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Original Research Article

Utilization and acceptance of Ayush medicines among school going adolescents

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ABSTRACT

Background: India is a country with significantly high use of Ayush medicine especially in the rural areas. Data on utilization of Ayush medicines among school going adolescent population are lacking. The aim of this study is to investigate the prevalence, patterns, and determinants of Ayush medicine use among school going adolescents aged 10 to 19 years in a rural setting.
Methods: The cross-sectional survey based study was conducted involving 298 school going adolescents aged 10 to 19 years of age. Data was collected through structured questionnaires, and statistical analysis was performed to determine the utilization and acceptance of Ayush medicines among the participants.
Results: Of the 298 adolescents who were offered the questionnaire, 264 returned the filled questionnaires, however, only 261 were included in the final analysis. The rate of utilization of Ayush drugs amounts to 47%. Utilization increases along with increase in age and shows a significant difference between boys and girls. Teenage girls are more likely to use Ayush medicines than teenage boys. 36% participants have used Ayush medicines for the treatment of respiratory ailments, while 28.7% utilized Ayush drugs for dermatological causes. Majority of participants had used both Unani and Ayurveda while Unani alone was the most prevalent system with a utilization rate of 22.1%.
Conclusions: Utilization of Ayush medicines including Unani and Ayurveda among school going adolescents in the age group of 10 and 19 years shows relatively higher rates. The findings of current study highlight the current state of Ayush drug utilization and identify factors influencing awareness levels among school going adolescents.

Keywords: Adolescents, Ayush, Medicine, Utilization

INTRODUCTION

In recent years, there has been a growing interest in traditional systems of medicine worldwide, and Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homeopathy (collectively known as Ayush) have emerged as prominent alternatives to conventional medical practices. These systems are accepted globally for prevention of disease, treatment and general maintenance of health.[1] Rooted in ancient wisdom and holistic healing principles, Ayush medicine offers a unique approach to wellness and disease management. The utilization of Ayush practices has surged, both in its country of origin, India, and across the globe, driven by a quest for natural, sustainable, and integrative healthcare solutions.[2]

While modern medicine has undoubtedly achieved remarkable advancements, there remains a yearning for more patient-centric and inclusive approaches to healthcare. The popularity of Ayush medicine stems from its emphasis on the individual's well-being, encompassing

physical, mental, and spiritual aspects. As a result, it has garnered a significant following, leading to increased demand for Ayush remedies, therapies, and practitioners.

Adolescents constitute a socially significant segment of the population and are the young people aged between 10 to 19 years. Globally more than 1.2 billion population is adolescent: indicating that roughly one in every six persons is an adolescent. Around 21% of Indian population is adolescents (roughly about 243 million) and therefore, forming a major demographic and economic force.[3] Although few studies have been conducted globally to evaluate the use and awareness of herbal medicines in different age groups, data on utilization of Ayush medicines among adolescents in India is insignificant.

This study aims to bridge this knowledge gap and contribute to the understanding of Ayush drug practices in the adolescent population.

METHODS

Study design

This prospective, cross-sectional, survey based observational study was carried out among the school going adolescents. The data was obtained using a structured questionnaire. The study was carried out over a period of two months between March 2022 and April 2022.

Study population, setting and sample size

This study targeted school going adolescents aged 10 to 19 years in the catchment area of Unani Medical College, Ganderbal. J&K, India studying in classes 5th to 12th. The study area is a rural area in the district Ganderbal of J&K and the participant have access to both Ayush as well as allopathic systems of medicine. Sample size was determined using convenience sampling method which is a non-probability sampling technique. No apriori sample size was calculated for the study. Only those participants who agreed to participate in the study and fulfilled the inclusion criteria were included in the study and a total of 261 students participated in the study (n=261) and returned the properly filled questioners.

Inclusion criteria

Students were required to meet certain inclusion criteria that include being in the age group of 10 to 19 years, being the residents of Ganderbal, being students, choosing willingly to take part in the study.

Exclusion criteria

Those who did not fill the questionnaires completely were excluded from the study.

Data collection form and collection of data

Eligible participants were interviewed using a semi-structured questionnaire. The questionnaire was designed in English language having Urdu translation after reviewing literature about the previous similar studies.[4-7] The pre-tested, semi-structured questionnaire was validated before dissemination among the respondents. Prior to administered in main survey, a pilot study was conducted involving 10 participants. This pilot study was instrumental in identifying any potential issues with the language, style, or response options within the questionnaire. Feedback from the pilot study participants was carefully considered, leading to necessary adjustments to enhance the overall quality of the survey instrument. The questionnaire was divided into two sections, Section A and Section B. Section A contained questions to collect demographic data such as gender, age, class of study, socio economic group, family education status. Section B recorded the knowledge of participants about Ayush medicines and their utilization. Additionally, the reason of utilization of Ayush medicine was also recorded in this section. An additional page was provided to explain the study both in English and Urdu.

Data was collected from the adolescents (10-19 years) who attended schools. Assent of the participants was recorded, and all efforts were made to maintain the privacy and confidentiality of the participants.

Analysis of data

After making entries in Microsoft excel the data was analyzed using SPSS software. Categorical variables were expressed as frequency and percentages. Continuous variables were expressed as mean (SD). Chi square test was used to determine association between sociodemographic variables and utilization of Ayush services. P values less than 0.05 were considered statistically significant.

RESULTS

During the study questioners were given to a total of 298 adolescent students of different schools, a total of 264 students returned the filled questioners and participated in the study, giving a response rate of 88.59%. Nevertheless, final analysis was carried out on 261 questionnaires as 3 questionnaires were incomplete and therefore discarded. No significant socio-demographic difference was observed among the adolescent students who returned the filled forms and those who did not participate in the study.

Majority of the participants were in the age group of 14-17 years (middle adolescence) with a mean age of 14.76±2.5. More than half of the participants (51%) were females. Majority of the participants (34.5%) belonged to lower middle socioeconomic class followed by upper

middle (28.7%) whereas 7.7% of the participants belonged to lower socio economic class (Table 1).

Table 1: Sociodemographic characteristics of study participants.

Variables	Frequency (n=261)	Percentage (%)
Age (years)		
Mean±SD	14.76±2.5	
10-13	97	37.2
14-17	121	46.4
≥18	43	16.5
Gender		
Male	128	49
Female	133	51
Religion		
Muslim	260	99.6
Hindu	1	0.4
Education of father		
Primary school	89	34.1
High school	55	21.1
Secondary	60	23
Graduate	44	16.9
Postgraduate	13	5
Socioeconomic status*		
Class I (upper)	24	9.2
Class II (upper middle)	75	28.7
Class III (lower middle)	90	34.5
Class IV (upper lower)	52	19.9
Class V(lower)	20	7.7

*Socioeconomic status was determined by using modified kuppuswamy scale 2022

Nearly half of the participants, amounting to 47% reported that they availed themselves of Ayush service (Figure 1). Approximately 58 % of all the participants reported being aware about the Ayush systems of medicines irrespective of utilizing it or not (Table 2).

Table 3 depicts the reasons for using Ayush medicines and type of Ayush system preferred by the participants. The majority of adolescents utilized Ayush medicines for the treatment of respiratory diseases (36%) while other causes included dermatological and gastrointestinal diseases.

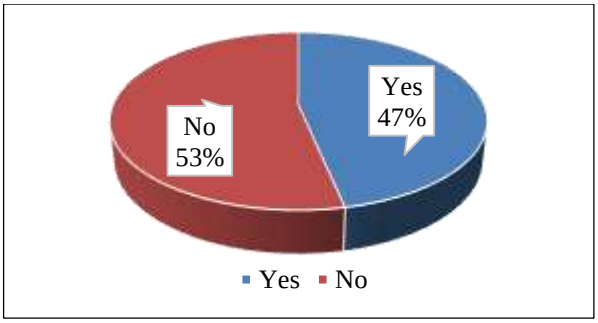

Figure 1: Utilization of Ayush services by participants.

Table 2: Participant's awareness regarding Ayush services.

Variable	Frequency (N)	Percentage
Are you aware about Ayush system of medicine?		
Yes	152	58.2
No	109	41.7
What was the source of motivation for taking Ayush medicine?		
Parents	63	51.6
Self	36	29.2
Friends	13	10.6
Social media	10	8.1

Table 3: Reasons and type of Ayush system utilized by participants.

Variable Reasons for using. AYUSH services	Frequency (n=122)	Percentage
Respiratory cause	44	36.0
Dermatological cause	35	28.7
Gastrointestinal cause	24	19.6
Routine	9	7.3
Urinary tract	6	4.5
Gynaecological cause	4	3.9
Type of system utilized		
Both Unani and Ayurveda	45	36.8
Unani	27	22.1
Don't know	26	21.3
Homeopathy	14	11.4
Ayurveda	10	8.1

Table 4: Association between utilization of Ayush services and Sociodemographic characteristics.

Variable	Utilization of Ayush services		*P value
	Yes	No	
Age (years)			
10-13	35	62	0.003
14-17	58	63	
≥18	29	14	
Gender			
Male	52	76	0.05

Continued.

Variable	Utilization of Ayush services		*P value
	Yes	No	
Female	70	63	
Education of parents			
Primary school	37	52	0.44
High school	23	32	
Secondary	31	29	
Graduate	23	21	
Postgraduate	8	5	
Socioeconomic status*			
Class I (upper)	9	15	0.030
Class II (upper middle)	45	30	
Class III (lower middle)	38	52	
Class IV (upper lower)	25	27	
Class V(lower)	5	15	

*Chi square test

Table 4 depicts the association between utilization of Ayush services and Sociodemographic characteristics. A significant association was found between utilization of Ayush services with age, gender, and socioeconomic status with a p value ≤0.05.

DISCUSSION

Increasing demand for mainstreaming of Ayush in India makes it mandatory to understand the utilization of Ayush medicines and its association with sociodemographic determinants of the population. Adolescents in the age group 10-19 years constitute a significant segment of the population and analyzing pattern of utilization of Ayush medicines in this age group is important to chalk out the strategies for mainstreaming the Ayush.

Studies have been carried out in the past to record the utilization of Ayush services in India. After carrying out the survey of 35 districts across 19 states of India, Singh et al. reported that approximately 14% patients avail ISM and homeopathy treatment.[8] A WHO-SAGE survey observed 11.7% utilization of traditional medicine as a frequent source of treatment among the respondents.[9] Similarly, Priya and Shweta surveyed 18 states of India to estimate the utilization of Ayush Services reporting 60% utilization of Ayush services among households of 5 out of 18 surveyed states. About 30-60% households in another six states reported utilization while in other five states they observed less than 30% households utilized Ayush services.[2] An analysis carried out in 2014 and based on a nationally representative cross-sectional household survey by National Sample Survey Organization (NSSO), reported overall 6.9% utilization of AYUSH services by patients seeking outpatient care in the reference period of last two weeks. There was no significant difference in the utilization among rural and urban areas.[1]

The results of the studies are not directly comparable due to variations in the years of surveys, use of different definitions for traditional and alternative medicine and differences in recall period. The reference population and units of analysis (individual or household) also vary among the studies. The analysis of these studies is also not comparable to our study due to variations in the recall period, sample characteristics etc. For example, Priya and Shweta used a recall period of last three months and the analytical unit was household level. Similarly, the NSSO survey recorded information at the individual level and involved all age groups. However, the recall period was last 15 days for all outpatient visits. We included only school going adolescents within the age group of 10-19 years and there was no limitation on the recall period.

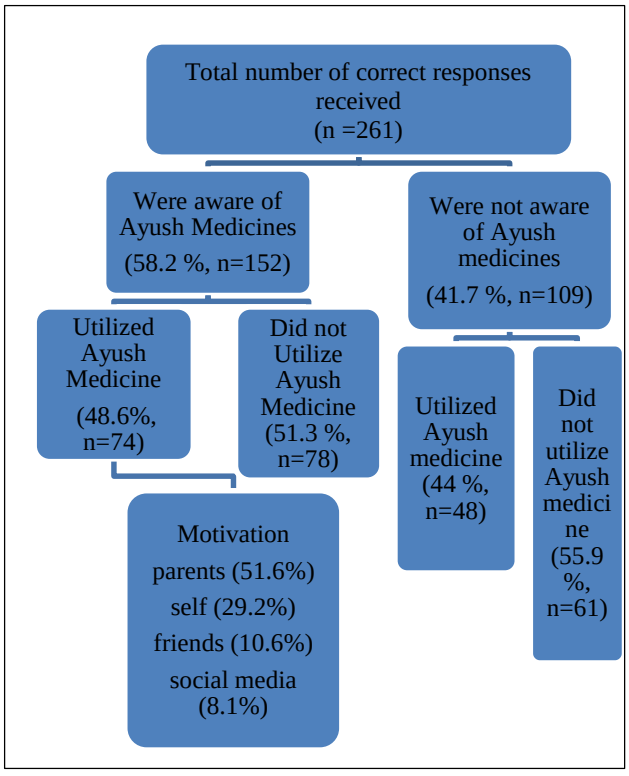

Figure 2: Awareness of Ayush and source of motivation.

We found that the overall utilization of Ayush medicine in the age group 10-19 years is approximately 47% and the participants had used the Ayush medicine for one reason or the other. There was a significant association between the utilization of Ayush medicines and gender. Females had significantly higher utilization rate as compared to males, this may be due to higher prevalence of dermatological consultations among the female adolescents. Approximately 58% of all adolescents participant had prior knowledge of Ayush irrespective of utilization. The most common source of motivation for utilization among the early adolescence was parents while in late adolescence the source of motivation was friends or social media (Figure 2). Majority of adolescents used Ayush medicine for the treatment of respiratory ailments followed by dermatological consultations (Table 3). Yong Du et al also reported higher utilization of herbal products for respiratory symptoms among children and adolescents.[10]

While majority of adolescents had utilized both Unani and Ayurvedic medicines, the prevalence of Unani medicines was higher as compared to other systems of medicine. Religious beliefs and culture play an important role in the selection of treatment method, since 99.5 % of the participants in our study were Muslim, this may be a reason for higher utilization of Unani medicines.[11] The higher availability of facilities and trained practitioners of Unani medicine in the area of study may be other reason for higher utilization of Unani medicines.[12]

Our study was limited in some respects. Being a cross-sectional study, the factors having effect on the attitude of participants towards utilization of Ayush Medicines over time could not be analyzed. Another limiting factor was that this study was conducted in a rural setting and majority of the participants belonged to a particular religion. A different, interventional prospective design is required to understand how sociocultural factors and education impact the utilization pattern of Ayush medicines. Although only 11.41% adolescents refused to fill the questionnaire it is possible that students with no knowledge of Ayush medicines might have not answered the questionnaire and this could have an effect on the results.

CONCLUSION

We observed higher utilization of Ayush medication among adolescents compared to previous reports involving individuals or households as analytical units. Awareness campaigns about the availability of Ayush treatments for different diseases, frequent use of social media among adolescents and scientific evidence about the efficacy and safety of these medicines may be important factors effecting their utilization rates. The findings of current study highlight the current state of Ayush drug utilization and identify factors influencing awareness levels among school going adolescents. The results also provide valuable insights for healthcare practitioners, policymakers, and stakeholders to design targeted interventions and promote Ayush drug adoption among this age group. Multicentric studies with large sample size and involving different segments of the population may be carried out to analyze the utilization and acceptability of Ayush medicines among diverse socio-demographic groups.

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