

Perceptions of Patients and Physicians Regarding Need for Taking Ayurveda Therapy

YASHASHRI C SHETTY¹, TUSHAR R BAGLE², PADMAJA A MARATHE³, ASHWINI G BODADE⁴,
SUDATTA G SHIROLE⁵, ARMAANDEEP A SINGH⁶, NIRMALA N REGE⁷

ABSTRACT

Introduction: Globally there is great awareness about complementary health systems and its integration. Ayurveda is nowadays being increasingly preferred by patients; however, reasons for patients need to attend ayurveda Outpatient Department (OPD) and the approach of allopathic physicians towards ayurveda is minimally highlighted.

Aim: To assess needs of patients attending ayurvedic OPD in an allopathic setup and to assess the clinical needs of physicians practicing allopathy for conditions which are not adequately treated by allopathy.

Materials and Methods: A cross-sectional study among 300 patients attending ayurveda OPD and 50 allopathic physicians of a tertiary care hospital was undertaken after Institutional Ethics Committee permission. Separate questionnaires for patients and physicians related to needs of ayurveda were validated for content and administered to patients and physicians after receiving their due consent. Data entered in MS Excel 2010, responses were coded and analysed. Descriptive statistics was expressed in terms of actual numbers, mean±standard deviation, frequency and percentage. A p-value <0.05 was considered statistically significant. Student's unpaired t-test

was used to compare the scores of Visual Analogue Scale (VAS) and parametric data. Categorical variables were compared using chi-square test.

Results: The level of satisfaction to ayurveda therapy by VAS score was 7.67±1.58. Females patients were more satisfied with ayurveda than males. About 77 patients had taken Ayurveda medicine for maintaining good health and 71 feel it does not have any adverse effects. About 90.75% patients taking Allopathy had discontinued treatment before they visited ayurveda OPD. The percentages of patients attending ayurveda OPD and the percentage of physician's that feel the need to develop ayurveda treatment were similar and matching for diseases which included arthritis, diabetes mellitus, backache, irritable bowel syndrome, malignancy, hypertension, alopecia, obesity, piles, viral hepatitis, degenerative spinal disease and migraine were common.

Conclusion: The most common clinical condition for which both patients and physicians preferred ayurveda was for osteoarthritis. There is need for developing scientifically validated therapies for conditions wherein allopathy treatment is inadequate.

Keywords: Allopathy, Arthritis, Diabetes mellitus, Obesity, Traditional science

INTRODUCTION

Complementary and Alternative Medicine (CAM) as defined by National Center for CAM, a collection of healthcare systems, diverse medical, concerned practices and medicines that are not expected to be a subset of conventional medicine [1].

CAM is now practiced all over the world [2]. CAM also known in India as non allopathic Indian medicines is gathering credit in India and all over world. Ayurveda, siddha, unani and homeopathy are the non allopathic systems practiced in India that satisfies almost 80% of medical requirements of population [3,4].

The origin of ayurveda medicine in India dates more than 5000 years [5]. Ayurveda forms the commonly practiced non allopathic medicine especially in rural India, where almost 70% of people live [3]. India today officially recognises ayurveda and other systems of indigenous medicine. In 1995, Government of India (GOI) had accorded department known as Ayurveda, Yoga, Unani, Siddha, Homeopathy (AYUSH) [6]. In 2009, Government of India (GOI) had taken step to foster Indian Systems of Medicine on promotion of AYUSH [4].

Ayurveda is used in India, Nepal, Sri Lanka and is increasingly used in Western countries [7,8]. Western allopathic medicine had good results in handling acute medical crisis and ayurveda has ability to manage chronic disorders that are difficult to treat by Western medicine [9].

Ayurveda provides cost effective techniques that are supposed to have minimal side-effects in contrast to that are seen in Western allopathic medicine [5]. The research in ayurveda literature during past 100 years shows encouraging results, especially in management of chronic disorders associated with aging process [5]. Despite growing research and understanding, there is limited information on the use of ayurveda [8].

There is no study reported so far to assess the perceptions of patients as to why patients take ayurvedic medicines despite availability of allopathic treatment. What are the needs of the patients visiting ayurveda OPD and why allopathic physicians prescribe ayurveda. To understand if the needs of physicians to use ayurveda and patients to seek Ayurvedic treatment correlate, we did a questionnaire based study.

MATERIALS AND METHODS

Complex articular fractures of the distal radius extending into a cross-sectional questionnaire based study was undertaken in 300 patients attending ayurveda OPD and 50 allopathic physicians of a tertiary care hospital. Institutional Ethics Committee permission (EC No: EC/OA-50/2014) was taken before starting the study. New and old patients more than 18 years of age, of both gender, willing to give consent and attending the ayurveda OPD of medical college and tertiary care hospital were included. Objectives of the study were

explained to participants, the participation was voluntary and written consent was taken prior to enrollment. The study was conducted from September 2014 to September 2016. The demographic details were noted, questionnaire was administered and collected after 20-30 minutes. The level of satisfaction to ayurveda therapy was measured by VAS from 0 (no satisfaction) to 10 (complete satisfaction).

A total of 369 patients were approached out of which 316 consented, 300 were included and 75 physicians were approached, 50 willing to participate were included. The allopathic practitioners were selected by randomisation based on the designation or at least 10% of the physicians from a department were enrolled after randomisation. Those not willing to participate or did not return the questionnaire or returned incompletely filled forms were excluded from study. Around 3000 new patients attend ayurveda OPD in a year; sample size taken was 10% i.e., 300 patients. The privacy and confidentiality of data were maintained throughout the study. Test-retest reliability was estimated with subsample of 10 patients and 5 physicians by taking two interviews seven days apart. Internal consistency reliability was assessed by Cronbach's-alpha coefficient was calculated by Statistical Package for the Social Sciences (SPSS) software version 20.0 which was 0.74 for patient's questionnaire and 0.82 for physicians questionnaire. Modified Kuppaswamy's Socioeconomic Classification (MKSC) was used for socioeconomic status [10].

Questionnaire for patients included information on demographic profile, questions on the disease and symptoms patients are suffering from, the physicians from different medical branches they had visited, reasons for discontinuing previous treatment, reasons for believing and not believing in ayurveda and other questions.

Questionnaire for physicians included questions on demographic profile, their belief on ayurveda, reasons for believing and not believing in ayurveda, views of physician on diseases for which there is need to obtain treatment from complementary branch of medicine, reasons for patients not completing current treatment, diseases for which there is need to develop ayurveda treatment and other questions.

In the study, procedures were followed in accordance with ethical guidelines of Institutional Ethics Committee and Declaration of Helsinki, adopted by 18th World Medical Assembly, revised in 64th General Assembly, October 2013.

STATISTICAL ANALYSIS

Data were entered in MS Excel 2010, responses coded and analysed. Descriptive statistics was expressed in actual numbers, mean±standard deviation, frequency and percentage. A p-value <0.05 was considered statistically significant. Student's unpaired t-test was used to compare the scores of VAS and parametric data. Categorical variables were compared using chi-square test. The statistical analysis in present study was done using GraphPad Prism software (version 5.0), and SPSS version 20.0.

RESULTS

Patient's

The mean age of patient attending ayurveda OPD was 44.2±14.2 years (range 18-84 year) [Female=42.45±13.44, Male=47.81±15.01]. There were 203 females and 97 males. About 283 patients were from urban and 17 from rural area. Out of 300, 250 patients were married [Female=168, Male=82], and 50 were unmarried. In the employment status, there were 60 government employees, 36 self-employed, 36 students, 21 professional, 123 housewives, 21 retired males and 3 unemployed males. Age, education and socioeconomic distribution in patients are given in [Table/Fig-1]. Out of 300, 265 (88.33%) patients visited OPD on advice of friends and relatives, 18 (6%) due to previous physician reference, 17 (5.67%) patients visited OPD due to information on

Variables	Numbers
Age (years)	
<20	17
20-40	104
40-60	138
60-84	41
Education	
<10 standard	93
11-12	110
Diploma	18
Graduates	62
Postgraduates	17
KSC	
Upper-Lower class	199
Lower-middle class	49
Upper-middle class	40
Upper class	7
Lower class	5

[Table/Fig-1]: Age, education and socioeconomic distribution of patients. KSC: Kuppaswamy's socioeconomic classification

media which included 5 patients due to television, 5 by reading newspaper, internet (3), book (2) and radio (2).

All 300 patients attending the ayurveda OPD believed in ayurveda. The average VAS score for satisfaction to ayurveda therapy was 7.67±1.58. The difference in average VAS for females (7.81±1.69) and males (7.17±1.43), was statistically significant ($p=0.002$). The average VAS for urban patients (7.68±1.54) and rural (7.58±1.42), not statistically significant difference ($p=0.794$). In females, VAS for housewife (7.84±1.23) and remaining female patients (7.78±1.93), the difference was not statistically significant ($p=0.806$).

Among 300, 192 (64%) patients had taken treatment from various systems of medicine and then visited ayurveda OPD, while 108 (36%) patients directly visited ayurveda OPD. Different branches of medicine that patients visited before coming to ayurveda OPD is given in [Table/Fig-2]. The patient's reasons for preferring ayurveda medicine and other complementary medicines are given in [Table/Fig-3]. About 88.02% patients had stopped treatment by previous system of medicine, while 157/173 (90.75%) taking Allopathy discontinued treatment. Suggestions of operative treatment were some of the other reasons for stoppage of allopathy treatment. The symptom distribution in patients attending ayurveda OPD is given in [Table/Fig-4] and the accompanying disease distribution in patient is given in [Table/Fig-5].

Physicians

The mean age of the physicians was 39.10±9.39 (25 to 58 years). Out of 50, 22 were females and 28 male physicians. The designation

Different branches of medicine	Number of patients	Stopped treatment
Allopathic (MBBS/MD/MS)	173	157
Ayurvedic (BAMS [Bachelor of Ayurveda, Medicine and Surgery]/MD)	5	5
Homeopathic (BHMS [Bachelors Degree in Homeopathy Medicine and Surgery]/MD)	9	6
Allopathic and Homeopathic	4	0
Allopathic and ayurvedic and Homeopathic	1	1
Total	192	169

[Table/Fig-2]: Different branches of medicine patients visited and stopped treatment before coming to ayurveda OPD.

Reasons	Ayurveda Alone	Other Complementary medicine	Total
Maintaining good health	77	136	213
No adverse side effects	71	129	200
Favourable personal/family experiences	41	63	104
Traditional science known and practiced for many centuries	11	10	21
Can be safely combined with modern medicines	5	8	13

[Table/Fig-3]: Patients reasoning for preferring ayurveda and other complementary medicines.

Symptoms	Number of patients
Knee joint pain	69
All joint pain	36
Backache	21
Dyspepsia	18
Constipation	14
Hair loss/Bleeding per rectum	13 [‡]
Abdominal pain/Tingling numbness	10 [‡]
Sore throat	9
Allergy/Sleep disturbance/Weight gain	8 [‡]
Anal pain/Irregular menses	6 [‡]
Urinary Incontinence/Radiating pain lower limb	5 [‡]
Acne/Neck pain/Headache	4 [‡]
Urinary tract infection (UTI)/Infertility/White discharge	3 [‡]
Anorexia/wrist joint pain/pedal edema/hyperpigmentation	2 [‡]
Weight loss/ Psoriasis/Primary Infertility/Obesity/Premature ejaculation/Short stature/Treated case of Buccal Cancer	1 [‡]

[Table/Fig-4]: Symptom distribution inpatients attending the ayurveda OPD.

[‡] Indicates the number of patients for each disease mentioned in the corresponding row

Diseases	Number of patients
Osteoarthritis	77
Backache	21
Piles	20
Acidity	16
Irritable Bowel Syndrome	14
Alopecia/Diabetes Mellitus	13
Obesity	12
Rheumatoid arthritis/Sciatica/Cervical spondylitis	10 [§]
Allergy/Lumbar spondylitis/Insomnia	8 [§]
Acne/UTI	6 [§]
Malignancy/Psoriasis/Viral Hepatitis	5 [§]
Primary Infertility/Sinusitis/Hypertension/Migraine	4 [§]
Allergic rhinitis/Anemia/Polycystic Ovarian Disease/Varicose veins/Hypothyroid/Leucorrhoea/Menorrhagia	3 [§]
Dysfunctional Uterine Bleeding/Anal fissure/Gout/Urticaria	2 [§]
Asthma, Ankylosing spondylitis, Frozen shoulder, Hernia, Hyperthyroidism, Hyperpigmentation, Irregular menses, Microphallus, Prolapse Intervertebral Disease, Premature ejaculation, Dysplasia buccal mucosa, Rhinitis, Vesicular calculus, Short stature	1

[Table/Fig-5]: Accompanying disease distribution in patients attending ayurveda OPD.

[§] Indicates the number of patients for each disease mentioned in the corresponding row

included 8 Senior residents, 16 Assistant Professors, 10 Associate professors and 16 Professor. The educational qualification and years of experience of physicians is given in [Table/Fig-6]. The reasons for discontinuing allopathy by patients and reasons according to physician are given in [Table/Fig-7].

Out of 50, 16 (32%) didn't believe in ayurveda, while 11 (22%) physicians were not sure, 23 (46%) believed in ayurveda, which included 11 from Medicine and allied departments and 12 were from

Qualification	Number of physicians	Experience (Years)	Number of physicians
MBBS (Bachelor of Medicine and Bachelor of Surgery) and MD (Doctor of Medicine) physicians	25	1 to 5	20
MD-DM (Doctorate of Medicine)	02	5 to 10	11
MBBS-MS (Master of Surgery)	12	10 to 20	10
MBBS-MS-MCH (Master of Chirurgiae)	06	20 to 30	05
MBBS-DNB (Diplomate of National Board)	05	>30	04

[Table/Fig-6]: Educational qualification and years of experience of physicians.

Reasons	Number of patients	Percentage (Out of 157)	Physicians views (Number of physicians)	Percentage (Out of 50)	p-value
Not satisfied with the previous treatment	138	87.89	19	38	<0.0001
Increased Cost of treatment	22	14.01	28	56	<0.0001
Adverse drug effects	26	16.56	25	50	<0.0001
Lengthy treatment	45	28.66	21	42	0.082
Resistance/ Intolerance to treatment	4	2.55	16	32	<0.0001
Other reasons	2	1.27	0	0	-----

[Table/Fig-7]: Patients reasoning for discontinuing from allopathy treatment and physicians views on patients reasons for discontinuing allopathy treatment[†].

[†]Patients and physicians opted for more than one option

Surgery and its allied departments. Among 50, 17 (34%) physicians found patients to use other alternative systems of medicine. Within 50 physicians, 36 (72%) physicians would prefer use of alternative systems of medicine, among them 22 physicians gave first preference to ayurveda and yoga, homeopathy (12), acupuncture (1), naturopathy (1). In second preference, 11 physicians preferred homeopathy followed by ayurveda, yoga (10) and one each for naturopathy, unani, yoga, reiki and acupuncture. About 10 (20%) physicians had come through patients that had satisfactory result after taking ayurveda therapy while 34 (68%) physicians had not come across any patients that had satisfactory treatment after taking ayurveda therapy and 6 (12%) physicians were not sure if they had across any patients that had satisfactory treatment after taking ayurveda therapy.

Among 50 physicians, 24 (48%) did not believe while 26 (52%) believed there is need to develop ayurveda treatment for different disease conditions; this included 13 from medicine and allied department and 13 from surgery and its allied department. The most common reason for physicians to believe in ayurveda were, 25 (50%) traditional science known and practiced for centuries followed by no adverse effect 5 (10%), 11 (22%) favourable personal/family experiences, 14 (28%) safely combined with modern medicines and 10 (20%) for maintaining good health. Physician's reason for not believing in ayurveda is given in [Table/Fig-8]. According to physicians, diseases for which there is need to develop ayurveda treatment is given in [Table/Fig-9]. The matching in percentages of

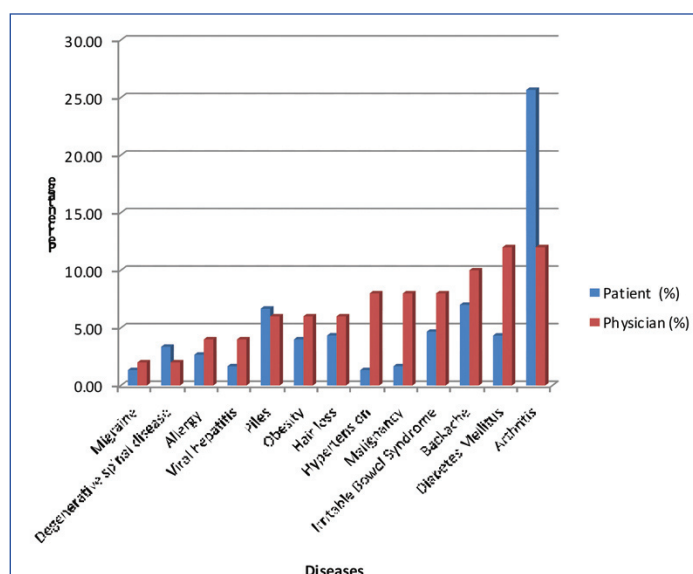
patients need and physicians need to develop ayurveda treatment for common diseases is shown in [Table/Fig-10].

Reasons for not believing in ayurveda	Number	Percentages
Lack of scientific evidence	21	42
Unavailability of standardised formulation	13	26
Not suitable for emergency care	14	28
Adulteration/malpractice	13	26
Unfavourable personal/family experiences	4	8
No knowledge	7	14
Costly	1	2

[Table/Fig-8]: Physicians reasons for not believing in ayurveda.
*Physicians opted for more than one option

Diseases	Number
Arthritis	6
Diabetes Mellitus	6
Backache	5
Malignancy	4
Hypertension/Irritable bowel syndrome	4**
Piles/Obesity/Hair loss	3**
Allergy	2
Headache	2
Degenerative spinal disease/Meningioma/Gullian Barrie Syndrome	1**
Viral hepatitis/Multi drug resistant Tuberculosis/Cataract	1**
Chronic condition/Lifestyle related	1**

[Table/Fig-9]: According to physicians, diseases for which there is need to develop ayurveda treatment.
** Indicates the number of physicians for each disease mentioned in the corresponding row.



[Table/Fig-10]: Matching of percentage, of patients need to attend ayurveda OPD and percentage of physicians that feel the need to develop ayurveda treatment for common diseases.

DISCUSSION

In India, there is coexistence of modern medicine and multiple traditional health systems in clinical practice of medicine especially for treatment of chronic diseases [11,12].

In present study, majority of patients were aged 40-60 years, females and from urban area. The level of satisfaction by ayurveda was more for females than males. A study by Satow SW et al., had patients of 52.5 years (18 to 80 years) and majorly females (65.5%) [8] while study by Roy V et al., had 70% patients that used CAM on advice of family and friends [13]. As per Ahmed TE, there were 31% housewives, 23.9% Government and 30.1 % non government officer that used CAM [14]. Similar results by studies from Chatterjee

B et al., and Abdul RJ et al., [9,15]. Thus, the demographic profile of the patients in this study was similar to other studies. Being a municipal hospital in metropolitan city, majority patients were from urban area and lower socioeconomic status. The role of family, friends and media has an importance as source of knowledge for patients.

The most common reason for discontinuing allopathy treatment by the patients was lack of satisfaction with previous treatment and the lengthy nature of treatment. According to physicians, prime reason for the patients to discontinue treatment was cost of treatment followed by adverse drug effects and resistance/intolerance to treatment. As per study by Roy V et al., there is inadequate doctor-patient communication about concomitant usage of CAM with allopathic medicine [13]. In present study, 90.75% patients had discontinued previous allopathy treatment, thus to change this, there is urgent need to change the attitude of patients through patient education to complete allopathy treatment.

There were various studies to evaluate the use of CAM but no studies evaluating only ayurveda system of medicine. In present study, physicians believed in ayurveda as it is traditional known science and can be safely combined with modern medicines. In study by Kong FH et al., 75% of physicians believed in CAM and 50% opined that CAM is better than allopathy in certain cases because of cost effectiveness and fewer side effects. According to the study by Sharma H et al., 62% of the physicians had recommended yoga and ayurveda as the commonly preferred CAM modality while 39% physicians had recommended yoga and ayurveda to patients [5]. In the study by Chatterjee B et al., patients most commonly preferred allopathy followed by ayurveda and homeopathy [9]. In study by Kenji F et al., the physician's reason to not prefer CAM was because of no scientific evidence and lack of knowledge on CAM [16]. Also study by Kenji F et al., desire to receive CAM by patients and the limitations of modern western medicines were the reasons given by physicians to integrate CAM therapies [16].

In present study, patient's attended ayurveda OPD for symptoms that were knee joint pain, all joint pain and backache. Physicians feel the need to develop ayurveda treatment were majorly for arthritis, diabetes mellitus and backache. Thus, the patient's need to attend ayurveda OPD and the physicians consideration for the need to develop ayurveda treatment matched for 13 diseases. Study by Selvaraj K et al., found that 40% of the patients attending Siddha OPD were having arthritis as the most common symptom [17]. As reported by Kong FH et al., physicians considered CAM better than allopathic treatment in diseases like psychological/psychiatric disorders, chronic illnesses, joint problems, bronchial asthma, allergic disorders and skin conditions [4]. In study by Chatterjee B et al., for obesity, ayurveda was the most popular choice of treatment [9]. Doctors and medical students believed that CAM should be taught and is most useful in psychiatry, rheumatology, general medicine, oncology and dermatology [2]. Peter K and Erik WB, concluded that CAM training had 0-30% lower mortality rates and healthcare costs in patients whose general practitioners had practiced CAM [18].

The National Institute of Health states that 4 out of 10 Americans and in Switzerland 11% used some form of CAM [18]. The desire to practice CAM have increased in Japan from 1999 to 2006. The doctors in Japan were familiar and practicing CAM, also attending training courses related with CAM [16]. CAM model is followed in China, Russia with substantial success and is gaining momentum in Vietnam, Sweden, Germany and Italy [7].

With proper integrative strategies of AYUSH systems along with allopathy a dream of healthy India can be achieved. AYUSH systems may offer better management of chronic and metabolic diseases, psychosomatic conditions, disease prevention, and health promotion. While modern medicine has worthwhile contributions for surgical interventions, diagnostics emergency medicine and infectious diseases [19].

Integrative healthcare programmes will play a considerable role in 21st century. The shortfall of satisfactory treatment by a single system of healthcare has been addressed by upcoming government sponsored national research institutes for CAM in Sweden, United Kingdom, Europe and United States [20]. In India when it comes to healthcare, people look forward to choose allopathy, AYUSH or a combination for various health conditions. In study by Subramanian K and Midha I, majority of Indian students believed incorporating CAM into the healthcare system as viable alternative to conventional medicine [21]. The need for integrated medicine in medical curriculum is highlighted by various studies [2,4,7,16]. In India with inclusion of Pharmacology subject in BAMS curriculum, there will be increase in integrative prescription [22].

LIMITATION

There were certain limitations of present study, as the study was done in one hospital, it may not represent data from the general population. Since, this was a questionnaire based study, the possibility of recall bias cannot be excluded.

CONCLUSION

There is need to undertake orientation programs related to CAM for Physicians and medical students. There is need of patient education cell in hospitals to educate them about compliance of therapies. Evidence based clinical trials should be done to scientifically validate ayurveda treatment in therapeutic areas which are unmet clinical needs.

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PARTICULARS OF CONTRIBUTORS:

1. Assistant Professor, Department of Pharmacology, Seth GSMC and KEMH, Mumbai, Maharashtra, India.
2. Assistant Professor, Department of Pharmacology, RGMC and CSMH, Thane, Maharashtra, India.
3. Professor, Department of Pharmacology, Seth GSMC and KEMH, Mumbai, Maharashtra, India.
4. Ex-Registrar, Ayurveda OPD, Department of Pharmacology, Seth GSMC and KEMH, Mumbai, Maharashtra, India.
5. Ex-Registrar, Ayurveda OPD, Department of Pharmacology, Seth GSMC and KEMH, Mumbai, Maharashtra, India.
6. Junior Resident, Department of Pharmacology, Seth GSMC and KEMH, Mumbai, Maharashtra, India.
7. Professor and Head, Department of Pharmacology, Seth GSMC and KEMH, Mumbai, Maharashtra, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Tushar R Bagle,
B-9, Kailash Kunj, Shiv Mandir Road, Near Govind Pool, Ambernath, Thane-421501, Maharashtra, India.
E-mail: tusharbagle21@gmail.com

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