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## Effect of education and religion on trends of usage of Ayurvedic medicines

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### Abstract

Ayurveda, the traditional Indian medicine is accepted as the earliest practiced system of medicine in India. Ayurveda remains an integral part of life of the people since time immemorial. We have discussed in review of literature how Ayurveda find its roots in Vedas. In the present study it was observed that nearly 66% people use Ayurveda either as prepared Ayurvedic medicine or as a home remedy. The trend of people opting for Ayurvedic medicines to attain health is also increasing and there is considerable growth of global market of Ayurveda. Present study was undertaken in Derabassi and S.A.S Nagar tehsils of Punjab to oversee the effect of Education and religion on the prevalence of usage of Ayurvedic medicines in these areas. The use of Ayurvedic was moderate in the study areas. The factors that affected use of these products were education and religion. The increased awareness among individuals with higher educational qualifications has increased the usage of products amongst them.

**Keywords:** Ayurveda, education, medicine

### Introduction

Ayurveda, the traditional Indian medicine is accepted as the earliest practiced system of medicine in India. However, its basic concepts appeared to have been nurtured between 2500 and 500BC (*Charaka* and *Sushruta Samhitas* hold with 341 and 395 herbal medicines separately 1000 BCE ago) [1].

A perusal of all these classical treatises indicates that there are two schools of Physicians and Surgeons and eight specialties called "*Ashtanga Ayurveda*", viz -

1. *Kaya Chikitsa*- Internal Medicine
2. *Shalya* - Surgery
3. *Shalakya* - ENT and Ophthalmology
4. *Kaumar Bhritya* - Pediatrics
5. *Bhoot Vidya* - Psychiatry
6. *Agad Tantra* - Toxicology
7. *Rasayana* - Geriatrics
8. *Vajikarana* - Eugenics and aphrodisiacs

The above eight branches have over the years and specifically during the last 50 years expanded into 22 specialities for post-graduate education as follows:

1. *Ayurveda Siddhanta* (Fundamental Principles of Ayurveda).
2. *Ayurveda Samhita*.
3. *Rachna Sharira* (Anatomy).
4. *Kriya Sharira* (Physiology).
5. *Dravya Guna Vigyan* (Materia Medica and Pharmacology).
6. *Rasa-Shashtra* and *Bhaishajya Kalpana* (Pharmaceuticals using minerals and metals).
7. *Kaumar Bhritya* – *Bala Roga* (Paediatrics).
8. *Prasuti - Tantra avum Stri Roga* (Obstetrics and Gynaecology).
9. *Swasth - Vritta* (Social and Preventive Medicine).
10. *Kayachikitsa* (Internal Medicine).
11. *Rog Nidana avum Vikriti Vigyan* (Diagnostics and Pathology).
12. *Shalya Tantra (Samanya)* (General Surgery).

13. *Shalya Tantra – Ksar Karma avum Anushastra Karma (Kshara)*.
14. *Karma and Para-surgical procedure*.
15. *Shalya Tantra (Asthi, Sandhi)*.
16. *Shalakyata Tantra – Netra Roga*.
17. *Shalakyata Tantra – Shiro-Nasa - Karna avum Kantha Roga (ENT)*.
18. *Shalakyata Tantra – Danta Avum Mukha Roga (Dentistry)*.
19. *Manovigyana avum Manas Roga (Psychiatry)*.
20. *Panchakarma*.
21. *Agad Tantra avum Vidhi Vaidyaka (Toxicology and Jurisprudence)*.
22. *Sangyahanana (Anaesthesiology)*.
23. *Chhaya avum Vikiran Vigyan (Radiology)*.

Courses of study for the award of Bachelor, Master and Doctorate degrees in Ayurveda are imparted through various Universities of India [2].

**Rasashastra and bhaishajya kalpana (alchemy and pharmaceutical sciences)**, covers classification, identification, manufacturing processes *shodhan* (purification) and *maran* (calcination), standardization and quality control of single and compound Ayurvedic formulations, as well as Pharmacotherapeutics, use of Ayurvedic mineral and metallic medicines and pharmacovigilance.

People are using Ayurvedic medicines since the time immemorial for the treatment of various diseases. With the increasing life expectancy, geriatric diseases are bound to increase and people are looking up-to Ayurveda for their geriatric health needs.

The trend of people opting for Ayurvedic medicines to attain health is also increasing and there is considerable growth of global market of Ayurveda. Present study was undertaken in Derabassi and S.A.S Nagar tehsils of Punjab to oversee the effect of Education and religion on the prevalence of usage of Ayurvedic medicines in these areas.

### Methodology

**Objective:** To ascertain the effect of education and religion on the extent and pattern of usage of Ayurvedic medicines

- **Study units:** Residents of the mentioned study area.
- **Study design:** Qualitative.
- **Survey technique:** In depth interviews.

- **Study tool:** Questionnaire

### Sample size (n)

The sample was distributed in a ratio of 178:227 because of the difference in population of Rural and Urban areas. A sample size of 178 from Rural and 227 from Urban area was taken.

The sample size was randomly selected from houses in rural and urban area based on random sampling.

### Inclusion criteria

- People above the age of 18years to 70 years from houses of the study area.

### Exclusion criteria-

- Those who denied consent.
- People below the age of 18years and above 70 years.

**Ethical aspect:** Participation was entirely voluntary and oral consent was taken from the participants. Confidentiality was maintained.

### Data Collection

For collection of data, the respondents were visited by the investigator. Respondents were explained about the nature and purpose of the study. They were then administered a semi-structured questionnaire. The tool was developed and tested prior to data collection.

### Data Validation and Data Analysis

Data validation exercise was conducted for all the data collected by crosschecking and matching the data from hard copies into the soft copies and by using Microsoft excel developed macros for data validations for both continuous and categorical variables. For data analysis of both univariate and bivariate done using STATA- 16.0 version. Advance Microsoft Excel (Office 360) is used for data visualization and cross tables.

### Result

The results of the study were assessed on the basis of outcome variables, already defined in the detailed methodology.

### Results

**Table 1:** Usage of Ayurvedic medicine by Education

Education	Usage					
	Yes	%	No	%	Total	%
Illiterate	24	82.76%	5	17.24%	29	100.00%
Matric/ Under Matric	89	72.36%	34	27.64%	123	100.00%
Senior Secondary	33	50.00%	33	50.00%	66	100.00%
Graduate	69	59.48%	47	40.52%	116	100.00%
Post Graduate	55	77.46%	16	22.54%	71	100.00%
Grand Total	270	66.67%	135	33.33%	405	100.00%
Fisher's Exact p-value	0.001***					

#p-value calculated using Fisher's exact test at 5% level of significance. \*p-value is significant at 0.05 level of significance.

\*\*p-value if significant at 0.005 level of significance. \*\*\*p-value is significant at 0.001 level of significance

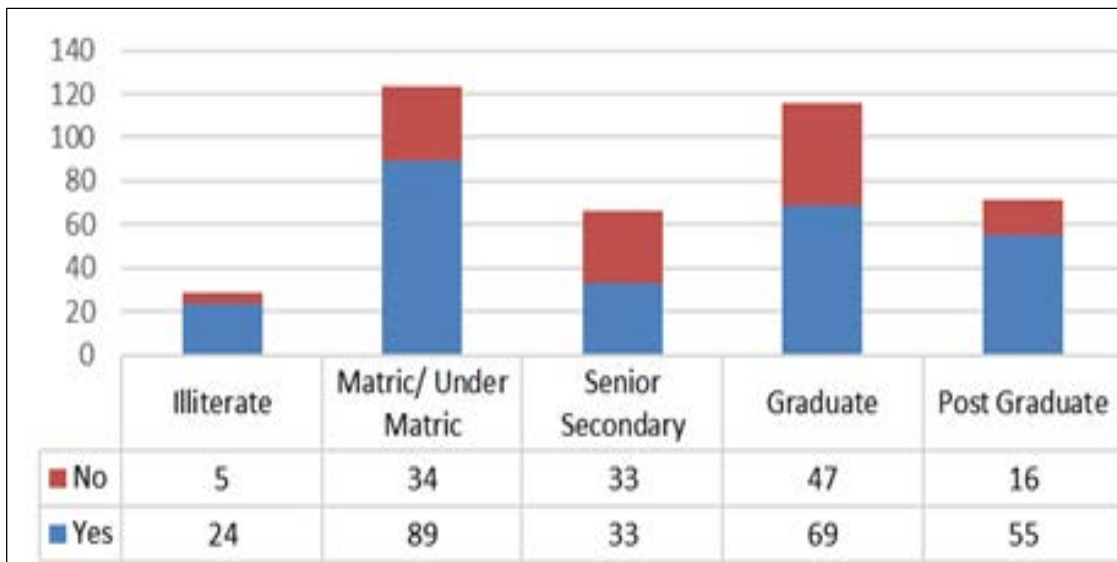


Fig 1: Usage of Ayurvedic medicine by Education

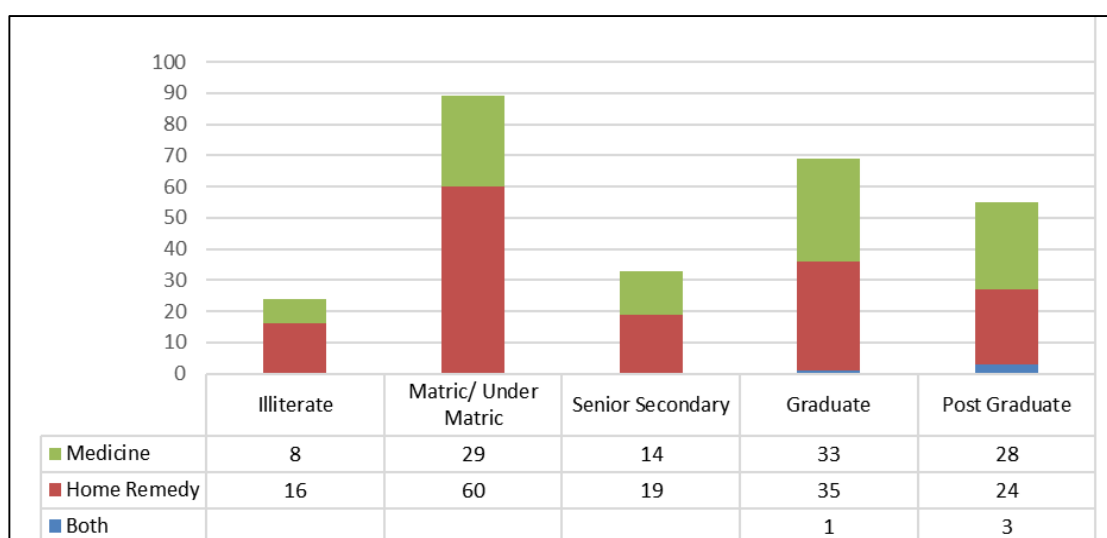


Fig 2: Usage of home remedies and prepared medicines by education

Table 2: Usage of Home Remedies and Prepared Medicines by Education

Education	Usage of Home Remedies and Prepared Medicines							
	Both		Home Remedy		Medicine		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Illiterate	0	0.00%	16	66.67%	8	33.33%	24	100.00%
Matric/ Under Matric	0	0.00%	60	67.42%	29	32.58%	89	100.00%
Senior Secondary	0	0.00%	19	57.58%	14	42.42%	33	100.00%
Graduate	1	1.45%	35	50.72%	33	47.83%	69	100.00%
Post Graduate	3	5.45%	24	43.64%	28	50.91%	55	100.00%
Grand Total	4	1.48%	154	57.04%	112	41.48%	270	100.00%
Fisher's Exact p-value <sup>3</sup>	0.049*							

#p-value calculated using Fisher's exact test at 5% level of significance. \*p-value is significant at 0.05 level of significance.

\*\*p-value if significant at 0.005 level of significance. \*\*\*p-value is significant at 0.001 level of significance.

It is evident from the above table that it is Illiterate (~83%) who are using Ayurvedic medicines the most followed by the, postgraduates (~77%), Matric/ under-matric (~72%), graduates (~59%) and senior secondary (~50%). This depicts that there is a significant relationship between level of education and Ayurvedic medicine usage. Either highly qualified people use Ayurvedic medicine or those who are on lower level of education. While on one hand majority of illiterates (~67%) used home remedies, use of prepared

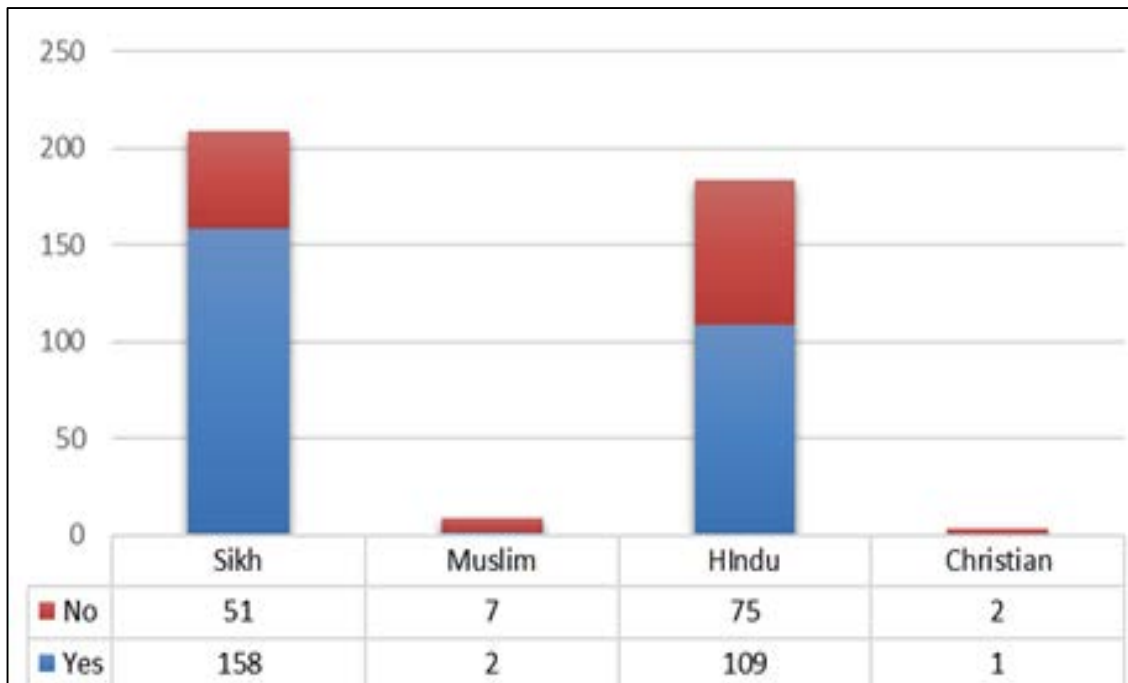
medicine (~51%) was more as compared to home remedies (~44%) amongst postgraduates.

**Interpretation**

**Null Hypothesis:** There is no relationship between level of education and Ayurvedic medicine Usage.

**Alternative Hypothesis:** There is relationship between Area of resident and Ayurvedic medicine Usage.

**Conclusion:** Since p-value<0.05, Null Hypothesis is rejected and Alternate Hypothesis is accepted.

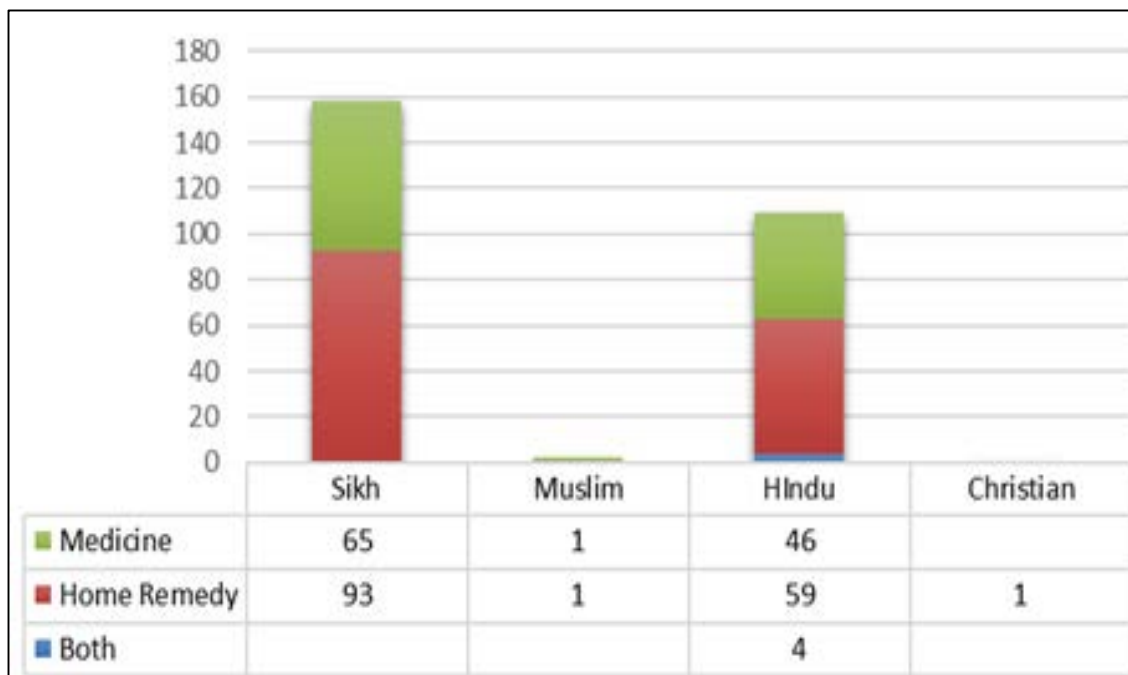


**Fig 3:** Usage of Ayurvedic Medicines by Religion

**Table 3:** Usage of Ayurvedic Medicines by Religion

Religion	Usage					
	Yes	%	No	%	Total	%
Sikh	158	75.60%	51	24.40%	209	100.00%
Muslim	2	22.22%	7	77.78%	9	100.00%
Hindu	109	59.24%	75	40.76%	184	100.00%
Christian	1	33.33%	2	66.67%	3	100.00%
Grand Total	270	66.67%	135	33.33%	405	100.00%
Fisher's Exact p-value <sup>3</sup>	0.000***					

#p-value calculated using Fisher's exact test at 5% level of significance. \*p-value is significant at 0.05 level of significance. \*\*p-value if significant at 0.005 level of significance. \*\*\*p-value is significant at 0.001 level of significance.



**Fig 4:** Usage of home remedies and prepared Medicines by Religion

**Table 4:** Usage of home remedies and prepared Medicines by Religion

Religion	Usage of Home Remedies and Prepared Medicines							
	Both		Home Remedy		Medicine		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Sikh	0	0.00%	93	58.86%	65	41.14%	158	100.00%
Muslim	0	0.00%	1	50.00%	1	50.00%	2	100.00%
Hindu	4	3.67%	59	54.13%	46	42.20%	109	100.00%
Christian	0	0.00%	1	100.00%		0.00%	1	100.00%
Grand Total	4	1.48%	154	57.04%	112	41.48%	270	100.00%
Fisher's Exact p-value <sup>3</sup>	0.152							

#p-value calculated using Fisher's exact test at 5% level of significance. \*p-value is significant at 0.05 level of significance.

\*\*p-value if significant at 0.005 level of significance. \*\*\*p-value is significant at 0.001 level of significance

It is evident from the above table that it is Sikhs ( $\approx 75\%$ ) and Hindus ( $\approx 59\%$ ), who are using *Ayurvedic* medicine the most. This depicts that there is a significant relationship between religion and *Ayurvedic* medicine usage. There is no major difference between the usages of home remedies and prepared *Ayurvedic* medicine on religion basis, it is almost being equal.

### Interpretation

**Null Hypothesis:** There is no relationship between religion of a person and *Ayurvedic* medicine Usage.

**Alternative Hypothesis:** There it's a relationship between religion of a person and *Ayurvedic* medicine Usage.

**Conclusion:** Since p-value < 0.05, Null Hypothesis is rejected and Alternate Hypothesis is accepted.

### Discussion

Ayurveda remains an integral part of life of the people since time immemorial. We have discussed in review of literature how Ayurveda find its roots in *Vedas*. In the present study it was observed that nearly 66% people use Ayurveda either as prepared *Ayurvedic* medicine or as a home remedy.

### Determinants of trends and patterns of utilization

Results of the study were analyzed with the factors namely religion and education level.

### Religion

Religion is also one the determinant which was tested in the present study and it was found that religion also play a major play as far as usage of *Ayurvedic* medicines is concerned. Low sample size of the Muslims and Christians is one of the limitations of the study. It was *Sikh* and *Hindu* diaspora who use more *Ayurvedic* medicines. This trend may be due to the low sample size of the minority communities in the study area. Although there was no major difference found between usage of finished *Ayurvedic* medicines and home remedies on the basis of religion.

### Education

Education of person in addition to the religion of the people is also one of the determinants of usage of *Ayurvedic* medicine. Whereas low education status people use more home remedies as compared to the people who are in higher education, who in turn use more finished medicines. No clear trend was observed as far as usage of *Ayurvedic* medicine as a whole is concerned, on the basis of education level of a person. There is need to provide awareness and access of finished *Ayurvedic* medicines in the lower education status people, especially in view of the rising trend of non-Communicable diseases in the lower education

strata people, where *Ayurveda* systems have proven efficacy in these diseases both in terms of health promotion, prevention and cure of these conditions<sup>4</sup>

### Conclusion

The use of *Ayurvedic* was moderate in the study areas. The factors that affected use of these products were education and religion. The increased awareness among individuals with higher educational qualifications has increased the usage of products amongst them.

### Recommendations

Awareness needs to be created amongst people by behavior change communication and Information, Education and communication activities.

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