A Survey on Popularity and General Awareness Regarding Allopathic and Ayurvedic System of Medicine among Rural and Urban Areas

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Abstract: The objective of present survey was to get the information about general awareness and popularity of allopathic and Avurvedic system of medicine among rural and urban areas. In this open field survey, a total of 400 volunteers aged 18-80 years having different education level, 200 from urban and 200 from the rural area were involved. A Performa was drafted containing a set of questions in simple and understanding language. The objectives and each doubt were explained and clarified to every volunteer. On the basis of the above questionnaire, responses are categorized into awareness about the system, side-effects, quality of herbal drugs, their faith, satisfactory level, and preference in a medical emergency, common ailment and in case of mental illness. From the study, it was found that both populations are quite familiar and aware of about allopathic and Ayurvedic medicines. They believed that Ayurvedic medicines are more effective and free from side-effects but they don't believe in the quality of herbal drugs. At the same time, allopathic medicine's fast action and scientific evidence make it the first preference for both populations in a medical emergency even they are aware of its side-effects. From this study, it was concluded that both the populations know the difference between Ayurvedic and Allopathic medicines, and are having huge faith in Ayurvedic medicines but have a concern about their quality, which indicates the need of fundamental research on herbal medicines with advanced technology for their global acceptance over allopathic medicines.

 ${\it Keywords} \hbox{: A yurvedic medicine, Allopathic medicine, Herbal drugs, Mental illness, Medical emergency, Questionnaire.}$

1. Introduction

In this 21st century, the global visions for medicines are getting changed. Now, globally medical herbology are accepted as we believed that traditionally used medicines are carrying potency and safety [1, 2]. As we know Ayurveda, the Indian ancient system of medicine is the oldest remedial system of medicines originating from the Vedas documented around 5000 years ago. The aim of Ayurveda is to prevent and cure the disease process. Therefore, the demand and market for herbal products is growing day by day throughout the globe. According to WHO, about 70–80% of the world populations

rely on Alternative system of medicines [3]. To fulfill this need of herbal products, many pharmaceutical companies and research universities are conducting analysis based research work on plant materials for their potential medicinal use [4]. These researches have done an exponential growth in the field of herbal medicines and their potent results increases consumers' awareness regarding potential benefits of substance get by plants in health related problems [5]-[7]. This popularity of Ayurvedic system of medicine is due to its therapeutic efficiency against many resist chronic diseases [8]. However, Ayurvedic system is lagging behind because of unavailability of scientific data still which is not fully explored [9]. There are some other reasons also which are responsible for railing of the Ayurvedic system of medicine viz. lack of new research methodologies, lack of willingness and cooperation of biomedical scientists, lack of well-established research infrastructure and unclear views of young researchers on how to make valuable output from Ayurvedic research [10]. Therefore, there is a need of fundamental research on Ayurvedic system of medicine in the fields of Ayurvedic pathology, physiology, pharmacology, and pharmaceuticals for the globally acceptance of herbal medicines [11].

In early 16th century, the allopathic system of medicine was introduced in Asian countries and become highly popular within a very short period due to its fast action than of Ayurvedic system of medicine [12]. The market of allopathic system of medicine has reached almost at the top but still the development and promotion of Ayurveda sector is under progress. On other side, the side-effects associate with this system increases its burden of mortality and morbidity rate, which makes Ayurveda a thrust area for research. As the India is having a glorious past in Ayurvedic system of medicines, therefore is a need of systematic research that converts this old treasure data into information, information into knowledge, knowledge into wisdom, and this wisdom into modern approach towards Ayurvedic research, which will create a better

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understanding of Ayurvedic system with the help of the modern medical fraternity [13]-[15]. Undoubtedly, day by day, Ayurvedic researches are becoming validated because of improving scientific approaches of researchers. For the past few decades, there is increase in approaches of researchers towards reverse pharmacology, which is an important and interesting new tremendous scientific approach to explore new Ayurvedic formulations from already known facts and experience of routine clinic practice, to the sound preclinical and clinical researches for the proper validation of a traditional medicinal system [15]-[17].

There are more than 2, 50,000 higher plant species on earth in which more than 80,000 are medicines [18]. In India there are more than 50,000 plant species but according to reports approximate 17,810 plant species is found to be medicinal value, out of these species only 30,000 plants is documented for use of any kind. In last decade, the turnover of herbal medicines was around US\$ 30 billion in the year 2000 and was US\$ 60 billion in 2010 in developed countries [19], which was increased up to 5-15% than the same for the last decade and was valued at USD 71.19 billion in 2016.

The factor behind growing global herbal medicine market are rising elderly population, increasing consumer awareness, scientific base research, little or no side effects, tighter health budgets of modern medicinal system and the release of Current Good Manufacturing Practices for dietary supplements by the FDA which has driven consumers towards the more economical and safer herbal medicine systems [20]-[22]. The market constraints are lack of research and standardization in herbal medicines, poor legal and regulatory frame work which causes patent problems, poor manufactured herbal products etc. [23], [24]. Therefore, for judging the awareness/knowledge and the overall preference of common man regarding Ayurvedic and Allopathic system of medicine we thought of conducting the present survey in rural and urban areas.

2. Experimental Design

A. Study design

This is an open-field and questionnaire based study involving common population of urban and rural areas. A Performa was drafted containing a set of questions in simple and understanding language. The objectives and each doubt were explained and clarified to every volunteer. This study involves total 400 volunteers of different educational level, 200 from urban and 200 from rural area in the age group of 18-80 years. The study was conducted from September 2018 to November 2018 North India.

Questionnaires:

The first nine questions in questionnaire were-

- 1. Do you know about allopathic treatment?
- 2. Do you know about Ayurvedic treatment?
- 3. Have you taken allopathic medicine for any disease or disorder?

- 4. Did you face any side-effects/ adverse effects of allopathic treatment?
- 5. Have you taken Ayurvedic medicines for the same or different disease/ disorder?
- 6. Did you face any side-effects/ adverse effects of Ayurvedic treatment?
- 7. Have you full faith in vendors selling herbal drugs?
- 8. Do you really believe that Ayurvedic medicines are free from side-effects?
- 9. Do you believe that Ayurvedic medicines provide root-cause treatment and thereby permanent relief?

On the basis of above questions, responses are categorized in awareness about the system, side-effects and quality of herbal drugs.

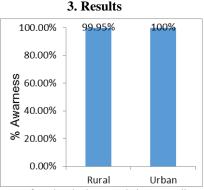


Fig. 1. Awareness of rural and urban populations regarding ayurvedic and allopathic medicine

Fig. 1 showed that 99.95% of the rural population and 100% of the urban population are aware of allopathic and Ayurvedic system of medicine, which proves that they know the difference between these two systems of medicine.

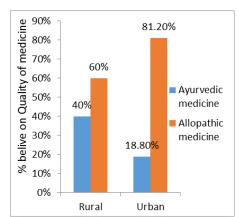


Fig. 2. Belief of rural and urban populations on quality of ayurvedic and allopathic medicine

Fig. 2 showed that 40% of the rural population and 18.80% of the urban population have belief in the quality of vendor selling Ayurvedic medicine, whereas 60% of the rural population and 81.20% of the urban population have belief in the quality of allopathic medicine.

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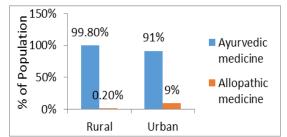


Fig. 3. Belief of rural and urban populations on ayurvedic and allopathic medicine regarding their side-effects

Fig. 3 showed 99.80% of the rural population and 91% of the urban population believed that Ayurvedic medicines are free from the side – effects.

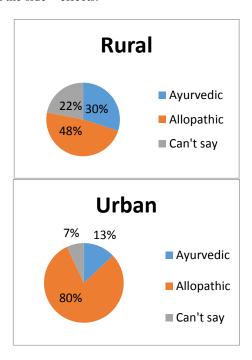
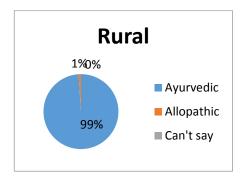


Fig. 4. Which treatment satisfied you more (on the basis of previous experience)?

Fig. 4 showed that 48% of rural population is satisfied with Allopathic medicine and 30 % of rural population is satisfied with Ayurvedic medicines in according to their previous experience. Fig. 5 showed satisfactory level of urban population i.e. 80% with Allopathic medicine and 13 % with Ayurvedic medicine based on their previous experience.



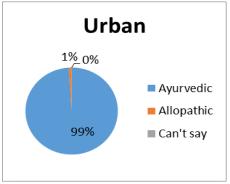


Fig. 5. Which treatment seem you cost effective?

Fig. 5 showed, rural and urban population are equally believed that Ayurvedic medicines are cost-effective as compared to Allopathic medicines.

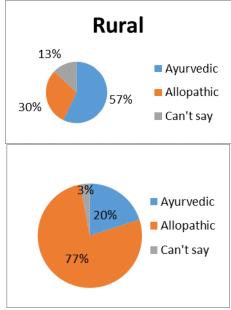
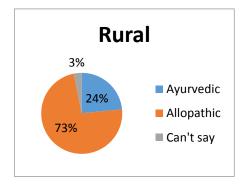


Fig. 6. In which system you have more faith?

Fig. 6 showed, 57% of rural population and 20% of urban population have faith in Ayurvedic medicines, whereas 30% of rural population and 77% of urban population have faith in Allopathic medicines. 13% of rural population and 3% of urban population don't know about their preference.



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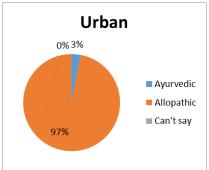


Fig. 7. Which system will you prefer, in case of medical emergency?

Fig. 7 showed 73% of rural population and 97% of urban population will prefer Allopathic medicine in medical emergency. Only 24% of rural population and 3% of urban population will prefer ayurvedic medicines in medical emergency.

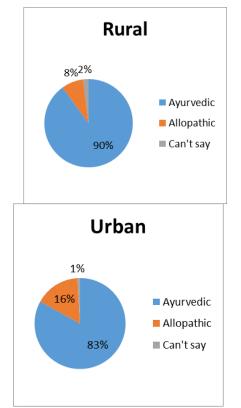


Fig. 8. In case of common ailments which system will you prefer?

Fig. 8 showed 90% of rural population and 83% of urban population will go with Ayurvedic medicines in case of common ailments. 8% of rural population and 16% of urban population will prefer Allopathic medicine for common ailments. Fig. 9 showed that 91% of rural population and 88% of urban population believed on lifelong effect of Ayurvedic medicines over Allopathic medicines.

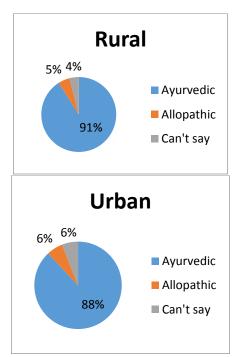


Fig. 9. What do you think, which system of medicine have lifelong effect?

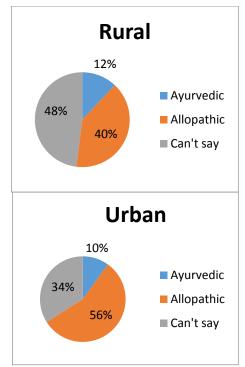


Fig. 10. Showing system of preference in case of mental illness in rural area and urban area

Fig. 10 showed 40% of rural population and 56% of urban population will prefer Allopathic medicines in case of mental illness, whereas 12% of rural population and 10% of urban population will prefer Ayurvedic medicines for mental illness.

4. Discussion

In this survey we found that most of urban and rural

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populations are quiet familiar with the term allopathic and Ayurvedic medicines as shown in Fig. 1. Tvs, Newspapers, Google, magazines and books etc are the sources for updating their information regarding allopathic and Ayurvedic treatments. From the survey it comes to know that both the population are well known and aware about the side-effects of allopathic treatments and have shown their belief in Ayurvedic treatment as shown in Fig. 3 and 4. But still more than 50% rural and urban populations don't believe on vendors selling herbal drugs as shown in Fig. 2. They usually like to procure these herbal drugs from kitchen, kitchen garden, municipal parks and pansari shops. In case of medical emergencies, rural population preferred allopathic treatment over Ayurvedic treatment where as in case of common ailments they have more belief on Ayurvedic treatment than of allopathic as shown in Fig. 7 and 8. On the parallel side, in case of medical emergencies urban population is found to be more inclined towards allopathic treatment than of rural population and for common ailments they will choose Ayurvedic treatment but having lower preference level than rural population Fig. 7 and 8. The reason behind inclination of rural and urban population towards use of herbal remedies for common ailments is their faith in our ancient system of medicines (Fig. 6) as they believe that herbal remedies or medicines are free of side-effects or having minimal side-effects on body with long-term and permanent cure for ailments as shown in Fig. 9. The second most important reason is their awareness concerning fear of toxicity, microbial resistance and the high cost of healthcare of allopathic drugs as shown in Fig. 5. Undoubtedly, Ayurvedic treatment is more effective than allopathic treatment in most of chronic diseases still the popularity of Ayurvedic treatment is rather lesser as majority of both of the populations prefers allopathic treatment because of its ability to give fast relief from diseases as compared to Ayurvedic treatment. However, Ayurvedic treatment is a time dependent treatment, which makes it a secondary choice for treatment of both of the population in medical emergencies.

The use of herbal drugs in mental disorders like depression and psychiatric disorders, the role of Ayurvedic treatment has become well established with phototherapeutic preparations over the past decades. However, in literature, some criticisers have criticised the quality of trials involving herbal products in account of using non-standardized products and poor study design for mental illness treatments. Our survey statistics conclude that majority of both the population will prefer allopathic treatment over Ayurvedic treatment because of the same reason i.e. fast action. Even more than 30% of both the population don't know about their preference which reflects their confusion about both the treatments. And this confusion is mainly caused by the lack of scientific evidences of Ayurvedic treatment which make it poorly acceptable and the increased side effects in allopathic treatment. Still in the modern era, allopathic system of medicine has been reached at the top because of advanced techniques, highly design and validated

research. Hence, the same validate basic principles are need to be implemented in the research of Ayurvedic system of medicine with the help of highly design research and advanced research methodology in concern of mental illness as well other chronic diseases as shown in Fig. 10. For the progressive development of Ayurvedic education and research, the government should be involved in and prepared a roadmap for standardization, proper mode of action, pharmacology, pharmacokinetics, and pharmacovigilance studies of many important Ayurvedic drugs. Also the pharmacist can play a central role in the development and increasing in the use of Ayurvedic medicine. For the up gradation of Ayurvedic system of medicine government as well as industries must have to take some strict steps and also carefully monitor the complete cycle of herbal medicine from raw material collection to their use. In this way, the Ayurvedic system of medicine will be globally acceptable with the standard quality of Ayurvedic products.

5. Conclusion

From this study it was concluded that both the populations know the difference between Ayurvedic and Allopathic medicines, and are having huge faith in Ayurvedic medicines but not so in vendor selling herbal drugs. This faith is because of low cost and no toxicity effect of herbal drugs. The rural population found to be softer to target for selling of herbal drugs by vendors, whereas urban population are well educated about these vendors. On the other side, allopathic medicines are costly unaffordable for economically poor people and people are aware about their side-effects, which makes a large number of people to seek herbal drugs. Still allopathic medicine is the first choice in the state of medical emergencies because of their fast relief action. The reason behind lagging of herbal drugs is the lack of scientific evidence and poor research methodology. Therefore, there is urgent need to design advanced research methodology for validation and to increase scientific evidence of herbal drugs. For this government should have to prepare some guidelines for Ayurvedic education as well for research and researchers should have to do researches in the areas of fundamental principles and diagnostic tools of Ayurveda in place of drug research, which could make it top most market of the world.

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References

- Ekor M. The growing use of herbal medicines: issues relating to adverse reactions and challenges in monitoring safety. Front Pharmacol, 2014; 4: 177.
- [2] Abbot N. C., Ernst E. (1997). Patients' opinions about complimentary medicine. Forsch. Komplementarmed, 1997 4: 164–168.
- [3] Jacqui W. Herbal products are often contaminated, study finds. BMJ 2013; 347: 6138.

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- [4] Bandaranayake W. M. Modern Phytomedicine. Turning Medicinal Plants into Drugs. WILEY-VCH, Weinheim, 2006; 1: 25-57.
- [5] Zhang J, Igho J. Onakpoya, Posadzki P and Eddouks M. The Safety of Herbal Medicine: From Prejudice to Evidence. Evid Based Complementary Altern Med, 2015: 316706: 1-3.
- [6] Zhang J, Wider B, Shang H, Li X, and Ernst E. Quality of herbal medicines: challenges and solutions. Complement Ther Med 2012; 20: 100–106.
- [7] Ernst E. Herb-drug interactions: potentially important but woefully underresearched. Eur J Clin Pharmacol, 2000; 56: 523–524.
- [8] Astin J. Why patients use alternative medicines: results of national study. J Am Med Assoc, 1998; 279: 1548–1553.
- [9] Basisht G. Exploring progression of Ayurveda. Ayu 2011; 32:445-7.
- [10] Chauhan A et al. Ayurvedic research and methodology: Present status and future strategies. Ayu 2015; 36: 364-369.
- [11] Baghel MS. Need of new research methodology for Ayurveda. Ayu. 2011; 32: 3-4.
- [12] Obadia L. The internationalisation and hybridization of medicines in perspective? Some reflections and comparisons between east and west. Int J Cult Stud 2009; 5: 8.
- [13] Humber J. M. The role of complementary and alternative medicine: Accommodating pluralism. J Am Med Assoc. 2002; 288: 1655-1656.
- [14] Hankey A. The scientific value of Ayurveda. J Altern Complement Med 2005; 11:221-225.

- [15] Patwardhan B and Vaidya A. D. Natural products drug discovery: Accelerating the clinical candidate development using reverse pharmacology approaches. Indian J Exp Biol, 2010; 48: 220-227.
- [16] Vaidya AD. Reverse pharmacological correlates of Ayurvedic drug actions. Indian J Pharmacol, 2006; 38: 311-315.
- [17] Kola I and Landis J. Can the pharmaceutical industry reduce attrition rates? Nat Rev Drug Discov. 2004; 3: 711-715.
- [18] S Jawla et al. General awareness and relative popularity of allopathic, Ayurvedic and homeopathic systems. J Chem Pharm Res 2009; 1 (1):105-112.
- [19] Niraml S. N. et al. Contribution of herbal products in Global Market. Pharm Rev 2013; 2013: 95-104.
- [20] Jayasundar R. Ayurveda: A distinctive approach to health and disease. Curr Sci 2010; 98: 908–914.
- [21] Goswami A, Barooch P. K, Sandhu J. S. Prospect of herbal drugs in the age of globalization – Indian scenario. J Sci Ind Res., 2002; 61: 423–443.
- [22] Cardellina J. H., 2nd Challenges and opportunities confronting the botanical dietary supplement industry. J Nat Prod 2002; 65: 1073–1084.
- [23] Manohar P. R, Eranezhath S. S, Mahapatra A and Manohar S. R. DHARA: Digital helpline for Ayurveda research articles. J Ayurveda Integr Med 2012; 3: 97-101.
- [24] Furst D. E. et al. Double-blind, randomized, controlled, pilot study comparing classic Ayurvedic medicine, methotrexate, and their combination in rheumatoid arthritis. J Clin Rheumatol., 2011; 17: 185-192.