school	56 (18.8)
High school	52 (17.4)
Higher secondary	35 (11.7)
Graduate	90 (30.2)
Postgraduate	21(7)
Occupation	
Govt. employee	15 (5)
Non govt. employee	49 (16.4)
Self employed	65 (21.8)
Unemployed	32 (10.7)
Student	17 (5.7)
Retired	12 (4)
House wife	108 (36.2)
SES	
Class I	201 (67.4)
Class II	68 (22.8)
Class III	18 (6)
Class IV	9 (3)
Class V	2 (0.7)

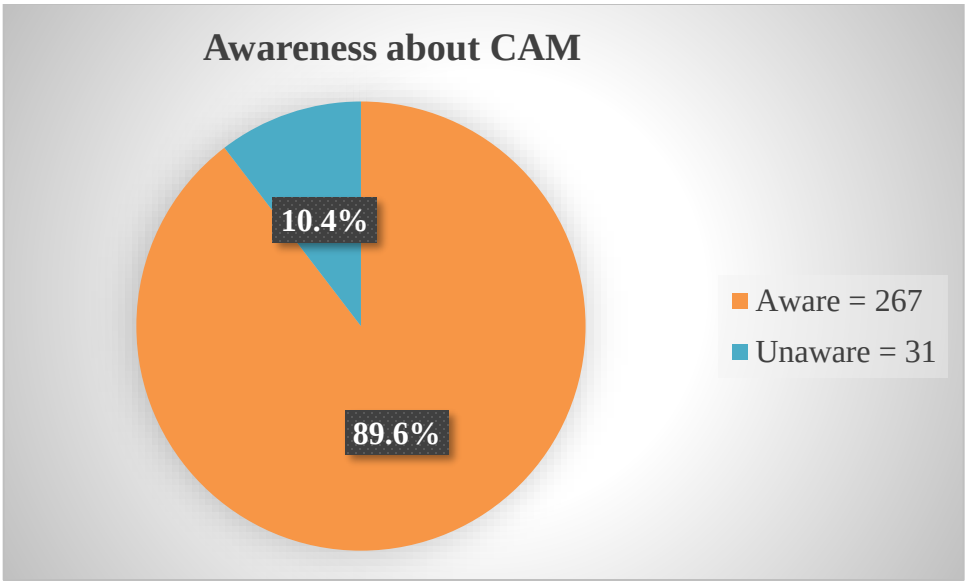

Figure 1: Distribution of Study Participants Based on their awareness about CAM (n=298)

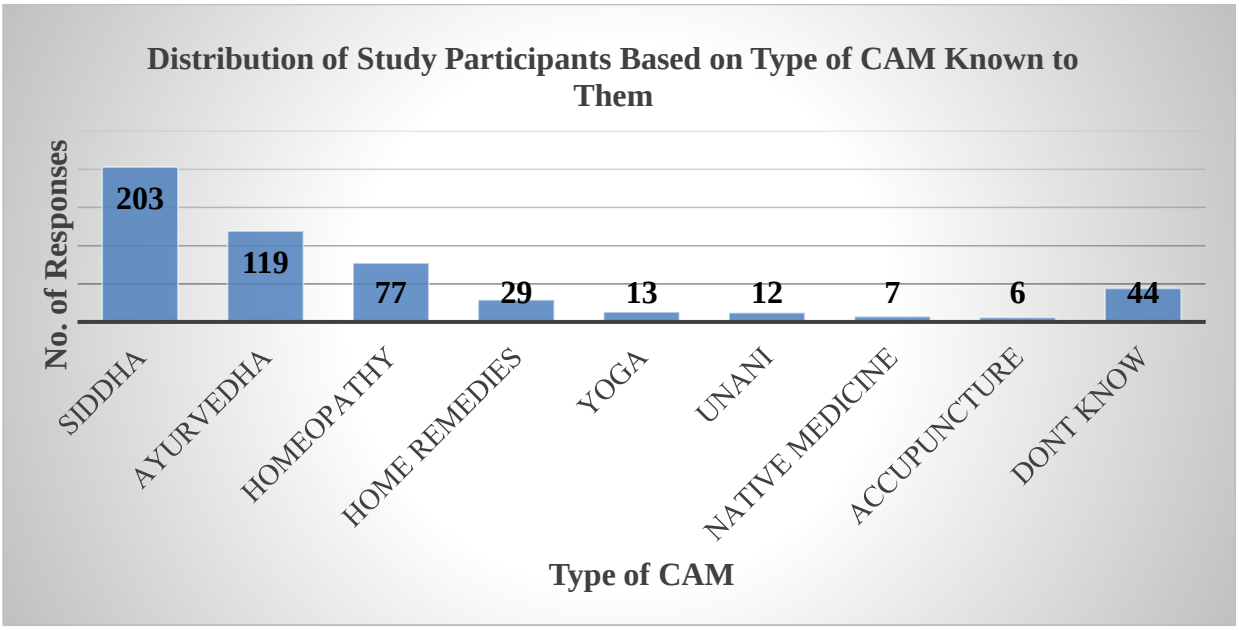

Figure 2: Distribution of Study Participants Based on the Type of CAM known to them

267 (89.6%) of them reported that they have heard about CAM (figure 1). The study participants mentioned different types of CAMs available in India out of which Siddha was the most commonly known CAM among the study group (figure 2). 74.1% mentioned that CAMs were accessible at an affordable cost in their community and the most common source

for CAM were government facilities as mentioned by 32.5 % of the participants. More than 65% of the participants felt that there is a need of health education on risks and benefits of CAM while more than 55% of them said that non – sterile methods of CAM drugs dispensing is harmful. In this study, it was found that 136 (45.6%), 171 (57.4%), 185 (62.1%) and 148 (49.7%) of the study participant believed that CAM is more effective, safer, produces lesser side effects when compared with MM and CAM are based on scientific evidences respectively. The most common source of information regarding the CAM was friends and family members (66.4%). Majority of the study participants 164 (55%) agreed that CAMs are available at an affordable cost. 101 (33.9%) agreed the statement that CAMs can cure diseases that cannot be treated by modern medicine while only 13 (4.4%) strongly disagreed the same. Similarly, 115(38.5%) agreed that CAMs are more efficacious that MM while only 12 (4%) of them strongly disagreed the statement and 96 (32.2%) of them agreed that they would support the integration of CAM with MM for the improvement of healthcare coverage. Among the study participants, 148(49.7%) of them were CAM users and Siddha (48.6%) was the most preferred type of CAM followed by Ayurveda (16.2%). The most common reason for preferring the CAM was mentioned as “no or less side effects” by 60 (40.5%) of users and the second most common reason mentioned was “more effective than modern medicine” by 55 (37.1%). Among the users, 78 (52.7%) of them had complete cure and 50 (33.7%) of them had symptomatic relief as an outcome of their previous treatment with CAM. Only 18 (12%) out of 148 users had encountered side effects and more commonly it was of mild grade as reported by 12 out of 18 (66.7%). The most common conditions / diseases the CAM was preferred by users were fever with cough and cold 31.7% (47/148) followed by myalgia 20.2% (30/148) and skin related disorders 13.5% (20/148). Study participants also preferred CAM for infertility 2 % (3/148) and tuberculosis 1.35% (2 /148). Table 2 shows the source of knowledge, attitude and practices of study participants towards CAM.

Table 2: Knowledge, attitude and practices towards CAM among study participants

Sl. No	Knowledge Attitude and Practices	n	%
1.	**Source of knowledge (n=298)**		
	• Friends and family	188	63
	• Government hospital	08	03
	• Media	87	29
	• Don't know	15	05
2.	**Attitude towards CAM (n=298)**		
	• CAMs are accepted and available with an affordable cost in the community.	201	67
	• CAM is more efficacious than MM.	165	55
	• Support integration of MM with CAM to improve healthcare coverage.	136	46
3.	**CAM utilizers**	148	49.7
4.	**Type of CAM used (n=148)**		
	• Siddha	72	49
	• Ayurveda	25	18
	• More than 1 type of CAM	24	16
	• Homeopathy	5	3
	• Unani	2	1
	• Home remedies	16	11
	• Native medicines	2	1
	• Acupuncture	2	1
5.	**Outcome of previous treatment with CAM (n=148)**		
	• Complete cure	78	53
	• Symptomatic relief	50	34
	• No relief	20	13
6.	**More common heath conditions for preferring CAM (n=148)**		
	• Fever, cough cold and headache	47	32
	• Myalgia	30	20
	• Skin disorders	17	11

Table 3: Distribution of Study Participants Based on usage of CAM in Association with Demographic details

Demographic details	Distribution based of usage of CAM		Chi square	P value
	Yes n (%)	No n (%)		
Age (years)				
≤ 40 (n =162)	78 (48)	84 (52)	2.707	0.608
>40 (n =136)	70 (51)	66 (49)		
Gender				
Male (n=104)	57 (55)	47 (45)	1.690	0.194
Female(n=194)	91 (47)	103(53)		
Education				
No formal education (n=27)	11 (41)	16 (59)		
≤ High. Sec(n=160)	74 (46)	86 (54)	5.778	0.448
Graduate (n=90)	50 (56)	40 (44)		
Postgraduate (n=21)	13 (62)	8 (38)		
Occupation				
Employed (n=129)	70 (54)	59 (46)	10.440	0.107
Unemployed (n = 169)	78 (46)	91 (54)		
SES				
Class I (n=201)	100 (49.7)	101 (50.3)		
Class II(n=68)	34 (50)	34 (50)	2.103	0.717
Class III(n=18)	9 (50)	9 (50)		
Class IV(n=9)	5 (56)	4 (44)		
Class V(n=2)	0 (0)	2 (100)		
Family H/O CAM use				
• Yes (n = 198)	128 (43)	70 (24)	52.979	0.000
• No (n = 100)	20 (6)	80 (27)		

Table 3 shows the distribution of study participants based on usage of CAM in association with their demographic characteristics. > 60% of the study participants had a family history of CAM use. Family history of CAM use was significantly associated with current CAM usage among the study participants 128 (43%) (P = 0.000). The various advantages of using CAM as mentioned by the utilizers of CAM include no or less side effects 71 (48%), favourable outcome 46 (31%), affordability of treatment 20 (14%), naturally sourced medicines 9 (6%), easier availability of treatment 1 (0.5%) and no specific dietary restrictions 1 (0.5%). 205 (68%) of the study participants quoted that they would use CAMs in future and 220 (73.8%) said that they would recommend CAM use in the community.

Discussion

In the present study, we were able examine the perceptions and practices regarding CAM at the community level. In our study, maximum 162 (54.3%) of the study participants were above the age of 40 years and a large proportion 194 (65.1%) of them were females. Also the study area being urban, majority 201 (67.4%) of the participants belonged to upper class as per modified BG Prasad classification and 146 (48.9%) educated above higher secondary. Almost 90% of them were aware of CAM, 148 (49.7%) were utilizers of CAM and Siddha was the most common type of CAM being used among the users i.e. 72 (49%). More than 50 % of the users had complete cure as the outcome as their previous treatment with CAM and fever, cough and cold 47 (32%) were the most common conditions for which the CAM treatment was sought for among the users. The most common perceived advantage of using CAM among CAM utilizers was no or less side effects 71 (48%). More than 50% of the study participants showed a positive attitude towards CAM and 46% of them supported the integration of allopathic system of medicine with the Indian system of medicine.

In our study we were able to observe that 89.6% of the study participants were aware of CAMs and 49.7 % of them were using CAM, it was found to be in consistent with other studies [10, 11]. Though in most of the previous studies it was reported that demographic characteristics such as age, gender, education, occupation socio-economic status and place of residence (urban or rural) had an influence on CAM usage, in our study only family history of CAM usage had a statistically significant association with the current usage of CAM

[10, 12]. The most common sources of information regarding CAM were through (informal sources) friends and family members (66.4%) similar findings were observed in previous studies where informal sources (friends, family, neighbours etc.) play a major role in influencing and decision making regarding CAM [10-12]. Also in our study we were able to observe that there is a felt need for health education regarding risks and benefits of CAM among 65% of the study participants. Majority of the study participants 45.6%, 57.4% and 62.1% reported that CAM are more effective, safer and cause lesser adverse effects respectively compared to MM. Similar finding were reported in previous studies [13, 14].

Most of the study participants had a positive attitude towards the CAM in consistent to previous other studies [10, 12, 14 &15]. Also 46% of the participants supported integration of CAM with MM for a wider and positive health coverage.

Among the CAM users (148), majority of them were using Siddha (49%) in our study area owing to Siddha being traditional medicine which originated from Southern India. Whereas, in previous studies which were conducted in other parts of the country, Ayurveda was the most commonly used CAM [10&14]. It was reported in the previous studies that CAMs were preferred for chronic conditions like arthritis, skin disorders, diabetes, hypertension including cancers, whereas in our study, it was found that fever, cough and cold was the most common reason for preferring CAM followed by myalgia and skin disorders among the users [10, 14, 16&17].

In accordance with pervious other studies, low or lesser side effects (31%), good outcome (21%) and affordability (14%) were found to be the common advantages for using CAM among the study participants [10, 13, 14 &15]. Furthermore, study participants (>60%) were willing to use CAM in future as well recommended the CAM use in the community indicating their optimism towards CAM which was also consistent in other studies [14].

Conclusion

By the end of the study, we were able to find that the study participants were well aware on available CAM in their community. Also the level of acceptability of CAM was found to be high due to its good outcome, no or lesser side effects, availability and affordability. Yet, a felt need for health education on risks and benefits of CAM was observed. There was also an

optimistic attitude among the participants towards integration of CAM and MM in order to improve the health coverage in the country. With appropriate guidelines and policy making for logistics, infrastructure, cross referral and ethical considerations, integration of CAM with MM will be beneficial to the public as well as the government in terms of reducing the burden on the health system of the country.

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Conflict of Interest: Nil

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