

A questionnaire based cross sectional survey of attitude and practice of complementary and alternative medicine in medical practitioners

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Abstract: *Background:* Complementary and alternative medicine (CAM) has been practised in India since many years. People unsatisfied with conventional medicine often turn to unconventional alternatives. *Aim* is to appraise the extent of use of CAM amongst doctors and to examine their perception, attitude and practice towards CAM. *Methods:* This study was conducted among 105 doctors. A predesigned validated, questionnaire was used to evaluate the attitude and practice. Of 150 physicians who were given questionnaire to participate in the survey, 105 (70%) responded. *Results:* 22 (20.95%) were specialists and 83 (79.04%) General physicians. 79 (75.23%) Physician's considered that CAM has a beneficial role and 69 (65.71%) advised use of CAM in patients but only 25.71% would refer patients to CAM practitioners for treatment of an ailment. Of the total 105 physicians 31.42% General practitioners suggested Ayurveda therapy as compared to 10.47% specialists. 36% of the patients preferred Ayurveda as opined by the physician. Homeopathy was recommended by 35% followed by herbal medicine 32% and 30% naturopathy. However, physicians' responses on most of the CAM therapies i.e. Ayurveda, homeopathy, naturopathy, herbal medicine etc. was found to be statistically not significant. *Conclusions:* In the future, physicians can more readily use CAM. Because evidence for the effectiveness of CAM remains sparse, more research is needed for the prudent use of CAM. An education and training system for potential CAM providers remains to be developed.

Keywords: CAM, Questionnaire- Physician Perception, Physician.

Introduction

The role of the traditional, complementary and alternative medicine (CAM) is becoming essential in the healthcare systems of both the developing and the developed countries [1]. Complementary and Alternative Medicine (CAM) is defined by the National Centre for CAM (NCCAM), United States as "a group of diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine" [2].

CAM such as Ayurveda, homeopathy, herbal treatment, acupuncture and yoga are widely used in chronic illnesses such as diabetes mellitus, hypertension, coronary artery disease, stroke, COPD, asthma, arthritis, gout and other chronic neurological diseases [3]. The advantages of CAM over conventional medicine is that latter is

associated with side effects and high cost. Also conventional medicine is unable to find cure for life style diseases [3]. The popularity of CAM has increased considerably throughout the world over the past several years [4]. The department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH), under the Ministry of Health and Family Welfare proposed a new approach by integrating with the allopathic system, ensuring health for all citizens across the country [5].

CAM's utilisation in developed and developing countries has almost doubled in recent years, particularly where long term treatment is required [6]. The utilization rate of CAM in India ranges from 32-63% in chronic medical conditions [7].

Despite uncertainties about their effectiveness, the use of CAM is well documented. Studies suggest 30–68% of patients use some form of CAM therapy. Surveys on the use of CAM among doctors have shown variation in physicians’ beliefs and practices with respect to CAM [8-9]. The integrated approach to treat an ailment is not a new concept but its position in India is still at infancy. The success of this depends on the practitioner’s opinion and attitude towards other health care systems.

Therefore this study was conducted to determine the proportion of practitioners practising CAM, referring CAM to other practitioners and describe their opinion about CAM therapy.

Material and Methods

This was a cross sectional questionnaire-based study, which was conducted for a period of 6 months. All the general practitioners (MBBS) and consultants (MD, MS, MCh, DM, Diploma) willing to participate in the study from hospitals in and around Navi Mumbai were included after acquiring written informed consent.

The participants were briefed about the purpose of the study and participant information sheet was provided. A predesigned validated, questionnaire was used to assess the attitude and practice. Validation was done by administering prepared questionnaire to 10 medical practitioners, then based on the answers the modified questionnaire was finalised. Ethical clearance was taken from Institutional Ethics Committee. IEC Ref. No. DYP/IECBH/2020/14.

The questionnaire consisted of four parts. First part of the questionnaire contained questions regarding participants’ demographic information, qualification and specialization. Second part of questionnaire was intended to collect opinion regarding CAM utilization and outcomes. Third part of the questionnaire assessed the attitude towards acceptance of traditional medicine practice and the fourth part of the questionnaire was about physicians’ responses on different type of CAM therapy.

The questionnaires were distributed and information was given to 150 participants. Participants were requested to return duly filled questionnaire either by hand or through mail.

Collected data were entered in Microsoft excel spread sheet. Categorical data was represented as frequencies. The perception and attitude regarding integrated medicine between two groups was assessed using Fishers Exact test. P value ≤ 0.05 was considered statistically significant.

Results

Physician Demographics: Of the 150 physicians who were given questionnaire, 105 responded. The demographic features, years of experience, specialty fields are as given in Table 1.

| Table-1: Demographic profile of the participants | | |
|---|---------------|-------------------|
| Category | Number | Percentage |
| Age (years) | | |
| 25–35 | 17 | 16.19 |
| 36–45 | 37 | 35.23 |
| 46–55 | 40 | 38.09 |
| ≥56 | 11 | 10.47 |
| Gender | | |
| Males | 59 | 56.19 |
| Females | 46 | 43.80 |
| Qualifications | | |
| MBBS only | 83 | 79.04 |
| MD/MS | 22 | 20.95 |
| Speciality | | |
| Local practitioners (MBBS) | 83 | 79.04 |
| Consultants (MD, MS, MCh, DM, Diploma) | 22 | 20.95 |
| Years of experience | | |
| < 5 | 23 | 21.90 |
| 5–10 | 34 | 32.38 |
| >10 | 48 | 45.71 |

Table 2 shown, summarizes Physicians’ responses to questions regarding CAM utilization and outcomes. 79(75.23%) Physician’s believe in beneficial role of CAM and 69 (65.71%) recommended use of CAM in patients but only 25.71% would refer patients to CAM practitioners for treatment of an ailment. 65.71% of physicians believed in assimilation of CAM therapies into practice

though fewer physicians i.e. 58.09% believed that the incorporation of CAM therapies would have a positive impact on patient satisfaction. A few numbers of physicians 10.47% thought the impact could even be negative.

Majority of physicians (77.14%) enquired their patients whether they are using CAM and many of their patients were taking CAM for chronic ailments (79.04%). 67.61% of the physicians think that CAM does not worsen the patient's condition and about 61.90% of them are skeptical about CAM bringing about clinical improvement in their patients. Very few physicians think that CAM has any interaction with allopathic medication and may increase adverse effects of allopathic medicine. Most physicians (68.57%) stated that patients initiated the discussion about benefits and harmful outcomes of CAM therapies. (Repetition of the entire data in Table is not mentioned in the Text. Only important relevant findings have been emphasised in the Text).

| Physicians opinion on Questions based on CAM Therapy | N | (%) |
|---|----------|------------|
| (1) Do you believe in beneficial role of CAM? | | |
| YES | 79 | 75.23 |
| NO | 25 | 23.80 |
| NR | 01 | 0.95 |
| (2) Do you recommend CAM use in patients? | | |
| YES | 69 | 65.71 |
| NO | 35 | 33.33 |
| NR | 01 | 0.95 |
| (3) Do you refer patients to CAM practitioners for treatment of an ailment? | | |
| YES | 27 | 25.71 |
| NO | 77 | 73.33 |
| NR | 01 | 0.95 |
| (4) Do you believe in assimilation of CAM therapies into practice? | | |
| YES | 69 | 65.71 |
| NO | 33 | 31.42 |
| NR | 03 | 2.85 |

| Physicians opinion on Questions based on CAM Therapy | N | (%) |
|--|----------|------------|
| (5) Do you believe, Incorporation of CAM therapies into practice would result in increased patient satisfaction? | | |
| Major positive impact | 29 | 27.61 |
| Somewhat positive impact | 65 | 61.90 |
| Negative impact | 11 | 10.47 |
| (6) Do you ask patients whether they are using CAM? | | |
| YES | 81 | 77.14 |
| NO | 23 | 21.90 |
| NR | 01 | 0.95 |
| (7) Are your patients consuming CAM for chronic ailments? | | |
| YES | 83 | 79.04 |
| NO | 20 | 19.04 |
| NR | 02 | 1.90 |
| (8) Do you think CAM can worsen the patient's condition? | | |
| YES | 29 | 27.61 |
| NO | 71 | 67.61 |
| NR | 05 | 4.76 |
| (9) Do you think CAM doesn't bring about clinical improvement? | | |
| YES | 37 | 35.23 |
| NO | 65 | 61.90 |
| NR | 03 | 2.85 |
| (10) Do you think CAM has any interaction with allopathic medication | | |
| YES | 21 | 20 |
| NO | 78 | 74.28 |
| NR | 06 | 5.71 |
| (11) Do you think CAM can increase adverse effects of allopathic medicine | | |
| YES | 17 | 16.19 |
| NO | 80 | 76.19 |
| NR | 08 | 7.61 |
| (12) Who usually initiates discussions of benefits and risks of a CAM therapy? | | |
| I initiate | 32 | 30.47 |
| Patient initiates | 72 | 68.57 |
| NR | 01 | 0.95 |

Table 3 shown, Physicians’ responses to questions about their attitudes toward CAM are summarized. 89% experienced personally, the positive results of CAM when using therapy on their own. 80% of the physicians-initiated CAM therapy on the advice of friends and family and colleagues who have used the therapy on themselves. 79% physicians prescribed CAM based on recommendation of a medical specialist or consultant to whom they were referred patients. Doctors reported information from Case reports (85%), clinical trials (88%) from standard

medical journals of CAM. Overall, 58% of the doctors experienced moderate to high impact about CAM in their clinical experience. Of the impact factors indicated in Table no. 3, that could affect physicians’ attitudes toward CAM, only one was chosen by more than 60% of the respondents to have high or definite impact is Clinical trials reported in standard medical journals. (Repetition of the entire data in Table is not mentioned in the Text. Only important relevant findings have been emphasised in the Text).

| Impact factors | Rating of impact (%) | | | | | |
|--|----------------------|---------|----------|------|----------|-------------|
| | None | Minimal | Moderate | High | Definite | No response |
| Personal experience; positive results when using therapy on myself | 10 | 30 | 31 | 20 | 08 | 01 |
| Recommendations by family and friends who have tried the therapy | 19 | 47 | 24 | 8 | 01 | 01 |
| Recommendations by colleagues who have used the therapy on themselves | 14 | 34 | 32 | 14 | 02 | 04 |
| Recommendation of a medical specialist or consultant to whom you have referred a patient | 13 | 18 | 39 | 17 | 05 | 08 |
| Case reports in CAM journals | 14 | 49 | 27 | 06 | 03 | 01 |
| Clinical trials reported in standard medical journals | 07 | 06 | 09 | 36 | 37 | 05 |
| Your clinical experience in your patient population | 12 | 08 | 30 | 28 | 12 | 10 |

Table 4 shown, Illustrates Specialist’s and General physician’s experiences in influencing their recommendations for Ayurveda, naturopathy, herbal medicine, homeopathy and other CAM therapies. Ayurveda therapy was the most recognized and utilized CAM.

Of the total 105 physicians 31.42% General practitioners recommended Ayurveda therapy as compared to 10.47% specialists. 36% of the patients preferred Ayurveda as opined by the physician. Homeopathy was recommended by 35% followed by herbal medicine 32.37% and 30.46% naturopathy. However, physicians’

responses on use of any of the above CAM therapies i.e. Ayurveda, homeopathy, naturopathy, herbal medicine etc. was found to be statistically not significant.

Many physicians were aware of and few of them recommended yoga (28.56%), Acupuncture (20.94%), massage (19.04%), but many were unaware of Siddha, Unani & Reiki therapy. (Repetition of the entire data in Table is not mentioned in the Text. Only important relevant findings have been emphasised in the Text).

| Table-4: Physicians responses on different type of CAM therapy | | | | | | |
|--|----------------|-------------|-----------------|-------------|-----------------|---------|
| Types of CAM | Experience | Unfamiliar | Not Recommended | Recommended | Patients choice | P value |
| Ayurveda | Specialist | 02(1.90%) | 02(1.90%) | 11(10.47%) | 07(6.66%) | 0.3792 |
| | Gen. physician | 03(2.85%) | 16(15.23%) | 33(31.42%) | 31(29.52%) | |
| Naturopathy | Specialist | 05(4.76%) | 02(1.90%) | 07 (6.66 %) | 08 (7.61%) | 0.3321 |
| | Gen. physician | 9(8.57 %) | 18(17.14%) | 25(23.80%) | 31(29.52%) | |
| Herbal Medicine | Specialist | 05(4.76%) | 03(2.85%) | 09 (8.57 %) | 05 (4.76%) | 0.5410 |
| | Gen. physician | 10(9.52 %) | 16(15.23%) | 25(23.80%) | 32(30.47%) | |
| Homeopathy | Specialist | 4(3.80 %) | 03(2.85%) | 09 (8.57 %) | 06 (5.71%) | 0.6498 |
| | Gen. physician | 09 (8.57 %) | 16(15.23%) | 28(26.66%) | 30(28.57%) | |
| Acupuncture | Specialist | 03(2.85%) | 07(6.66 %) | 03 (2.85%) | 09 (8.57 %) | 0.6577 |
| | Gen. physician | 12(11.42%) | 29(27.61%) | 19(18.09%) | 23(21.90%) | |
| Yoga | Specialist | 02(1.90%) | 05(4.76%) | 07 (6.66 %) | 08 (7.61%) | 0.7902 |
| | Gen. physician | 11(10.47%) | 26(24.76%) | 23(21.90%) | 23(21.90%) | |
| Massage | Specialist | 04(3.80%) | 9(8.57 %) | 02 (1.90%) | 07 (6.66%) | 0.6959 |
| | Gen. physician | 13(12.38%) | 27(25.71%) | 18(17.14%) | 25(23.80%) | |
| Siddha | Specialist | 14(13.33%) | 06(5.71%) | 01 (0.95%) | 01 (0.95%) | 0.867 |
| | Gen. physician | 49(46.66%) | 22(20.95%) | 08 (7.61%) | 04 (3.80%) | |
| Unani | Specialist | 10(9.52%) | 9(8.57 %) | 02 (1.90%) | 01 (0.95%) | 0.872 |
| | Gen. physician | 43(40.95%) | 27(25.71%) | 12(11.42%) | 3(2.85%) | |
| Reiki / Therapeutic touch | Specialist | 14(13.33%) | 06(5.71%) | 01 (0.95%) | 01 (0.95%) | 0.450 |
| | Gen. physician | 49(46.66%) | 22(20.95%) | 08 (7.61%) | 04 (3.80%) | |

Fig.1 and Fig.2 depicts physicians’ opinion on their preferences on various CAM therapies.

Fig-1: Specialist responses on various CAM therapies

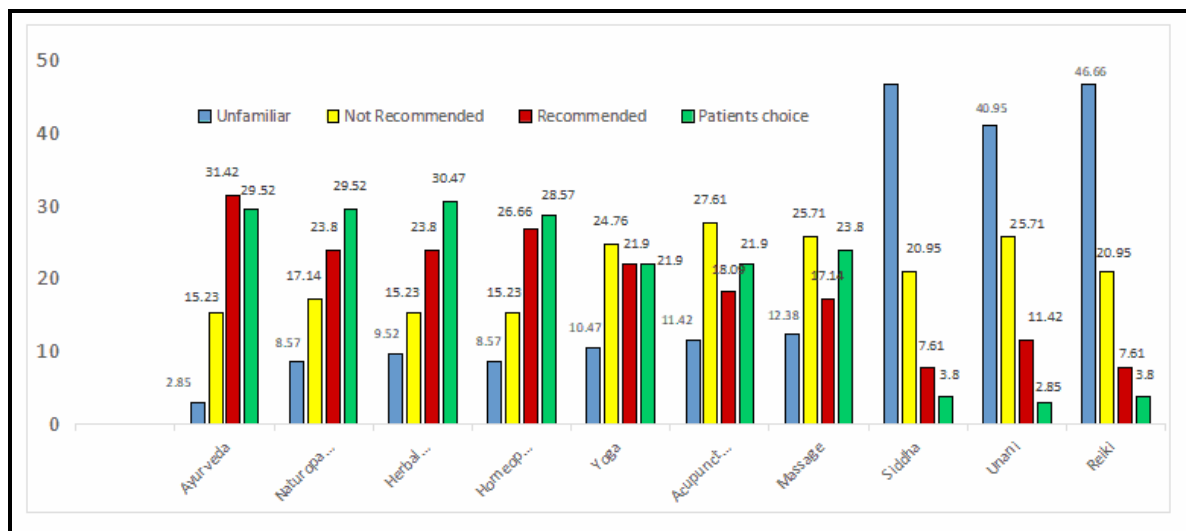
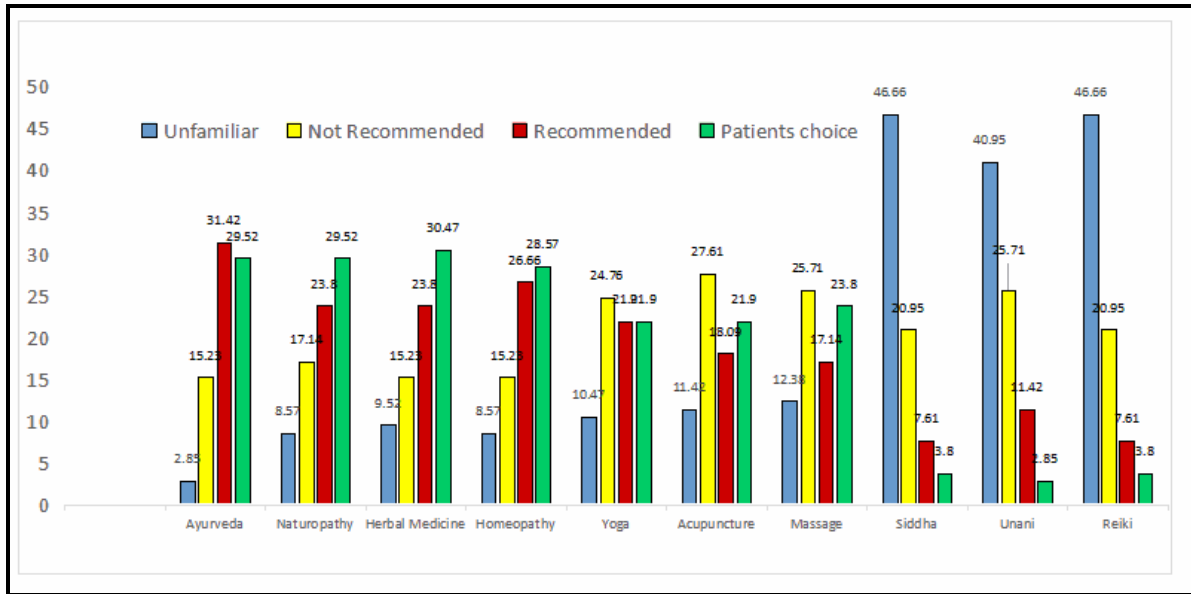


Fig-2: General Physician’s Responses on various CAM therapies



Discussion

Approximately 45% physicians who responded to this questionnaire on CAM therapies had 10 years of experience. Their mean age was 38 years and median number of years in practice was 6. There were more General physicians as compare to Specialists. The views come from a population which has good experience and adequate knowledge about CAM. Most Physician’s (75.23%) believed in beneficial role of CAM. This is similar to another study by Roy, Vandana et al [10] where 67% believed in their beneficial role. Meta-analysis of literature, as well as individual national surveys indicate that there is a significant interest in CAM among doctors from varying sub specialties [11-12].

Though most of them recommended use of CAM in patients but only few would refer patients to CAM practitioners for treatment of a ailment. This could mean that the physicians would prescribe CAM from their own experience or could consider patients preference of CAM. Though most of them believed in assimilation of CAM therapies into practice but few physicians believed that the incorporation of CAM therapies would have a positive impact on patient satisfaction. The reasons could be that to validate their belief they require evidence-based data from standard medical journals. This is similar to the results obtained from another study where most physicians wished to prescribe CAM but are

unconvinced of therapeutic benefit of CAM in their patients [13].

In our study only 25.71% of physicians would refer patients to CAM practitioners for treatment of an ailment. This is much lesser than that observed in a random sample of doctors in California who demonstrated an overall positive attitude towards CAM but 61% found themselves discouraging CAM therapies to their patients [14]. CAM was used by doctors mainly for chronic conditions, as has been reported in another study also [15].

Most of their patients were taking CAM for chronic ailments. Majority of the physicians thought that CAM may not worsen the patient’s condition and many of them were skeptical about beneficial effects of CAM. Very few physicians think that CAM has no interaction with allopathic medication and also does not increase adverse effects of allopathic medicine. Thereby implying that concomitant use could be safe. These results are similar to the study on the Indian population at Chatsworth, South Africa where people were observed to use CAM and allopathic medicine concomitantly [16].

Physicians’ responses to questions about their attitudes toward CAM were summarized and analysed. Maximum physicians experienced

personally the positive results of CAM when using therapy on their own. Maximum physicians-initiated CAM therapy on the advice of friends, colleagues, recommendation of a medical specialist or consultant. This demonstrated that they liberally use and believe CAM for themselves.

Doctors reported information from case reports, clinical trials from standard medical journals of CAM. But since they are still not extemporaneously prescribing CAM, means that need lot of evidence-based medicine to substantiate their belief. Ayurveda therapy was the most recognized and utilized CAM followed by homeopathy, naturopathy and herbal medicine. Next to allopathy Ayurveda is most widely known and commonly prescribed CAM therapy. Also, Allopathic medicine had good results in handling acute medical crisis and Ayurveda has ability to manage chronic disorders that are difficult to treat by allopathy medicine [17].

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Ayurveda provides cost effective techniques that are supposed to have minimal side-effects in contrast to that are seen in Western allopathic medicine [18]. These could be the reasons that patient self-prescribed ayurvedic medicine. Physicians responses on use of Ayurveda, homeopathy, naturopathy and herbal medicine is more as compare to other CAM therapies, this is similar to the results obtained from study of Kunnoor et al [13].

Conclusion

In the future, CAM can be more readily used by physicians. Because evidence for the effectiveness of CAM remains sparse, more research is needed for the prudent use of CAM. An education and training system for potential CAM providers remains to be developed.

Conflicts of interest: There are no conflicts of interest.

References

1. Subramanian K, Midha I. Prevalence and Perspectives of Complementary and Alternative Medicine among University Students in Atlanta, Newcastle upon Tyne, and New Delhi. *Int Scholarly Res Notices*. 2016.
2. NCCAM National Institutes of Health. What is CAM? 2008 National Centre for Complementary and Alternative Medicine, National. *Institutes of Health*. 2008.
3. Marcy halter man-Cox et al. CAM Attitudes in First- and Second-year Medical Students: A Pre- and Post-course Survey. *Integrative Medicine*. 2009; 7(6):34-42.
4. Gozum S et al. Complementary and alternative medicine used by patients with cancer in eastern Turkey. *Cancer Nurs*. 2003; 26:230-236.
5. Singh B, Kumar M, Singh A. Evaluation of implementation status of national policy on Indian systems of medicine and homeopathy 2002: Stakeholders' perspective. *Anc Sci Life*. 2013; 33:103-108
6. Mak JC, Mak LY, Shen Q, Faux S. Perceptions and attitudes of rehabilitation medicine physicians on complementary and alternative medicine in Australia. *Intern Med J*. 2009; 39:164-169.
7. Mehta DH, Phillips RS, Davis RB, McCarthy EP. Use of complementary and alternative therapies by Asian Americans. Results from the National Health Interview Survey. *J Gen Intern Med*. 2007; 22:762-767.
8. Wahner-Roedler DL, Elkin PL, Lee MC, Vincent A, Gay RE et al. Complementary and alternative medicine: use by patients seen indifferent specialty areas in a tertiary-care centre. *Evid Based Integr Med*. 2004; 1:253-260.
9. Mildren SP, Stokols D. Physicians' attitudes and practices regarding complementary and alternative medicine. *Behav Med*. 2004; 30:73-82.
10. Roy V, Gupta M, Ghosh RK. Perception, attitude and usage of complementary and alternative medicine among doctors and patients in a tertiary care hospital in India. *Indian J Pharmacol*. 2015; 47(2):137-142.
11. Robinson A, McGrail MR. Disclosure of CAM use to medical practitioners: A review of qualitative and quantitative studies. *Complement Ther Med*. 2004; 12:90-98.
12. Fountain-Polley S, Kawai G, Goldstein A, Ninan T. Knowledge and exposure to complementary and alternative medicine in paediatric doctors: A questionnaire survey. *BMC Complement Altern Med*. 2007; 7:38.
13. Kunnoor NS, Rathore R, Xavier D. Physicians Perception on Complementary and Alternative Medicine (CAM): A Cross Sectional Survey at Tertiary Care Hospital in India. *Med chem*. 2015; 5:197-202.
14. Wahner-Roedler DL, Vincent A, Elkin PL, Loehrer LL, Cha SS, Bauer BA. Physicians' attitudes toward complementary and alternative medicine and their knowledge of specific therapies: A survey at an academic medical center. *Evid Based Complement Alternat Med*. 2006; 3:495-501.

15. Lewith GT, Hyland M, Gray SF. Attitudes to and use of complementary medicine among physicians in the United Kingdom. *Complement Ther Med.* 2001; 9:167-72.
16. Singh V, Raidoo DM, Harries CS. The prevalence, patterns of usage and people's attitude towards complementary and alternative medicine (CAM) among the Indian community in Chatsworth, South Africa. *BMC Complement Altern Med.* 2004; 4:3.
17. Chatterjee B, Biswas PC, Pancholi J. Health awareness and popularity of alternative medicines among people of Jamnagar town: a cross-sectional study. *AYU.* 2012; 33(1):33-37.
18. Sharma H, Chandola HM, Singh G, Bassist G. Utilization of Ayurveda in health care: an approach for prevention, health promotion, and treatment of disease. Part 2-ayurveda in primary health care. *Journal of*

Alternative and Complementary Medicine. 2007; 13(10):1135-1150.

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