Chettinad Health City Medical Journal
Volume 12, Issue 1 - 2023, Pg. No. 54-64
Peer Reviewed & Open Access Journal

Research Article

Utilisation and Out-of-Pocket Expenditure for AYUSH Outpatient Care among Older Adults in India

Roopali Goyanka[1], Jeetendra Yadav[2], Manoj Kumar[3], Surendra Kumar Sagar[4]

[1]Associate Professor, Department of Economics, Indraprastha College for Women, University of Delhi, Delhi-110054, India.
[2]Technical Officer, ICMR-National Institute of Medical Statistics, Ansari Nagar, New Delhi-110029, India.
[3]Assistant Professor & Biostatistician, [A]Centre for Economic Studies & Planning, School of Social Science, [B] School of Life Science, Jawaharlal Nehru University, New Delhi, India.
[4]Department of Zoology, Swami Shraddhanand College (University of Delhi), Delhi, India.
DOI: https://doi.org/10.24321/2278.2044.202310

I N F O

Corresponding Author:
Manoj Kumar, [A]Centre for Economic Studies & Planning, School of Social Science, [B] School of Life Science, Jawaharlal Nehru University, New Delhi, India.
E-mail Id:
manojdiwakarstat@gmail.com
Orcid Id:
https://orcid.org/0000-0001-6444-8160
How to cite this article:
Goyanka R, Yadav J, Kumar M, Sagar SK. Utilisation and Out-of-Pocket Expenditure for AYUSH Outpatient Care among Older Adults in India. Chettinad Health City Med J. 2023;12(1):54-64.

Date of Submission: 2023-02-27
Date of Acceptance: 2023-03-24

A B S T R A C T

Background: Traditional, complementary, and alternative medicine are known to be used across the world for many types of diseases. In India, they are referred to as AYUSH and are known to be used for promotive, preventive, and curative purposes for healthy living and well-being. This study looks at the levels, patterns, and determinants of utilisation and out-of-pocket expenditure for AYUSH outpatient care among older adults in India.

Method: Descriptive analysis, data visualisation, and bivariate and multivariate logistic regression analysis have been used.

Results: The utilisation for AYUSH care is found to be quite low at 8.2% among 52% of respondents in the sample who sought outpatient care during the reference period. The study found the mean OOPE for AYUSH to be ₹ 687 per episode, in comparison with the overall mean OOPE of ₹ 1239 per episode for all types (allopathic and AYUSH combined) of outpatient care.

Conclusions: Despite the policy support for the promotion of AYUSH by the Government of India for a long time, and the common knowledge about the affordability and low cost of AYUSH care, utilisation of AYUSH healthcare remains low. Evidence-based studies on the efficacy and safety of AYUSH treatment, promotion of cross-referral between different streams of medicine, and standardisation of AYUSH medicines can help to build trust and boost utilisation of AYUSH care.

Keywords: AYUSH, Traditional, Complementary, and Alternative Medicine, Outpatient Care, Healthcare Utilisation, Out of Pocket Expenditure, Older Adults

Introduction

In spite of the stupendous success of modern allopathic medicine in treating diseases and improving longevity, it is unable to fully cope with the growing epidemics of chronic illnesses and is also known to have toxic side effects and iatrogenic disorders in some cases.[1,2] When allopathy fails to deal with the disease burden and unmet needs of the patients, they take recourse to traditional medicine for managing their health conditions.[3] Traditional medicine, described as the sum total of indigenous knowledge and practices used in the maintenance of health, is used by a large number of the global population.

In the United States, 33% of adults suffering from painful conditions like arthritis were found to make use of acupuncture and herbal medicines,[4] 15% of Canadians suffering from asthma and migraine were estimated to have visited a complementary/ traditional medical practitioner,[5] during the 2015-16 dengue epidemic in Malaysia, a high prevalence of traditional medicine usage was observed,[6] the prevalence of complementary medicine utilisation among adults and children has been reported in Korea,[7] and use of alternative medicine has been found to be important in the management of diabetes mellitus among Nigerian patients.[8]

India is the cradle of the most ancient system of traditional medicine – Ayurveda, in the world. It is known to be used in India and many other countries to foster health and well-being.[9,10] Besides Ayurveda, Indian people use five other traditional methods of healthcare and promotion: Yoga, Naturopathy, Unani, Siddha, and Homeopathy. The Indian policy documents consider all of them under one umbrella and refer to them as AYUSH,[11] but not much is known about the extent, pattern, and costs associated with their usage. A study of cancer patients in Kerala found the use of AYUSH treatment along with allopathic treatment by patients;[12] another study looked at the utilisation of services and client satisfaction by patients attending a public AYUSH hospital in Delhi.[13] Even during the recent COVID-19 pandemic, studies found the use of yoga and self-care by respondents an effective strategy for mental and physical well-being.[14-16] Such studies are, however, few in number and lack population-based descriptions.

The Government of India has also been promoting AYUSH care through various policy measures such as the National AYUSH Mission,[17] budgetary support for the Ministry of AYUSH,[18] and mainstreaming of AYUSH care at public healthcare facilities.[19] Recently, the Government of India, in collaboration with the World Health Organization, also established the WHO Global Centre for Traditional Medicine in Gujarat, India with budgetary support of USD 250 million.[20] Not much is known about the outcome of these policies in terms of utilisation of AYUSH care, expenditure incurred on these services by the users, socioeconomic and demographic profile of the users, and the types of ailments for which use of AYUSH care is more prevalent. The role of insurance and preventive care on the magnitude of out-of-pocket expenditure is also not known.[21,15]

This paper aims to fill this gap in knowledge by looking at the level and pattern of utilisation and out-of-pocket expenditure (OOPE) on AYUSH healthcare among the elderly population of India using a nationally representative sample. The study also analyses the types of diseases, the purpose, the demographic and socio-economic profile of users, and the factors that determine the choice of AYUSH care.

This study is important because AYUSH is said to provide natural, low-cost healthcare, and serve as a system of primary healthcare by providing culturally acceptable care to the under-served population.[22] Its use is found to be quite prevalent among the elderly population as it helps in promoting well-being and managing chronic conditions, hence the study of utilisation of AYUSH healthcare among elderly adults has a special significance.

Methodology

Data Source

This study was based on the nationally representative cross-sectional survey data of 72,250 adults who are 45 years or older across all states and union territories of India. These subjects were chosen from 42,949 households during 2017-18 from the first wave of the Longitudinal Ageing Study in India (LASI). LASI is an ongoing study in India that involves the collection of data regarding the health, economic, psychological, and social well-being of people aged 45 years and more. At present, data are available only for the first wave. The sample was collected from all over the country using a multistage stratified area probability cluster sampling design.[23] India-level weights were used hence the estimates are nationally representative. The inclusion criterion for the sample was the individuals who chose AYUSH care for outpatient healthcare.

Outcome Variables

AYUSH Utilisation (AU)

The respondents were treated as utilising AYUSH care if they consulted an AYUSH practitioner for seeking outpatient care during the reference period of the last 30 days.

Out-of-pocket Expenditure on AYUSH for Outpatient Care

For outpatient care, information was available for expenditure on consultation fees for doctors, medicines and diagnostic tests, medical items like blood, oxygen etc., transportation, and expenses incurred by the attendant. Out-of-Pocket expenditure (OOPE) on AYUSH was estimated

ISSN: 2278-2044
DOI: https://doi.org/10.24321/2278.2044.202310

as the total expenditure on these items for using outpatient care while visiting an AYUSH practitioner.

Consent to Participate and Ethics Approval

The present study used data from LASI (2017-2018). Firstly, the LASI obtained ethical consent from the Institutional Review Committee before the survey. Secondly, the LASI study was approved by the Indian Council of Medical Research (ICMR) Ethics Committee. Thirdly, during the survey, usually written consent had been taken by the respondent once they agreed to take part in the study. Therefore, no ethical approval is required separately for the current study.

Statistical Methods

Descriptive analysis was used to look at the socio-economic and demographic profile of individuals using AU, types of ailments, and types of healthcare facilities for which AYUSH care was being utilised. Mean OOPE on AYUSH was also estimated for different socio-economic groups of people and across types of ailments and healthcare facilities. Logistic regression was used to analyse the factors that determined the choice of outpatient healthcare between allopathic and AYUSH care. All analyses were carried out on STATA 13.1.[24] Figure 1 shows the flowchart for selection of the sample for the study.

Results

Sociodemographic Characteristics and OOPE for Patients using AYUSH Healthcare

Table 1 describes the socio-demographic characteristics of patients using AYUSH healthcare for outpatient care. AU was higher (62.7%) among females compared to males (37.3%). Almost two-thirds of all the individuals having AU had low levels of education (primary or below) and lived in rural areas. The largest number of AYUSH users lived in the Western states, followed by Central and Eastern states in the country. Among all the users seeking care from an AYUSH practitioner, about 86% visited private health facilities. The mean OOPE for AYUSH care was ₹ 686 per episode. Mean OOPE was found to be increasing across MPCE quintiles. The mean OOPE per episode at private facilities (₹ 721) was 1.6 times than that at public hospitals (₹ 448).

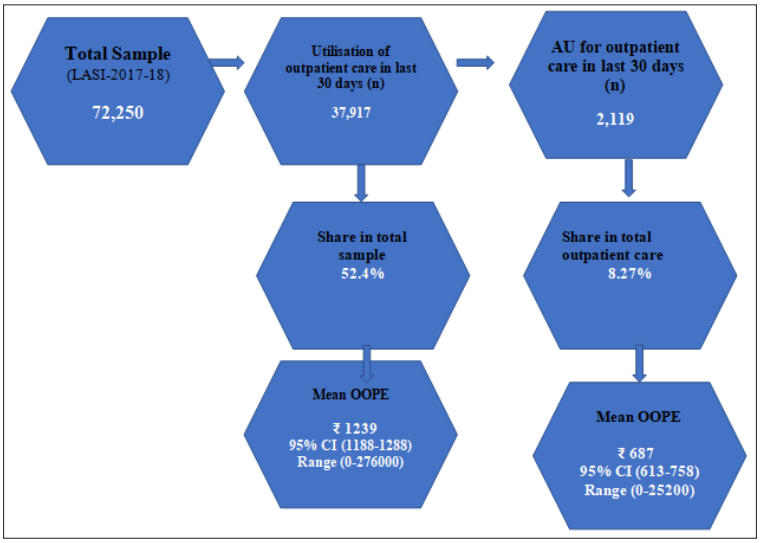

Figure 1.Analytical Sample

Table 1.AU and OOPE for Outpatient AYUSH Care - Socioeconomic Profile

Socio-economic Characteristics	Sample	Utilisation of AYUSH Healthcare (AU)	OOPE (₹)
	n	%, [95% CI]	Mean, [95% CI]
Age group (years)			
≤ 60	1,233	53.9, [53.8-54.0]	641, [563-719]
61- 80	806	42.2, [42.1-42.3]	757, [612-902]
≥ 81	80	3.90, [3.89-3.92]	537, [362-712]
Gender			
Male	791	37.3, [35.3-39.4]	638, [518-759]

ISSN: 2278-2044
DOI: https://doi.org/10.24321/2278.2044.202310

Female	1,328	62.7, [60.6-64.7]	713, [621-804]
Marital status			
Single	489	25.2, [25.1-25.2]	812, [627-997]
Married	1,630	74.8, [74.7-74.9]	645, [569-722]
Education			
Illiterate	969	45.7, [43.6-47.9]	687, [580-793]
Primary completed	527	24.9, [23.1-26.8]	672, [540-805]
Middle completed	193	9.1, [8.0-10.4]	770, [487-1052]
Secondary completed	223	10.5, [9.3-11.9]	742, [413-1071]
Higher secondary and above	207	9.8, [8.6-11.1]	594, [477-712]
MPCE quintile			
Poorest	357	16.8, [15.3-18.5]	454, [391-517]
Poorer	467	22.0, [20.3-23.9]	886, [670-1101]
Middle	501	23.6, [21.9-25.5]	576, [502-650]
Richer	448	21.1, [19.5-22.9]	627, [510-743]
Richest	346	16.3, [14.8-18.0]	908, [634-1182]
Place of residence			
Rural	1,511	71.3, [69.3-73.2]	680, [594-765]
Urban	608	28.7, [26.8-30.7]	710, [572-849]
Geographic region			
North	157	2.98, [2.97-2.99]	773, [596-950]
Central	603	32.41, [32.38-32.43]	590, [495-686]
East	460	21.74, [21.72-21.76]	560, [431-690]
Northeast	55	0.60, [0.60-0.61]	839, [565-1113]
West	481	33.21, [33.19-33.24]	731, [600-862]
South	293	8.84, [8.83-8.86]	888, [551-1226]
Union territories	70	0.21, [0.21-0.22]	2973, [1312-4634]
Type of healthcare facility			
Public	270	8.16, [8.14-8.18]	448, [294-603]
Private	1,713	85.98, [85.97-86.01]	721, [637-805]
Pharmacy	48	1.98, [1.98-1.99]	513, [299-727]
Others	88	3.87, [3.86-3.88]	438, [291-586]
Payment support			
Reimbursement from insurance/ employer	-	-	-
Total	**2119**	**100**	**686, [613-758]**

Types of Healthcare Facilities for Utilisation of AYUSH for OPD

Figure 2 shows that most persons (86%) visited a private healthcare facility for AU and 1.98% used a pharmacy for a healthcare facility for utilisation of AYUSH.

Figure 3 shows that most persons (84%) used AYUSH care for curative care as they see the provider when sick. Utilisation for promotive and preventive care was undertaken by 13% as demonstrated by regular check-ups and immunisation (the percentage adds up to more than 100% because individuals may be visiting the AYUSH practitioner for more than one purpose).

AU and OOPE by Types of Ailments

Among all those who used outpatient care in the reference period of the last 30 days, 8% used AU (Table 2). The greatest utilisation was by those suffering from fever (33%), chronic

ISSN: 2278-2044
DOI: https://doi.org/10.24321/2278.2044.202310

pain of the joints or muscles (20%), and generalised pain of the stomach or head (14%), among those choosing AU. Among those suffering from fever, gastroenteritis and chronic communicable diseases, and vector-borne diseases, about 9-10% of individuals chose AU over allopathic care in each type of disease category. The lowest utilisation was for diseases like cancer, cardiovascular diseases and diabetes (Figures 4(a) and 4(b)). The mean OOPE per episode for AYUSH care was ₹ 461 for fever, ₹ 1085 for vector-borne diseases, and ₹ 1135 for depression, anxiety and sleep disorders, while OOPE for both allopathic and AYUSH care for these diseases were ₹ 594, ₹ 1595 and ₹ 1708 respectively (Table 2).

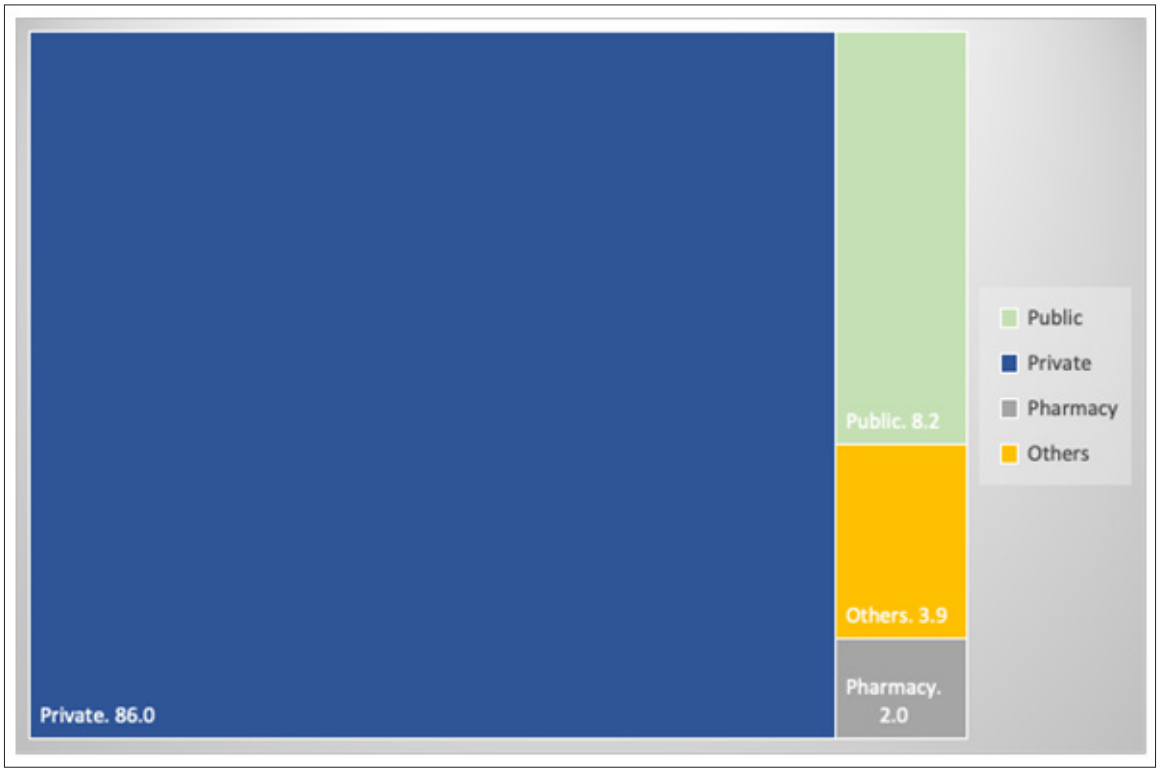

Figure 2.Types of Healthcare Facilities for Utilisation of AYUSH for OPD

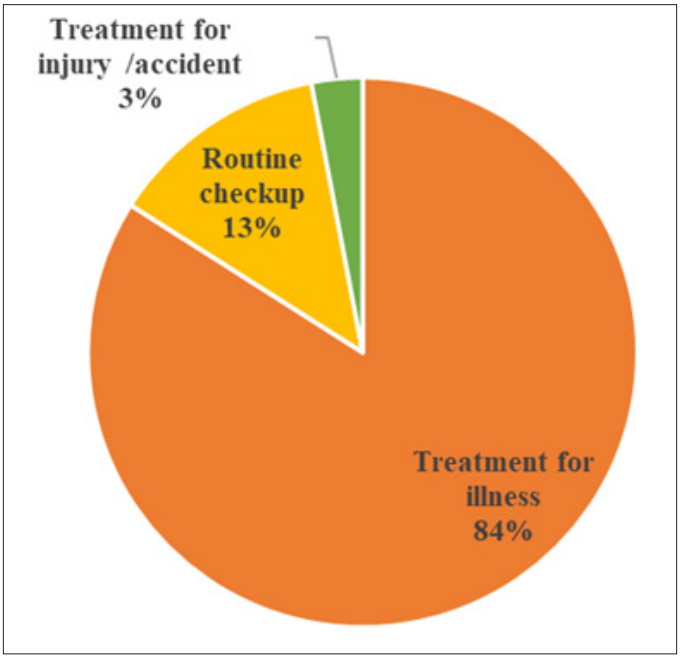

Figure 3.Purpose of Visit

ISSN: 2278-2044
DOI: https://doi.org/10.24321/2278.2044.202310

Table 2.Utilisation of AYUSH Healthcare and OOPE by Types of Ailments

Types of Diseases		Outpatient Utilisation and OOPE for All Types (Allopathic + AYUSH) Care		Utilisation (AU) and OOPE for AYUSH			
		Utilisation (n1)	Mean OOPE (₹) [95% CI]	Utilisation (n2)	Share in total AU (%)	Share of AU in total outpatient utilisation (n2/n1) (%)	Mean OOPE (₹) [95% CI]
Communicable diseases							
1.	Fever	10,201	594 [564-624]	664	33.14 [33.11-33.17]	9.85 [9.85-9.86]	461 [389-533]
2.	Gastroenteritis & other acute/ chronic communicable diseases	1,190	1667 [1346-1987]	77	3.85 [3.84-3.86]	9.8 [9.78-9.83]	629 [396-863]
3.	Skin diseases	714	1047 [899-1195]	58	2.89 [2.88-2.9]	12.26 [12.22-12.3]	860 [395-1325]
4.	Dengue, malaria & other vector-borne diseases	585	1595 [1326-1864]	36	1.8 [1.79-1.81]	9.32 [9.28-9.36]	1085 [151-2019]
5.	Respiratory tract infection	435	1092 [804-1380]	11	0.57 [0.57-0.58]	3.98 [3.95-4.01]	504 [149-859]
6.	Tuberculosis	117	1347 [910-1783]	-	-	-	-
7.	Urinary tract infection	312	2704 [1948-3460]	16	0.82 [0.82-0.83]	8.0 [7.95-8.05]	373 [143-603]
8.	**Total (1-7)**	**13,554**	851 [802-901]	**863**	43.07 [43.04-43.1]	9.64 [9.63-9.65]	**529 [452-605]**
Non-communicable diseases							
9.	Chronic pain (joints, back, neck, muscle)	5,117	1199 [1094-1305]	395	19.71 [19.68-19.73]	11.69 [11.68-11.71]	761 [580-943]
10.	Hypertension, cardiovascular diseases	3,810	1347 [1257-1437]	108	5.39 [5.38-5.41]	4.29 [4.28-4.3]	561 [445-677]
11.	Ear, eye, mouth & teeth diseases	2,098	1397 [1235-1559]	83	4.17 [4.15-4.18]	6.02 [6-6.04]	724 [308-1140]
12.	Respiratory problems	1,187	1469 [1218-1720]	69	3.46 [3.45-3.47]	8.86 [8.83-8.88]	630 [527-733]
13.	Diabetes, nutritional malfunctions	2,119	1613 [1469-1757]	44	2.19 [2.19-2.2]	3.14 [3.13-3.15]	800 [499-1101]
14.	Gastritis/ acidity	570	1164 [891-1437]	32	1.6 [1.59-1.6]	8.48 [8.45-8.52]	476 [139-812]

ISSN: 2278-2044
DOI: https://doi.org/10.24321/2278.2044.202310

15.	Liver diseases	423	2052 [1401-2703]	24	1.19 [1.19-1.2]	8.55 [8.5-8.59]	870 [45-1696]
16.	Depression, anxiety & sleep disorders	334	1708 [1391-2025]	23	1.15 [1.15-1.16]	10.47 [10.42-10.52]	1135 [341-1930]
17.	Stroke/ paralysis	291	3895 [2894-4895]	11	0.56 [0.56-0.57]	5.86 [5.81-5.9]	1824 [110-3757]
18.	Cancer	103	13286 [5969-20603]	1	0.03 [0.03-0.03]	0.85 [0.82-0.88]	3358 [2960-3756]
19.	**Total (9-18)**	**16,052**	1497 [1416-1579]	**791**	39.46 [39.43-39.49]	7.46 [7.45-7.46]	**747 [631-864]**
Injury							
20.	Injury, accident	1,100	1932 [1512-2353]	48	2.4 [2.4-2.41]	6.62 [6.6-6.64]	761 [188-1333]
Others							
21.	Generalised pain (stomach, headache, other non-specific pain)	3,671	837 [775-899]	274	13.69 [13.67-13.71]	11.31 [11.29-11.33]	900 [607-1192]
22.	Other diseases	783	1629 [1327-1931]	136	0.98 [0.98-0.99]	5.35 [5.33-5.38]	772 [442-1102]
23.	**Total (21-22)**	4,454	1227 [1084-1369]	410	15.07 [15.04-15.09]	10.27 [10.25-10.28]	870 [641-1100]
	Total	35,160	1239 [1189-1289]	2,004	100	8.20 [8.19-8.22]	687 [614-760]

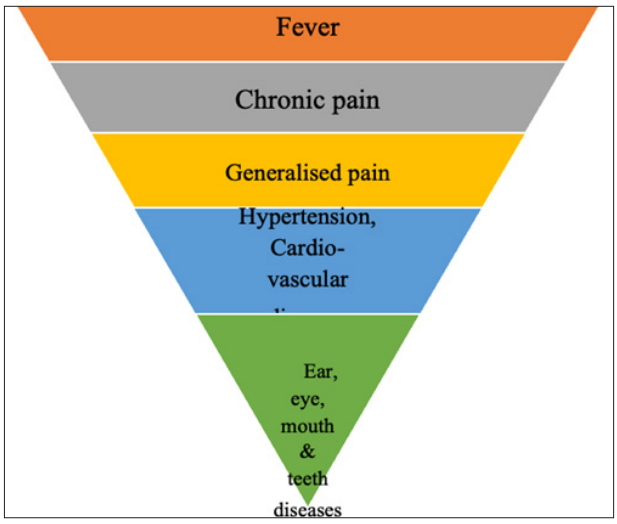

Figure 4(a).Top 5 Communicable Diseases (In Terms of Number of Persons) for AYUSH Care Utilisation

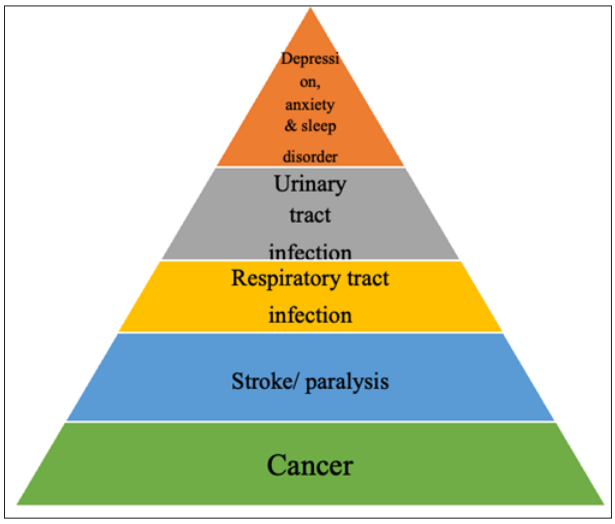

Figure 4(b).Bottom 5 Non-communicable Diseases (In Terms of Number of Persons) for AYUSH Care Utilisation

ISSN: 2278-2044
DOI: https://doi.org/10.24321/2278.2044.202310

Table 3.Factors affecting the Choice of AU

Socioeconomic Characteristics	Choice of AU	
	Unadjusted OR	Adjusted OR
Age group (years)		
≤ 60		
61-80	1.101 [0.967-1.253]	1.10 [0.95-1.273]
≥ 81	1.057 [0.78-1.433]	1.13 [0.792-1.611]
Gender		
Male		
Female	1.093 [0.964-1.238]	1.165** [1.013-1.339]
Marital status		
Single		
Married	0.989 [0.852-1.148]	0.949 [0.799-1.127]
Education		
Illiterate		
Primary	1.049 [0.903-1.219]	1.162* [0.986-1.369]
Middle	0.964 [0.777-1.197]	1.198 [0.946-1.517]
Secondary	0.996 [0.786-1.264]	1.481** [1.154-1.9]
Higher secondary and above	0.956 [0.756-1.209]	1.446*** [1.123-1.861]
MPCE quintile		
Poorest		
2nd poorest	1.161 [0.956-1.41]	1.114 [0.906-1.368]
Middle	1.127 [0.936-1.357]	1.082 [0.883-1.325]
2nd richest	0.869 [0.718-1.052]	0.82* [0.664-1.012]
Richest	0.635*** [0.508-0.795]	0.661*** [0.517-0.844]
Place of residence		
Rural		
Urban	0.59*** [0.512-0.678]	0.469*** [0.398-0.552]
Geographic region		
North		
Central	8.111*** [6.472-10.164]	7.553*** [5.933-9.615]
East	3.299*** [2.616-4.16]	3.03*** [2.358-3.893]
Northeast	0.875 [0.574-1.333]	0.934 [0.584-1.495]
West	9.275*** [7.366-11.679]	6.932*** [5.428-8.852]
South	1.523*** [1.183-1.961]	1.408*** [1.082-1.833]
Union Territories	0.888 [0.515-1.531]	1.673* [0.93-3.008]
Preventive		
No		
Yes	0.675 *** [0.585-0.779]	0.839** [0.715-0.983]
Main reason for the last outpatient visit		
All other diseases		
Chronic pain (arthritis, joint pain, backache)	2.036*** [1.684-2.461]	2.083*** [1.685-2.575]

ISSN: 2278-2044
DOI: https://doi.org/10.24321/2278.2044.202310

Diabetes	0.426*** [0.286-0.634]	0.484*** [0.315-0.744]
Fever	1.723*** [1.458-2.037]	1.423*** [1.186-1.707]
General pain (headache, stomach ache)	1.988*** [1.579-2.504]	1.936*** [1.522-2.463]
Hypertension	0.721**[0.547-0.95]	0.738** [0.55-0.989]
Other acute/ chronic communicable diseases	1.831** [0.989-3.392]	2.037** [0.993-4.179]
Skin diseases	1.816*** [1.142-2.889]	1.674** [1.056-2.655]
Upper respiratory tract infection	1.354* [0.946-1.936]	1.274 [0.884-1.836]
Distance to healthcare facility from residence		
Far (> 1 km)		
Near (0-1 km)	1.396*** [1.228-1.587]	1.573*** [1.368-1.808]
Type of healthcare facility		
Public		
Private	4.079*** [3.292-5.055]	3.393*** [2.739-4.204]
Intercept		0.007*** [0.005-0.01]
Levels of significance: *p < 0.10, **p < 0.05, ***p < 0.01		

Factors affecting the Choice of AYUSH Care

Table 3 shows the various factors that affect the choice of AYUSH care. The odds of using AYUSH care are 53% greater for those living in rural areas. Females had 17% greater odds of choosing AU in contrast to males. Those visiting public facilities or using healthcare for preventive purposes had lower odds of using AYUSH care at 16% and 65% respectively. Individuals with chronic body pains were 88% more likely to use AYUSH care, those with stomach pain, headache etc. had 70% more chance of using it, while those suffering from diseases like hypertension were 31% less likely to use it.

Discussion

This study has used nationally representative data to estimate the utilisation and OOPE for AYUSH care among older people in the country. For the year 2022-23, the total budgetary allocation by the Union Govt for the Ministry of AYUSH is ₹ 3050 cr and there are 3859 hospitals, 29951 dispensaries, 712132 practitioners, and more than 18 million patients for AYUSH. Despite the impetus through budgetary allocation, creation of service infrastructure, and mainstreaming of AYUSH in public facilities, this study found that utilisation of AYUSH care remains low at 8.2% of the total persons utilising outpatient care in the sample. The mean OOPE on AYUSH at ₹ 687 per episode is lower than the mean OOPE on all types of care at ₹ 1239 per episode for all types of diseases. For a common disease like fever or acute communicable diseases which have a high share of utilisation in AYUSH care, the mean OOPE for AYUSH is lower than that for all types of care. People living in rural areas, or far away from healthcare facilities, having lower education levels, and using private facilities have a greater likelihood of using AYUSH care.

The prime attraction of Ayurveda lies in its affordability, low cost, and low level of technological input. Ayurveda's primary focus is on the prevention of diseases and then it looks to cure manifested diseases by avoidance of causative factors. Several studies have reported the benefits of Ayurveda in communicable, neurological, and lifestyle diseases such as diabetes and obesity and preventive care for holistic well-being. Ayurveda has given a practical explanation of communicable diseases and their prevention and cure in day-to-day life.[25-29,15]

But in spite of all these factors, utilisation of AYUSH healthcare remains low. While there is a lot of anecdotal and oral discussion about the use of herbs and other traditional practices for promotive and preventive healthcare, there is a general perception of distrust about the effectiveness of AYUSH care in the minds of the people.[30] It is essential to promote the use of evidence-based health practices for dispelling this distrust. Good clinical practice guidelines, clinical safety, and efficacy documentation for AYUSH care are needed, for it to be adopted as a mainstream treatment protocol.[31] Systematic research for yoga by Dean Ornish has helped to demonstrate the efficacy of yoga on the reversal of heart disease and downregulation of oncogenes and has made it popular in some societies.[30]

Integration of AYUSH with various cadres of outreach workers like accredited social health activists, promotion of cross-referral between various streams of medicine, scientific validation and documentation of AYUSH drugs, ensuring purity, safety, standardisation, and preventing

ISSN: 2278-2044
DOI: https://doi.org/10.24321/2278.2044.202310

counterfeiting of AYUSH medicines are needed to build trust and boost utilisation of AYUSH care.[32] A study showed that utilisation of any type of healthcare gets positively affected by physical and financial accessibility and adversely affected by a lack of coordinated care and the longitudinal relationship between the physician and the patient. Care may be taken to improve these aspects of healthcare delivery at AYUSH facilities and providers to boost the utilisation of AYUSH care.[33]

Strengths and Limitations of the Study

The strength of the study lies in the use of nationally representative survey data of the aged from LASI Wave 1. The results can be generalised to the elderly population in the country. The data have been collected from a cross-sectional survey and may be subject to some recall bias.

Conclusion

The study found that while the OOPE for AYUSH care was lower than the OOPE for allopathic and AYUSH care combined, the utilisation of AYUSH care among all those seeking outpatient care is low. There is a need to promote AYUSH care, especially for promotive and preventive healthcare by encouraging evidence-based studies regarding the efficacy of AYUSH care.

Data Availability Statement

This study utilised the LASI Wave 1 round data which is available for individuals on a request basis. The authors got data from IIPS, Mumbai on a request basis for the present study.

Acknowledgement

This study used LASI Wave 1 data (2017-18) which was collected by IIPS, Mumbai. The authors gratefully acknowledge members of the study field team including those who were involved in mapping/ listing/ segmentation and the main survey during data collection. The authors also acknowledge all the respondents for their active participation in this study.

Conflict of Interest: None

References

1. George M. Integrative medicine is integral to providing patient-centered care. Ann Allergy Asthma Immunol. 2015;114(4):261-4. [PubMed] [Google Scholar]
2. Lazarou J, Pomeranz BH, Corey PN. Incidence of adverse drug reactions in hospitalized patients: a meta-analysis of prospective studies. JAMA. 1998;279(15):1200-5. [PubMed] [Google Scholar]
3. Saroj RK, Murthy KH, Kumar M, Kumar A. Case-control study of STI patients and its associated risk factors. Glob J Med Public Health. 2016;5(5):1-8. [Google Scholar]
4. Valiathan MS. Towards ayurvedic biology: a decadal vision document [Internet]. Bangalore, India: Indian Academy of Sciences; 2006 [cited 2023 Feb 19]. Available from: https://www.ias.ac.in/public/Resources/Other_Publications/Overview/ayurvedic_biology.pdf
5. Metcalfe A, Williams J, McChesney J, Patten SB, Jetté N. Use of complementary and alternative medicine by those with a chronic disease and the general population--results of a national population-based survey. BMC Complement Altern Med. 2010;10:58. [PubMed] [Google Scholar]
6. Ismail IS, Hairon SM, Yaacob NM, Besari AM, Abdullah S. Usage of traditional and complementary medicine among dengue fever patients in the Northeast region of Peninsular Malaysia. Malays J Med Sci. 2019;26(3):90-101. [PubMed] [Google Scholar]
7. Seo HJ, Baek SM, Kim SG, Kim TH, Choi SM. Prevalence of complementary and alternative medicine use in a community-based population in South Korea: a systematic review. Complement Ther Med. 2013;21(3):260-71. [PubMed] [Google Scholar]
8. Ogbera AO, Dada O, Adeyeye F, Jewo PI. Complementary and alternative medicine use in diabetes mellitus. West Afr J Med. 2010;29(3):158-62. [PubMed] [Google Scholar]
9. Niemi M, Ståhle G. The use of ayurvedic medicine in the context of health promotion – a mixed methods case study of an ayurvedic centre in Sweden. BMC Complement Altern Med. 2016;16(1):62. [PubMed] [Google Scholar]
10. Berra JL, Molho R. Ayurveda in Argentina and other Latin American countries. J Ayurveda Integr Med. 2010;1(3):225-30. [PubMed] [Google Scholar]
11. Samal J. Role of AYUSH workforce, therapeutics, and principles in health care delivery with special reference to National Rural Health Mission. Ayu. 2015;36(1):5-8. [PubMed] [Google Scholar]
12. Sarada K, Puthiyedath R, Philip A, Ravindran GC, Pavithran K. Prevalence of the use of traditional complementary and alternative medicine amongst cancer patients in a tertiary care center in Kerala, India. J Ayurveda Integr Med. 2021;12(2):359-64. [PubMed] [Google Scholar]
13. Naaz F. A study of service utilization and patient satisfaction among patients attending state level AYUSH hospital in Delhi. J Ayu Herb Med. 2019;5(1):1-6. [Google Scholar]
14. Sahni PS, Singh K, Sharma N, Garg R. Yoga an effective strategy for self-management of stress-related problems and wellbeing during COVID19 lockdown: a cross-sectional study. PLoS One [Internet]. 2021 [cited 2023 Feb 19];16(2):e0245214. Available from: https://

journals.plos.org/plosone/article?id=10.1371/journal.pone.0245214 [PubMed] [Google Scholar]
15. Kumar M, Kothe SK, Bala R, Sagar SK, Devi CS, Krishna KK, Kaushik K, Saran M. Self-care and preventive measures of Coronavirus: evidence from India. Epidem Int. 2022;7(2):6-12. [Google Scholar]
16. Kumar M, Bala R. Health care and health insurance in India: a review based study. In: Innovative socio-economic trends in BFM (banking, finance & management). Nitya Publication; 2019. p. 118-29. [Google Scholar]
17. Ministry of AYUSH [Internet]. National AYUSH Mission (NAM) – Introduction; [cited 2023 Feb 19]. Available from: https://namayush.gov.in/content/introduction
18. Ministry of Ayush [Internet]. Notes on demands for grants, 2023-2024; [cited 2023 Feb 19]. Available from: https://www.indiabudget.gov.in/doc/eb/sbe4.pdf
19. Saxena SA. Mainstreaming AYUSH & revitalizing local health traditions under NRHM: an appraisal of the Annual State Programme Implementation Plans 2007-10 and mapping of technical assistance needs. National Health System Resource Centre; 2009.
20. Press Information Bureau [Internet]. Prime Minister Shri Narendra Modi lays foundation stone of WHO Global Center for Traditional Medicine at Jamnagar, Gujarat; 2022 Apr 19 [cited 2023 Feb 24]. Available from: https://pib.gov.in/PressReleasePage.aspx?PRID=1818164
21. Bala R, Kumar M, Krishna KK, Devi CS. Has Ayushman Bharat dwindled the out-of-pocket expenditure? J Evol Med Dent Sci. 2021;10(25):1895-8. [Google Scholar]
22. Mishra LC. Scientific basis for ayurvedic therapies. CRC Press; 2004. [Google Scholar]
23. Perianayagam A, Bloom D, Lee J, Parasuraman S, Sekher TV, Mohanty SK, Chattopadhyay A, Govil D, Pedgaonkar S, Gupta S, Agarwal A, Posture A, Weerman A, Pramanik S. Cohort profile: the Longitudinal Ageing Study in India (LASI). Int J Epidemiol. 2022;51:e167-76. [PubMed] [Google Scholar]
24. StataCorp. Stata Statistical Software: release 13. College Station, TX: StataCorp LP; 2013.
25. Vishnuprasad CN, Pradeep NS, Cho YW, Gangadharan GG, Han SS. Fumigation in Ayurveda: potential strategy for drug discovery and drug delivery. J Ethnopharmacol. 2013;149(2):409-15. [PubMed] [Google Scholar]
26. Mukherjee PK, Nema NK, Venkatesh P, Debnath PK. Changing scenario for promotion and development of Ayurveda--way forward. J Ethnopharmacol. 2012;143(2):424-34. [PubMed] [Google Scholar]
27. Thottapillil A, Kouser S, Kukkupuni SK, Vishnuprasad CN. An 'Ayurveda-Biology' platform for integrative diabetes management. J Ethnopharmacol. 2021;268:113575. [PubMed] [Google Scholar]
28. Goyal M. Threats and challenges of emerging viral diseases and scope of Ayurveda in its prevention. Ayu. 2019;40(2):67-8. [PubMed] [Google Scholar]
29. Paudel P, Fiaz S, Malashree SG. Role of Ayurveda in prevention of communicable diseases. Int Res J Ayur Yoga [Internet]. 2022 [cited 2023 Feb 19];5(5):148-Available from: https://irjay.com/index.php/irjay/article/view/Role-Of-Ayurveda-in-Prevention-of-Communicable-Diseases
30. Patwardhan B. Public perception of AYUSH. J Ayurveda Integr Med. 2015;6(3):147-9. [PubMed] [Google Scholar]
31. Rastogi S. Exploring larger evidence base for contemporary Ayurveda. Int J Ayurveda Res. 2010;1(3):195-6. [PubMed] [Google Scholar]
32. Shrivastava SR, Shrivastava PS, Ramasamy J. Mainstreaming of Ayurveda, Yoga, Naturopathy, Unani, Siddha, and Homeopathy with the health care delivery system in India. J Tradit Complement Med. 2015;5(2):116-8. [PubMed] [Google Scholar]
33. Goyanka R, Garg CC. Patient perception of attributes of primary care: a study of Aam Aadmi Mohalla Clinics in Delhi, India. Fam Pract [Internet]; 2023 [cited 2023 Feb 19]. Available from: https://academic.oup.com/fampra/advance-article-abstract/doi/10.1093/fampra/cmac154/6992893?redirectedFrom=fulltext

ISSN: 2278-2044
DOI: https://doi.org/10.24321/2278.2044.202310