

# Complementary and alternative medicine (CAM) use among patients presenting in OPD at tertiary care hospital, Rajasthan; a Questionnaire based study

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**Abstract-** Concurrent CAM utilization with conventional medicines is increasing both in developed and developing countries. A questionnaire based study was conducted among the patients attending OPD of a tertiary care institute of Southern Rajasthan. The aim of the study was to find out the pattern of CAM use in patients as well as their attitude and perception regarding CAM therapies.

Ayurveda (56%) was the most commonly used CAM therapy followed by homeopathy (34%). 76% patients did not inform their physicians about CAM use. 57.2% patients started using CAM on advice of a relative or friend. 'No or less adverse effects' (69.6%) was the most common reason for CAM preference over conventional medicines. 65.5% patients believed that CAM therapy do not cause any adverse effect.

Patients generally consider CAM therapies as safe and devoid of any adverse effects. Nondisclosure of CAM utilization to concerned physician can lead to adverse effects and drug interaction between CAM and conventional medicines. Thus there is a need to increase awareness among patients as well as more such studies need to be conducted in patients and in general public to know the current scenario of extent, pattern and prevalent misconceptions in society regarding CAM use.

**Index Terms-** complementary and alternative medicine (CAM)

## I. INTRODUCTION

National center for complementary and alternative medicine (NCCAM) defines CAM as a group of diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine.[1] Conventional medicine (allopathic medicine) is medicine as practiced by holders of M.D. and M.B.B.S degrees and by allied health professionals, such as physical therapists, psychologists, and registered nurses. Wide variety of alternative medicine is practiced all over India i.e. Ayurveda, Homeopathy, Unani, Herbal, Chinese, Acupuncture,

Yoga etc. In India commonly used CAM therapies have been given official recognition and a separate department was established in 2003 by the Government of India named as 'AYUSH'. This department has the responsibility of developing and propagating officially recognized CAM systems - Ayurveda, Yoga, Naturopathy, Siddha, Unani, and Homoeopathy.

Use of CAM is increasing not only in adult population, but also in pediatric age groups. According to a survey done by National Institute of Health (NIH) in USA approximately 38 % of adults in the United States and 12 % of children use some form of complementary and alternative medicine (CAM).[2] Usually the patients of chronic and intractable diseases end up using CAM after taking conventional medicine, but in some diseases they may use CAM as initial treatment.

There can be many reasons why patients opt for CAM. It has been reported by some studies that conventional healthcare is perceived as ineffective, having too many adverse effects or too expensive.[3,4] However dissatisfaction with conventional system may not be the only reason why patients turn to CAM. Concurrent use of CAM with conventional medicine is also widespread and poses a potential risk of drug interaction. This risk of drug interaction further increases because many a time's patients do not inform their physician about CAM use. There are also many misconceptions among patients regarding CAM use.

Studies regarding CAM use have been done in other countries, but only few studies have been reported in India.[5,6,7] Also most of the studies on CAM utilization have focused on special patient group, very few studies have observed CAM use among patients attending outpatient department of a general hospital. Thus this study is planned to develop a baseline data of CAM use among patients presenting in outpatient department of a tertiary care teaching hospital in Southern Rajasthan.

## II. LITERATURE SURVEY

CAM utilization is a universal phenomenon both in developing as well as developed countries. Type of CAM use can vary from country to country. Studies have been conducted in other countries & few in India, most of the studies have observed CAM use among specific patient group e.g. pediatric patients, cancer patients, epilepsy patients etc.[8,9,10]

A recent study has done by Adams D et al, assessed CAM use among pediatric patients in two hospitals of Canada. CAM use was widely prevalent, 42% in one hospital and 71 % in another. Most common CAM therapies used were massage, chiropractic, relaxation and aromatherapy. Most responders felt that CAM use was helpful & many of them did not discuss their CAM use with their physician.[11]

A systematic review assessing CAM use in cancer patients has been done by Adams M et al. In this review an average 31.4% CAM use was found among cancer patients across all the studies included. CAM use was more in females, married people, higher earners & better educated patients. CAM use was most common among breast cancer patients. Most of the studies suggested that only half of the cancer patients inform their physician about CAM use.[9]

In a recent study done by Biligil SG et al CAM use was observed among patients attending Dermatology outdoor, and it was found that 43.7% patients were using at least one CAM method & 20.8% were using two or more CAM methods.[9] An Indian study by Tandon M assessed CAM use among epileptic patients & found CAM use in 32% patients. Ayurvedic medicines were most common frequently used CAM therapy. Influence by 'family and friends' was most common reason for trying CAM in those patients.[10]

Most of the above mentioned studies have examined CAM use among specific patient group. Very few studies are available which have focused on CAM use in patients attending outpatient department of a general hospital. Hori S et al have conducted a study on CAM use among outdoor patients of a general hospital in Japan. CAM use was high (50%) among patients surveyed, while reporting of CAM use to concerned physician was low (42%). Similar to other studies CAM use was more in females as compared to males.[13] Another Indian study has assessed prescription of CAM medicine by practitioners of modern medicine. 12% of prescriptions contained CAM medicines, mainly ayurvedic drugs. CAM medicines mainly consisted of liver tonics, anti-inflammatory & analgesic ointments.[14]

During literature search only limited studies were found assessing CAM use among outdoor patients. We were not able to find any such study from Rajasthan. Thus, present study was conducted among outdoor patients of a general hospital associated with a tertiary care teaching institute in southern Rajasthan.

## III. AIMS & OBJECTIVES-

1. To find out the pattern of CAM use among patients presenting in outpatient department.
2. To find out the attitude of patients towards CAM use.
3. To develop a baseline data of CAM use in a tertiary care teaching hospital of Rajasthan.

## IV. METHODOLOGY-

**Type of study:** This was a cross sectional, observational, questionnaire based study

**Place of study:** The study was conducted in a Tertiary Care Hospital of Rajasthan

**Duration of study:** 2 months

**Sample size:** 200

**Inclusion Criteria:** All patients visiting out-patient department of the hospital who were using CAM

**Exclusion Criteria:**

1. Patients of age less than eighteen years.
2. All those who denied participation in the study.

**Procedure:**

1. Approval from Institutional Ethics Committee was taken before starting the study.
2. Patients attending the out-patient department of hospital were randomly contacted personally.
3. The study was explained to them in brief in a language they can understand. Patients who were using CAM were included in the study.
4. Consent of participants was taken in written informed consent form. (Appendix 2).
5. A pre-decided questionnaire was provided to them which included thirteen questions for assessment of pattern of CAM use & attitude of patients towards CAM therapy. They were asked to fill the questionnaire, with the help of the investigator if they were not able to understand it. It required approximately 10 to 15 minutes in filling the questionnaire. (Appendix 1)
6. All data collected were analyzed using appropriate statistical tests.

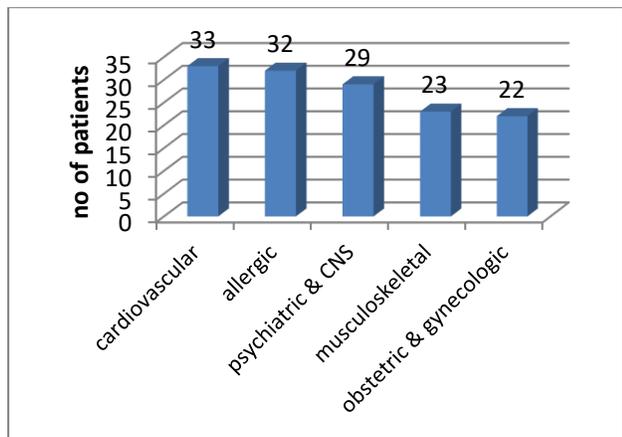
## V. OBSERVATION AND RESULTS-

A total of 200 patients who were using CAM were recruited in the study. Out of these 87 (43.5%) were males and 113 (56.5%) patients were females. 107 (53.5%) patients belonged to age group 20-40 years, 88 (44%) were from 40-60 years and 16 (8%) patients were of

agemorethan60years.86(43%)patientswereilliterate,52(26%)wereeducateduptoseniorsecondarylevel,33(16.5%)wereundergraduateand39(19.5%)werepostgraduate.

**Pattern of CAM use**

Aurveda was most commonly used CAM therapy, out of 200 patients 114 patients (56%) were using ayurvedic medicines. Second most common CAM



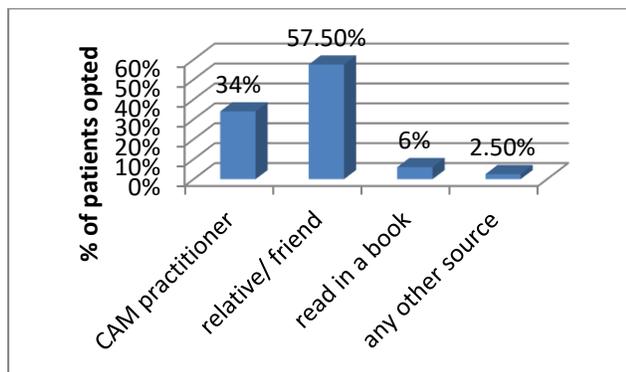
**Reporting to concerned physician**

152 (76%) patients did not inform to their physician about their CAM use. Only 48 (24%) patients informed to their physician about their CAM use. 127 (63.5%) patients admitted that their physician have asked them about CAM utilization, while 63 (31.5%) patients informed that their physician did not inquire about CAM use.

**Source of information regarding CAM**

115 (57.2%) patients started using CAM on advice of a relative or a friend, while 68 (34%) patients were using CAM on advice of CAM practitioner. 12 (6%) patients were using CAM after reading CAM related books or other literature. (Figure 2)

*Figure 2: Figure showing most common sources of information regarding CAM*



**Preference and reasons**

therapy used was homeopathy, which was used by 68 (34%) patients. Out of 200 patients contacted 185 (92.5%) were such who have used CAM in past also. Cardiovascular problems (n=33,16.5%) were the most common conditions for which CAM was used followed by allergic conditions (n=32, 16%). (Figure 1)

*Figure 1: Figure showing five most common conditions for which CAM was used*

S. No.	Reason	Patients who conventional system over CAM therapy (n=144)
1.	No / less adverse effects	33 (22.91%)
2.	Cheaper	04 (2.77%)
3.	Easy to take	03 (2.08%)
4.	No relief by CAM therapy	97 (67.36%)
5.	Any other reason	07 (4.86%)

56 (28%) patients preferred CAM over conventional medicine, while 144 (72%) patients gave preference to conventional medicine over CAM therapy.

Among 56 patients who preferred CAM, no or less side effects (69.6%) was the most common reason given followed by low cost (10.7%). (Table 1)

*Table 1: Table showing frequency of reasons for CAM preference*

Among 114 patients who preferred conventional medicine, no relief by CAM therapy (67.36%) was the most common reason for their preference followed by no or less side effects (22.9%). (Table 2)

*Table 2: Table showing frequency of reasons for preference of Conventional Medicines*

S. no	reason	Patients who preferred CAM therapy over conventional system (n=56)
1	No/ less adverse effects	39(69.64%)
2	Cheaper	06(10.71%)
3	Easytotake	03(5.35%)
4	No relief byconventionaltreatment	04 (7.14%)
5	Just to explore other option	04 (7.14%)

**Perception regarding adverse effects and interactions**

Out of 200 patients, 131 (65.5%) believed that CAM therapy do not cause any adverse effect, 9 (4.5%) patients admitted that CAM can also cause adverse effect while 60 (30%) patients were not sure about adverse effect with CAM therapy

Regarding interaction between CAM and Conventional medicines, 118 (59%) patients were ignorant about this fact. 65 (32.5%) patients believed that these two therapies do not interact when taken together, while 17 (8.5%) patients said that CAM and Conventional medicines can interact when given together.

## VI. DISCUSSION

In the present study pattern of CAM use and attitude & misconceptions of patients regarding CAM was assessed in patients attending outpatient commonly used CAM therapies. Use of CAM therapies varies from country to country depending upon their cultural beliefs and indigenous medicines prevalent e.g. in China, traditional Chinese medicine such as herbal medicine, acupuncture, acupressure, qi gong and t'ai chi chu'an are widely used, while in Japan kampo and acupuncture are commonly used as CAM therapy.[13] Cardiovascular problems were the most common conditions for which CAM was used followed by allergic conditions. Studies have shown that CAM usage is more in patients suffering from chronic diseases.[7] As common cardiovascular as well as allergic conditions are chronic in nature, high CAM utilization is found in such patients.

76% of patients did not inform their physicians regarding CAM usage. This figure is alarming and is higher than reported by other studies. Other studies have found that about 60% of patients do not disclose their CAM use to concerning physician.[13,16] This trend can be dangerous as modern medicines and CAM medicines can have potential interactions when taken together and physician's unawareness can result into serious consequences. Interestingly 63.5% patients admitted that their physician had asked them about CAM usage. This figure is reassuring, but shows that some percentage of patients did not disclose their CAM use even after physician's questioning. Patients may find it hard to report their CAM use for fear of anticipating a negative response and disapproval from their doctor.[17]

More than half of the patients (57.2%) started CAM on advice of a friend or a relative. Other studies have also reported similar results where CAM therapy was started under influence of some friend or relative.[15,18] Only 34% patients were using CAM on advice of a CAM practitioner. This trend is again undesirable as CAM and modern medicine can interact and there can be adverse effects by CAM therapies, CAM usage should be under guidance of an authorized practitioner.

65.5% patients believed that CAM therapies do not cause any adverse effect or cause minimum adverse effect, while 59% patients were ignorant that CAM & modern medicines can interact.

CAM therapies are generally considered devoid of adverse effects by the patients. This is further strengthened by the finding that the most common reason for CAM preference in the present study was 'no or less side effects by CAM. However this misconception among patients can be dangerous as many studies have reported that CAM therapies can cause serious adverse effects.[8,19] Thus physicians need to be more vigilant and inquire about CAM, simultaneously there is a need to remove

departments of a general hospital associated with a tertiary care teaching institute of southern Rajasthan. Ayurveda (56%) was found to be the most commonly used CAM therapy. This is in consensus with other studies done in India that have also reported ayurveda as the most commonly used CAM therapy.[7] As ayurveda is the indigenous medicine system of India, it is the most commonly used CAM therapy. Homeopathy (34%) was the next commonly used CAM therapy. Other Indian studies have also reported homeopathy as one of the commonly used CAM therapy in India.[7,15] Studies done in other countries have reported massage, spiritual practices, acupuncture etc. as the most

misconceptions in patients regarding adverse effects with CAM therapy. This can be done through awareness campaigns & better establishment of 'AYUSH' centers, so that most of the CAM utilization occurs in guidance of authorized practitioners.

There were some limitations in the present study. The study findings could not be applied to general public as the study was limited to patients attending the hospital OPD. Therefore it is recommended that several studies of similar kind especially in community setup need to be conducted to know the extent and pattern of CAM use in the society as well as attitude and perceptions of people towards CAM therapies.

## VII. CONCLUSION

The results of the present study show that Ayurveda is the most commonly used CAM therapy. Disclosure rate to concerned physicians about CAM use is low. Patients are largely unaware about the fact that CAM medicines can cause adverse effects & can interact when combined with conventional medicines. Thus physicians should be more vigilant about CAM utilization of their patients and there is a need to increase awareness among patients regarding safety of CAM.

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