



## Research Article

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### PERCEPTION AND PRACTICE OF AYURVEDA AMONG USERS AND NON-USERS: A COMPARATIVE STUDY

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#### ABSTRACT

The present study has been designed to capture the current perception and practice of Ayurveda in its users and non-users. With objective of comparing the difference in its source of knowledge among both the groups, satisfaction level among who have already used it and identification of factors that promote or demote it. As this was questionnaire based cross section study, we develop questionnaire for it, after piloting we modified and validated it. This questionnaire was presented to common public via three ways, online portal, printed form and telephonic interview. Respondents for the study were selected after a pre-decided criterion. A total of 728 responses were selected for analysis out of which 376 (52%) were Ayurveda users and 352 (48%) were non-users, out of all participants 222 (30.4%) were females and rest 506 (69.5%) were males. Results also showed that while people of all age groups, both sex, all occupational and educational group uses Ayurveda, it appears that males and peoples older than 30 years of age prefer Ayurveda. Survey made clear that most of the users were more or less satisfied with effect of Ayurveda as they feel. While no statistical significant difference was found in source of knowledge between users and non-users, ignorance and unavailability of dependable Ayurvedic physicians appears to be the main demotivation for common public that prevent to use Ayurveda.

**Keywords:** Ayurveda, CAM, AYUSH, Traditional Medicine, Survey, Perception

#### INTRODUCTION

WHO has defined traditional medicinal systems as the knowledge, skills and practices of holistic healthcare, recognized and accepted for its role in the maintenance of health and the treatment of diseases, based on indigenous theories, beliefs and experiences that are passed on from generation to generation<sup>1,2</sup>. Ayurveda as one of these traditional medicinal systems have developmental roots in India and having longest uninterrupted tradition of practice<sup>3</sup>. Being in used by large population of India, Sri-Lanka, Nepal, Bhutan, Pakistan and Bangladesh. Global use of Ayurveda is increasing steadily because of its qualitative strength, essential elements of health and important clues for consistent functioning of life highly logical and rational foundations<sup>4</sup>. In one form or other around 70% of peoples depend on CAM (complementary and alternative medicines) therapies all around the world for their health care needs<sup>1</sup>. CAM therapies are growing at a rate of 8% annually and are supposed to grow to 5 trillion USD by the year 2050.<sup>1,2</sup> The National Center for Complementary and Alternative Medicine (NCCAM) has also recognized and placed Ayurveda as whole alternative medicinal system.<sup>1</sup>

In India, first schedule of "The drugs and cosmetics Act 1940" enlist classical books of Ayurveda as authoritative texts for several purposes, mainly for licensing of Ayurvedic medicine. Still it was not until March 1995 when a separate department was created to look after Ayurvedic affairs in our country. And it took 74 years after 1940 to attain a separate ministry of Ayurvedic affairs in 2014. Thought efforts for mainstreaming of Ayurveda had started in 2005 in India with NRHM, WHO however recognized the potential of traditional medicines earlier in 1978 to attain the objective of health for all.<sup>2</sup> Later organization

promote it further by Traditional Medicine Program of WHO. Traditional medicinal strategies published regularly by WHO (2002–2005, 2005–2010, 2010–2014, 2014–2023) summarizes the efforts of WHO in advancement of Traditional medicinal systems of medicine including Ayurveda with a futuristic approach.<sup>1</sup>

Evidence based rational thinking of modern science led to obligation for all traditional medicinal systems including Ayurveda to provide evidence for their mechanism of action and safety and efficacy. Similarly, in account for safety, there are a huge demand for providing evidences in support for their safety for human use. Concerns about heavy metals (lead, mercury, arsenic) found in certain Ayurvedic products prompted the Food and Drug Administration (FDA) to put an import alert on those products sold in the U.S. in 2007, later allowed with consumer caution in 2008. Along with a complete ban on Ayurvedic products which were being sold for less than 15 years by European Union in year 2004. Events like these affect the trust of those who use this system for their health needs globally, and its business in India<sup>5</sup>. At the same time status of Ayurvedic Educational system in India is also under question for its originality when it largely adopts and copy the allopathic medicinal structure for its educational need<sup>6</sup>. This clubbed with poor quality of educational system raises concern if the system is capable of producing the needed evidence for satisfaction of global scientific community and its users. The scenario appears more complex with reports of large prevalence of cross practice by physicians of both main systems of treatment in India<sup>6</sup>, abuse and misuse of Ayurveda by Quakes, fake advertising and marketing companies for profit making and quality issues of Ayurvedic drugs<sup>7</sup>.

Expenditure on health care like direct out of pocket expense, plays a major role for peoples in deciding method of treatment for their health need, previously Ayurveda was on absolute exclusion criteria of Ayurveda from any type of medical insurance benefit until last three years. In past two or three years health insurance companies have started giving this benefit, however with very careful terms and conditions. Therefore, no or very little promotion for Ayurveda treatment is there from health insurance companies<sup>5</sup>.

Other countries like China, Vietnam, Japan, and Germany which have integrated their traditional medicinal system with conventional modern medicine, do possess the capabilities and condition for harvesting best out of all medicinal system for their population. CAM therapies are under revival in the western world<sup>6,8</sup>. On the other hand efforts for integration of all medicinal systems to form an indigenous medicinal system are in their infancy in India.

All these above discussed factors have their own affect separately, however produces a huge impact on perception and practice of Ayurveda among health seekers in their collaborative interplay. To develop this understanding population surveys are needed that can help to generate the data needed to assess the present perception of Ayurveda among common public. This type of surveys, that too with Ayurveda in focus only are very limited. Hence forth this survey is designed to capture public's perception and practice about Ayurveda.

**MATERIAL AND METHODS**

A cross sectional, exploratory, questionnaire based non-interventional survey was conducted. Age above 18 years, primary education and a non-medical educational/ professional

background were some of the criteria for selection/ participation in the study.

An open-ended questionnaire was developed, after identifying major issues related to perception of Ayurveda by a panel of experts of the issues as questions related to perception of Ayurveda after interviewing experts of the subject.

Responses were collected through online portals and social websites like WhatsApp and Facebook, Additionally, printed questionnaires were distributed among schools and colleges in various localities of Delhi and NCR region.

Only a completely filled up questionnaire was used for analysis. Each response was assigned a unique code. Data was analyzed using descriptive statistics and double or triple cross tables.

**Statistical analysis**

MSEXcel-2013 was used for preparation, entering and coding of data. SPSSv21 software was used for Chi-square and Students independent t tests, using p- value of 0.005 as significant.

**RESULTS**

A total of 779 responses we received through all means (Figure.1). After removing duplicates and incomplete forms, a total of 728 responses were used for further analysis. A total of 506 males and 222 females participated in the study.

Also, most of the participants were graduates (77.3%), followed by senior secondary educated (13.7%), secondary qualified (6.18%), while a small percentage of 2.74% had only primary education. (Table 1)

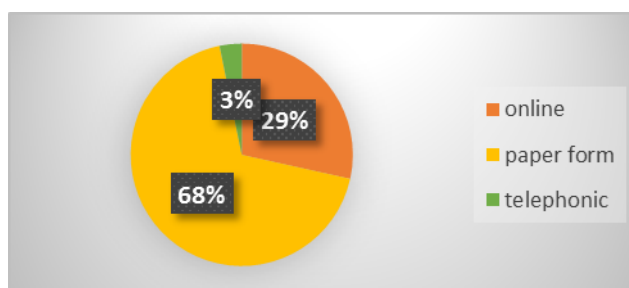


Figure 1: Response Path

Table 1: Study Demographics

Row Labels	Graduation	Primary	Secondary	Sr. Secondary	Grand Total
18-29 years	252	2	23	59	336
F	104	0	1	8	113
M	148	2	22	51	223
30-59 years	294	14	18	36	362
F	78	8	4	10	100
M	216	6	14	26	262
Above 59 years	17	4	4	5	30
F	6	3	0	0	9
M	11	1	4	5	21
Grand Total	563	20	45	100	728

We also found it interesting to analyze the professional background of the study participants. The largest portion of the study participants (29.6%) were working in private sector, followed by government sector workers (24.8%), students(19.3%), self employed (18.5%), housewives(4%), in between jobs(1.9%) and retired (0.82%).

Chi-square test of independence was conducted to know if there is any association of using or non-using of Ayurveda with Age, Sex, Educational qualification or Occupation.

**Table 2: Chi-Square results table**

Sl. No.	Independent group	Ayurveda User		Non-User		p value
1.	Age	Below 30	149	Below 30	187	0.0003*
		Above 30	227	Above 30	165	
2.	Sex	Male	275	Male	231	0.0298*
		Female	101	Female	121	
3.	Educational Level	Graduate	292	Graduate	271	0.8596
		Non-Graduate	84	Non-Graduate	81	
4.	Earning, Not Earning	Earning	284	Earning	248	0.1326
		Not Earning	92	Not Earning	104	

\* shows the result with significant p value

Table 2 shows that there is a strong association between age and sex with that being an Ayurveda users or non-users, while no significant statistical association was found between Ayurveda

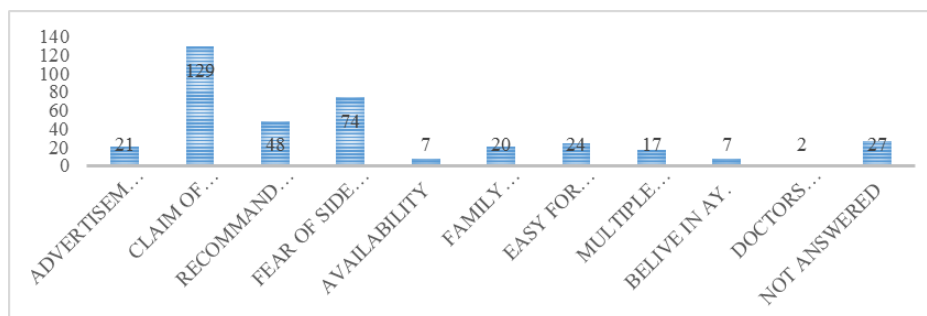
users with their educational level or earning status. The overall knowledge sources between both the user and non-user groups are summarized in Table 3.

**Table 3: Difference of source of knowledge about Ayurveda between Users and Non- Users**

Row Labels	Non-User	User	Grand Total
Books	21	33	54
By Doctor	0	6	6
Human Contact	122	134	256
Internet	56	24	80
Multiple Sources	77	143	220
No Any Knowledge	41	0	41
TV, Newspaper	35	36	71
Grand Total	352	376	728

**Table 4: Diseases and their frequency recorded among Ayurvedic users**

Sl. No.	Disease	No. of Respondents
1	HTN	21
2	Diabetes	26
3	Weakness	7
4	Stomach Related	48
5	Weight related	12
6	Fever	30
7	Liver related	13
8	Musculoskeletal pain	47
9	urinary tract	10
10	hair fall	16
11	Respiratory disease	36
12	Skin problems	50
13	Cancer	1
14	CVA	2
15	Brain disease	5
16	All disease	14
17	Gynecological diseases	5
18	ENT	7
19	Anorectal problem	5
20	Not disclosed	11
21	Toothache	1
22	Blood disorders	1
23	Overall well being	7
24	male potency	1
Grand Total		376



**Figure 2: Motivation for use of Ayurvedic treatment**

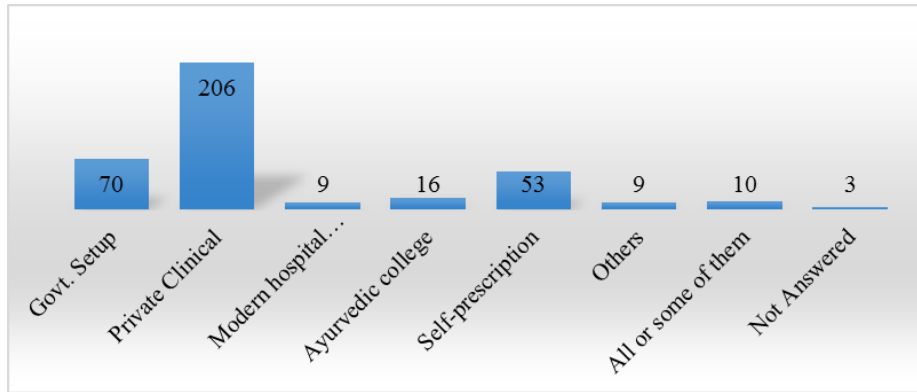


Figure 3: Kind of setup provide Ayurveda to user respondents.

Table 5: What caused Non-user to, not use Ayurveda, (Age wise Distribution)

Reasons for not using Ayurveda	Age			Grand Total
	18-29 years	30-59 years	Above 59 years	
Never Needed	107	85	7	199
Family physician discourages	3	3	1	7
Ignored	21	27	2	50
Unavailability of Dependable Physicians	32	29	1	62
Bitter taste of medicine	5	5	1	11
Don't Believe in Herbal	6	3	1	10
Slow Action and Longer duration for Treatment	18	10	1	29
Grand Total	192	162	14	368

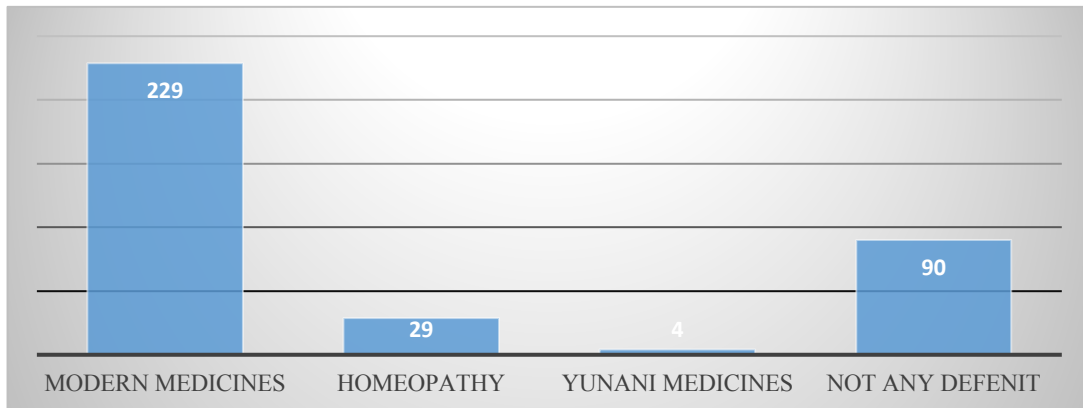


Figure 4: Preferred medicinal system among Non-Users.

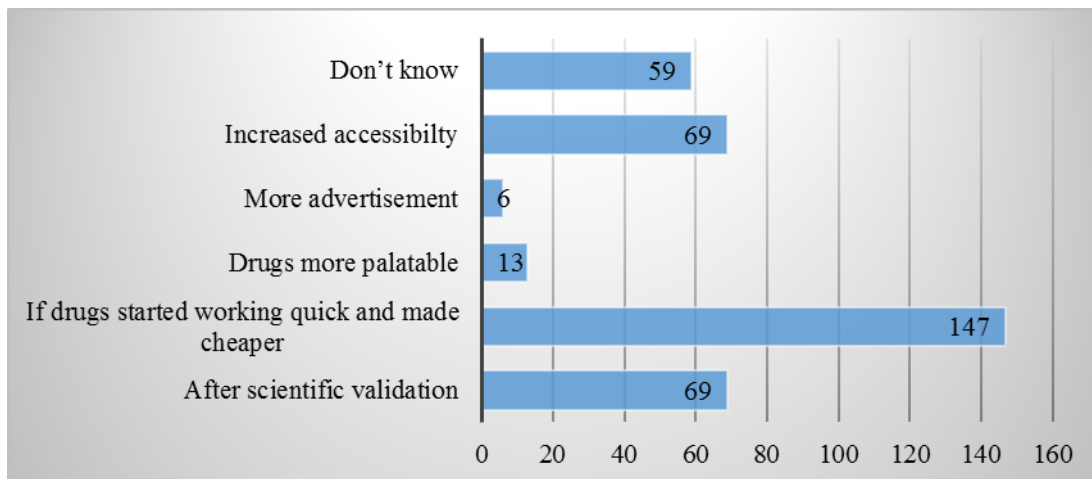


Figure 5: What Change can lead Non-Users towards Ayurveda.

Student independent t testing between both the groups of user and non-users, yielded t value = 1.54775 and p value = 0.061, which does not approve any association of the source of knowledge with that being an Ayurveda user or non-user.

The users were asked about what motivates them to use Ayurvedic treatment modalities. (Figure.2). Three major responses recorded were those who claimed to gain complete cure (34.3%), followed by belief of having fewer side effects than modern drugs (19.6%) and recommendation by a known person (12.7%).

Our study has also helped us to analyze the most common diseases for which user group prefer to use Ayurvedic medication. Table 4 reveals the top five alignments for which participant's preferred Ayurvedic medications as Skin problems (13.2%), followed by gastrointestinal issues (12.7%), musculoskeletal pain or disorder (12.5%) and common cold (7.9%).

Responding to the enquiry about the type of setup they have received Ayurvedic treatment in, Participants gave a large number of multiple responses. Redistributed them to domains in which all the different responses are summarized gave us 9 domains (Figure 3)

We can clearly see that while majority of the peoples (54%) prefer private setups and Govt. setups (18.6%) there is also a notable occurrence (14%) of self-prescription among peoples for Ayurveda treatments. The domain of others is composed of all other responses like traditional Vaidya, dispensing chains like that of Jiva or Patanjali, and telephonic companies that sale Ayurvedic of products. Our results also brought forth that about 64.3% of the participants experienced positive and beneficial effects after using Ayurvedic medications. Only a small fraction of individuals, 3.75% claim that Ayurveda treatment proved to be of no benefit to them.

On the other hand, Ayurveda non-users were also needed to enquire about their issues, and reasons why they do not use Ayurveda. As this understanding can suggest ways through which increases chance for using someone's using of Ayurveda can be increased. The non-users of Ayurveda were asked about their source of knowledge about Ayurveda (Table 6).

Answering this question, some (12) respondents have answered in multiple fields. Incorporation of these responses in to our results led to increase in N (non-users) 368 from 352 for this particular question only. Respondents revealed four causes for not using Ayurveda as never needed (54%), unavailability of trusted dependable Ayurvedic physician (16.8%), ignored (13.5%) and due to slow action and longer duration of treatment (7.8%). Age wise distribution of the reasons why people haven't used Ayurveda (table 5), shows us that majority of never needed responses were given by younger age group individual of both genders. This leads to the shift in importance to second response (they were not able to find a dependable Ayurvedic physicians) have the major significance because it appears to be a hurdle to the mass which might have sought to seek the alternative medicinal treatment.

When the non-users were asked about which medicinal system they prefer for their health needs they responded (Figure.4) that most of them preferred allopathic system of medicine (65%), and a considerable number (25.5%) of respondents did not have a definitive preference.

Lastly, when the non-users were asked for the change in the Ayurveda system of medicine which they think might pull non-use to use Ayurveda (Figure 5). Majority of the respondents (41.7%) responded that if somehow Ayurvedic medicines are made cheaper and started working early, most of the respondents (19.6%) respond both, that if accessibility to Ayurvedic establishment's increases, with increased scientific validation of this medicinal system they will be able to utilize Ayurveda system of medicine, a few of the participants (3.6%) feel that Ayurveda is not promoted in the right manner.

## DISCUSSION

For the present survey we receive 779 responses from all over country, a careful scrutiny of responses led to elimination of incomplete and invalid responses that left 728 responses for further analysis. Males appear more participative than females, as there were 506 males and 222 females. Participants found to be distributed to all age groups and educational back grounds. Responses were grouped to classes of age above 30 and below 30 for analysis purpose, Chi-square analysis showed an association between age groups and gender with that of being a Ayurveda user or non-user, and no association was found with educational background and earning status of respondents with that of being an Ayurveda User or non-user. That put this finding in the line of debate as some studies suggest some kind of association of demographic profile with their being of an a CAM user<sup>8,9</sup> on the other hand some do not suggest any association of this kind<sup>10,11</sup>. At the same time independent student's- t testing revealed that there is no difference between user and non-user as group's, for their source of knowledge for Ayurveda<sup>11-13</sup>. Study also displays that major source of motivation to use Ayurveda is, fear of side effects of modern drugs along with desire of complete cure which is in accordance with finding of other studies<sup>11,14,15</sup>. It is very interesting to note that peoples prefer or use more of Ayurveda and alternative therapies more in some disease than other<sup>14,16-18</sup>, this finding may be used to identify potential areas for promotion of these therapies. It was also found that when peoples prefer private providers to avail these kind of treatment<sup>14</sup> there also is a considerable prevalence (14%) of self-prescription about these therapies. When our Ayurveda user group was enquired about the level of satisfaction they have received, majority of respondents responded in favor of receiving good benefits after using Ayurveda despite of drug compliance or non-compliance with almost all other studies globally support this finding<sup>11,14,15,17,19</sup>. Present and all other similar surveys reflected inclination of the population to learn these therapies<sup>9,15</sup>. This inclination to learn these therapies is also reflected when we found considerable prevalence of self-prescription (14%) of these therapies in present study.

On the other hand, it was also required from Ayurveda non-user group to reveal out issues which limit them to use Ayurveda. Out of them, 54% of respondents claimed that they had never needed Ayurveda followed by unavailability of dependable Ayurvedic physician (16.8%), ignored (13.5%) and slow action and longer duration of the treatment (7.8%) as causes for not using Ayurveda. Further investigation of never needed group revealed that they belonged to younger age group of both sexes, which is a perceptible fact. This led to increased significance to their opinion of unavailability of dependable Ayurvedic physician and discouragement of practice by slow action and longer duration of Ayurvedic medicines as possible obstacles about the practice of Ayurveda among Public which also is indicated by some studies<sup>6,15</sup>. Ayurveda non-user group responding about their therapy of choice identified as modern medicine (65%), not any definite (25.5%), followed by homeopathy and Unani in order for their preferences, this finding is also in accordance with other

studies published<sup>4,12,13</sup>. However when the non-users were inquired about the modifications they feel might be used to increase the use of Ayurveda among populations, received inputs like that if Ayurveda drugs are made cheaper (41.7%) along with increased scientific validation and acceptance (19.6%) with increased accessibility to establishments providing such facility (19.6%) and shorter duration of treatment might lead to increased use of Ayurveda among the general population, these findings are in found aligned with other studies<sup>12,20</sup>.

## CONCLUSION

This survey shows us that Ayurveda is used by around fifty percent of population, from all age groups, both sexes and all type of professionals. Majority both users and non-users come to know about Ayurveda from human contact e.g. friends, relatives, family. And primary motivation for them to use Ayurveda was the claim of complete cure, and fear of side effects of modern drugs, provided to them or they perceive along with their knowledge source or later. Survey also showed to us that the peoples who use Ayurveda, used it in many kinds of diseases preliminary in skin, GIT, and musculoskeletal disorders. Most of the peoples who have used Ayurveda prefer it or have received the treatment from private setups, or government setups there also were occurrence of self-prescription to avail Ayurveda treatment. Taken for the efficacy as perceived by the users, majority of the respondents appear satisfied after using Ayurveda. Also, the users have shown a huge inclination towards availing any opportunity to learn simple Ayurvedic remedies.

On the other hand, after comparing the source of knowledge between users and non-users, later group was asked why they haven't tried Ayurveda till then. Most of the peoples who claimed that they haven't got a chance to avail Ayurveda and have ignored what type of treatment they are receiving belongs to the younger age group, so it has less importance, while most important reason come to surface is they couldn't find dependable Ayurvedic physicians to begun treatment with. Almost all of the non-Ayurveda using respondents prefer to receive treatment by modern medicinal system. Also, the non-user group think that if Ayurvedic medicinal system is made cheaper and starts working early with increased scientific validation and acceptance then they could give it a chance.

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