



RESEARCH ARTICLE

AWARENESS AND UTILIZATION OF EXPANDED SERVICE PACKAGES IN HEALTH & WELLNESS CENTRES (HWCS): A COMMUNITY-BASED STUDY IN VARANASI DISTRICT

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ABSTRACT

Background: To enhance the reach and quality of primary healthcare in India, the Government has transformed existing Sub-Health Centres and Primary Health Centres into Ayushman Arogya Mandirs (AAMs), offering twelve comprehensive healthcare service packages. However, limited empirical evidence exists regarding public awareness and utilization of these services, particularly in underserved regions like Varanasi. **Objective:** This study aimed to assess the level of awareness and the extent of utilization of expanded healthcare services under AAMs among PM-JAY beneficiaries in the Kashi Vidyapeeth Block of Varanasi district. **Methods:** A community-based cross-sectional study was conducted using multistage random sampling. Data were collected from 607 respondents through a pre-tested semi-structured questionnaire. Descriptive statistics and chi-square tests were applied to examine awareness and utilization patterns across the twelve service packages. **Results:** Findings revealed that 72.8% of respondents were aware of AAMs, but only 48.0% were aware of the full range of services provided. Overall service utilization stood at 58.1%, with particularly low uptake in mental health, palliative care, and dental services. No statistically significant association was found between awareness and utilization across all service category. **Conclusion:** The study highlights a critical gap between awareness and actual utilization of AAM services. To bridge this gap and achieve the goals of Universal Health Coverage, there is an urgent need for targeted community awareness initiatives, enhanced training of frontline health workers, and infrastructural improvements at AAMs.

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INTRODUCTION

The primary health care (PHC) system in India has steadily evolved since independence, with Government Primary Health Care Facilities (GPHCFs) playing a crucial role in the country's health achievements (1). Historically, these facilities offered a limited range of services, primarily focusing on maternal and child health, adolescent care, and specific national health programs. Despite their potential to address nearly 80% of basic healthcare needs and significantly reduce outpatient department (OPD) costs (2). GPHCFs remain grossly underutilized. According to data from 2013–2014, only 11.5% of the rural and 3.9% of the urban population in need of health services accessed these facilities, excluding maternal and child health services (3). A large proportion of patients either seek care at higher-level government institutions, thus overburdening them, or choose private providers, which increases their out-of-pocket expenditures. Both scenarios present challenges to the efficiency and equity of the healthcare system. India's healthcare system is undergoing significant reforms to achieve Universal Health Coverage (UHC) and address existing gaps in healthcare delivery (4).

A notable development in this direction is the renaming of Ayushman Bharat Health and Wellness Centres (AB-HWCs) to 'Ayushman Arogya Mandir' (AAM), accompanied by the new tagline 'Arogyam Parmam Dhanam' (Health is the ultimate wealth) (5). The Ayushman Arogya Mandirs are envisioned as community-centric hubs that deliver a broad spectrum of health services, including maternal and child health care, management of non-communicable diseases, mental health support, and first-level emergency care(6). These centers also provide free essential drugs and diagnostic services, aiming to reduce out-of-pocket expenditures and improve accessibility to quality healthcare (7). By transforming existing Sub-Health Centres and Primary Health Centres into Ayushman Arogya Mandirs, the government seeks to bring healthcare services closer to people's homes, especially in rural and underserved areas (8). This approach not only enhances the delivery of healthcare services but also fosters community participation and awareness, contributing to the overall goal of achieving universal health coverage in India. In 2017, the Government of India introduced the National Health Policy, emphasizing the enhancement of primary healthcare services. This policy advocated for the establishment of Health and Wellness Centres (HWCs) as foundational elements of the healthcare system and

recommended allocating two-thirds of the health budget to primary care initiatives. These HWCs are designed to provide a range of services, including preventive, promotive, curative, rehabilitative, and palliative care,(9). thereby strengthening the primary healthcare infrastructure and moving towards the goal of universal health coverage(10). Ayushman Arogya Mandirs (AAMs), formerly known as Ayushman Bharat Health and Wellness Centres,(13) have been established to provide a comprehensive range of primary healthcare services that extend beyond traditional maternal and child health care(11).

Key Services Offered:

- Non-Communicable Diseases (NCDs)
- Mental Health Services:
- Palliative and Rehabilitative Care
- Oral, Eye, and ENT Care
- Emergency and Trauma Care
- Free Essential Drugs and Diagnostic Services

By encompassing these expanded services, Ayushman Arogya Mandirs play a pivotal role in strengthening India's primary healthcare infrastructure and moving towards the goal of universal health coverage (12). An important part of this transformative journey is assessing how well healthcare services meet the diverse and evolving needs of the populace. This is particularly crucial in the Varanasi Vidyapeeth Block, where acts as a little example of the country's larger healthcare issues and objectives. This study looks closely at healthcare consumption trends in this specific context. It looks at how the local population uses the twelve healthcare service packages provided by the Ayushman Arogya Mandirs (13). and, more importantly, if they meet the urgent healthcare needs in the area.

METHODS

Study design and setting: The study utilized a cross-sectional quantitative design to assess the utilization patterns of the twelve comprehensive healthcare service packages provided under the Ayushman Arogya Mandir initiative in Vidyapeeth Block of Varanasi District. Data collection was conducted at three selected Ayushman Arogya Mandirs: Tarapur Sub-Centre, Madhopur Sub-Centre, and Bazardiha Primary Health Centre. Employing a community-based approach, the study gathered information from both urban and rural populations to ensure a comprehensive understanding of service utilization across diverse demographic segments.

Study Participants : The study was conducted among beneficiaries of the Pradhan Mantri Jan Arogya Yojana (PMJAY) residing in the Vidyapeeth Block of Varanasi district, encompassing both rural and urban areas. Eligible participants included male and female residents aged 18 years and above. For minors, data were collected through responses provided by their parents or legal guardians. In instances where individuals were unable to respond due to mental health conditions, information was obtained from accompanying caregivers or guardians. Individuals who were experiencing acute mental distress at the time of the interview, those suffering from severe illnesses, or those unwilling to provide informed consent were excluded from the study.

Sample size: The sample size for this study was calculated based on the beneficiary list, which indicated that 32% of households were covered in the PM-JAY beneficiary list. The initial calculation yielded a sample size of 362.81. To account for a 10% non-response rate, the sample size was increased to 399.3. Further, considering a design effect of 1.5 for systematic multistage random sampling, the final adjusted sample size was 600 participants.

Sampling: A multistage random sampling approach was adopted. In the first stage, the Kashi Vidyapeeth block was selected randomly from the eight blocks of Varanasi. In the second stage, two rural

Health and Wellness Centers (HWCs) (Tarapur and Madhopur) and one urban Urban Primary Health Center (UPHC) (Bazardiha) were selected using systematic random sampling to ensure rural-urban representation. In the third stage, households were selected systematically, starting with a randomly chosen first house, followed by every fifth household. Data collection was conducted using a pre-tested tool covering socio-demographic and health-related information.

Data Collection: Data collection was done using the predesigned and pretested schedule from June 2023 to October 2024.

Statistical analysis: The Descriptive statistics is used using numbers with percentages. Statistical analysis was done using the available version of SPSS 26 software.

Ethical considerations: Ethical approval for the study was granted by the Institutional Ethics Committee of the Institute of Medical Sciences, Banaras Hindu University (IMS-BHU), Varanasi, Uttar Pradesh, India, in 2023. Prior to participation, written informed consent was obtained from all individuals involved in the study. To uphold confidentiality, participant data were anonymized and securely stored with access limited to authorized personnel.

RESULTS

Awareness about HWCs

- A significant proportion of respondents (72.8%, n = 442) reported that they had heard about Health and Wellness Centres. However, 27.2% (n = 165) stated they were not aware of HWCs. This indicates that while overall awareness is relatively high, nearly one in four individuals still lack basic knowledge about the existence of these centres Fig 1.
- Rural respondents were more aware (53.8%) compared to urban counterparts (39.4%); $\chi^2(1) = 8.83, p = .003$.

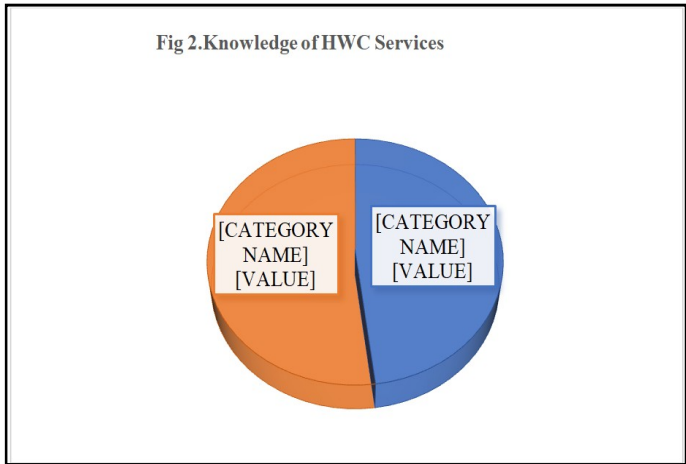
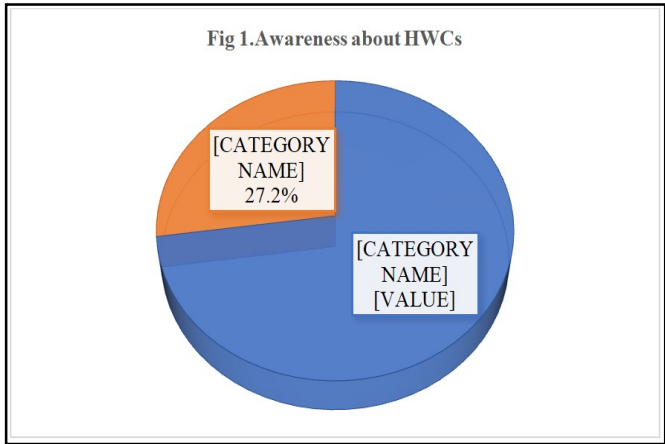
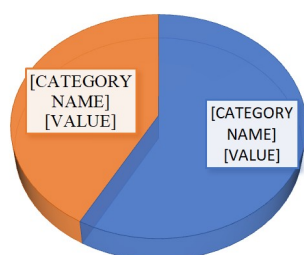


Fig 3.Utilization Of Hwc Services



The chi-square test revealed no significant association between awareness and utilization ($\chi^2 = 0.124$, $p = 0.724$). For screening, prevention, control, and management of non-communicable diseases (NCDs), 63.2% ($n = 55$) of users were aware of the services, while 36.8% ($n = 32$) were not. The association was not statistically significant ($\chi^2 = 1.483$, $p = 0.223$). Family planning, contraceptive, and reproductive healthcare services were used by 64.3% ($n = 9$) of respondents with awareness, compared to 35.7% ($n = 5$) who were unaware. Again, the association was not significant ($\chi^2 = 0.242$, $p = 0.623$). Emergency medical services and basic oral health care showed 100% utilization among aware respondents ($n = 2$ for each), with no reported usage among those unaware. Despite the complete association, the sample size was too small to yield statistically significant results ($\chi^2 = 1.461$, $p = 0.227$). For elderly and palliative health care services, 64.3% ($n = 27$) of utilization occurred among those who were aware, while 35.7% ($n = 15$) were unaware.

Table 1.Comparison of Health and Wellness Centre (HWC) Awareness, Knowledge, and Utilization by Place of Residence

Variable	Response	Urban	Rural	Number	Chi-Square	P-value
Know About HWCs (N=607)	Yes	180 (67.2%)	262 (77.3%)	442	7.747	.005
	No	88 (32.8%)	77 (22.7%)	165		
		268	339	607		
Aware About HWC Facilities (N=442)	Yes	71 (39.4%)	141 (53.8%)	212	8.831	.003
	No	109 (60.6%)	121 (46.2%)	230		
		180	262	442		
Utilize the services of HWC? (N=442)	Yes	101 (56.1%)	156 (59.5%)	257	.516	.473
	No	79 (43.9%)	106 (40.5%)	185		
		188	262	442		

Table 2. Association Between Awareness of HWCs Facilities and Utilization of Specific Service Packages, Total N=257

Service Package	Awareness of HWCs Facilities		Total no. of utilization (n,%)	Chi-square value	p-value
	Yes Numbers and percentage	No Numbers and percentage			
Management of Common Communicable Diseases and Outpatient care	97 (58.8%)	68 (41.2%)	165 (100.0%)	0.124	0.724
Screening, Prevention, Control and Management of NCDs	55 (63.2%)	32 (36.8%)	87 (100.0%)	1.483	0.223
Family planning, Contraceptive and Reproductive Health Care	9 (64.3%)	5 (35.7%)	14 (100.0%)	0.242	0.623
Emergency Medical Services	2 (100.0%)	0 (0.0%)	2 (100.0%)	1.461	0.227
Elderly and Palliative health care services	27 (64.3%)	15 (35.7%)	42 (100.0%)	0.82	0.365
Mental health ailments - Screening & Basic Management	6 (75.0%)	2 (25.0%)	8 (100.0%)	0.982	0.322
Care for Common Ophthalmic and ENT problem	3 (50.0%)	3 (50.0%)	6 (100.0%)	0.16	0.689
Basic Oral health care	2 (100.0%)	0 (0.0%)	2 (100.0%)	1.461	0.227
Pregnancy, Child-birth, Neonatal and Infant care	10 (58.8%)	7 (41.2%)	17 (100.0%)	0.005	0.942
Childhood and adolescent health care services	24 (54.5%)	20 (45.5%)	44 (100.0%)	0.257	0.613
Management of Communicable diseases incl. National Health Programmes	5 (45.5%)	6 (54.5%)	11 (100.0%)	0.74	0.39

Knowledge of HWC Services

- Despite a majority being aware of HWCs, only 48.0% ($n = 212$) of participants were aware of the range of services provided at these centres. Conversely, 52.0% ($n = 230$) were unaware of the specific health services available. This reflects a crucial gap between general awareness and in-depth knowledge, which may hinder optimal utilization of services Fig 2.
- Significantly more rural residents (77.3%) knew about HWCs than urban residents (67.2%); $\chi^2(1) = 7.75$, $p = .005$.

Utilization of HWC Services: Regarding actual visits to HWCs, 58.1% ($n = 257$) of respondents reported having visited an HWC, while 41.9% ($n = 185$) had never accessed services at these centres. This finding suggests that even among those who are aware of HWCs, service utilization is not universal, potentially due to barriers such as lack of perceived need, dissatisfaction with services, distance, or lack of detailed awareness about the benefits Fig 3. No significant difference between rural (59.5%) and urban (56.1%) groups; $\chi^2(1) = 0.52$, $p = .473$. There is significant rural-urban variation of in case of awareness of being the health and wellness centre. But this is not being observed in the case of Utilization of HWC. The management of common communicable diseases and outpatient care services were utilized by 58.8% ($n = 97$) of respondents who were aware of them, while 41.2% ($n = 68$) reported no awareness.

The association was statistically non-significant ($\chi^2 = 0.820$, $p = 0.365$). Mental health services were utilized by 75% ($n = 6$) of those who were aware of their availability, while 25% ($n = 2$) were unaware ($\chi^2 = 0.982$, $p = 0.322$). Although this appears promising, the association was not statistically significant. In the case of care for common ophthalmic and ENT problems, utilization was evenly distributed: 50% ($n = 3$) of those aware accessed the services, and 50% ($n = 3$) did not ($\chi^2 = 0.160$, $p = 0.689$). For pregnancy, childbirth, neonatal, and infant care, utilization was reported by 58.8% ($n = 10$) of those aware, and 41.2% ($n = 7$) were unaware. The relationship was not statistically significant ($\chi^2 = 0.005$, $p = 0.942$). Similarly, childhood and adolescent healthcare services were utilized by 54.5% ($n = 24$) of aware respondents, compared to 45.5% ($n = 20$) who were unaware ($\chi^2 = 0.257$, $p = 0.613$). For analysis purposes, services related to pregnancy, childbirth, neonatal, and infant care were grouped with childhood and adolescent health services, as they form a continuum of maternal and child health interventions. Lastly, management of communicable diseases under national health programmes had 45.5% ($n = 5$) utilization among the aware, while 54.5% ($n = 6$) utilization occurred among those unaware of the specific services. This counterintuitive finding was also not statistically significant ($\chi^2 = 0.740$, $p = 0.390$).

DISCUSSION

The present study aimed to assess the association between awareness and utilization of the expanded healthcare services offered under

Ayushman Arogya Mandirs (formerly Health and Wellness Centres) in the Vidhyapeeth Block of Varanasi district. The results, based on chi-square analysis across twelve service categories, did not reveal any statistically significant association between awareness and actual utilization ($p > 0.05$ in all categories). This finding highlights a crucial gap between community knowledge and healthcare-seeking behavior and suggests that awareness alone is not a sufficient condition for service uptake. A closer look at the data shows that services like outpatient care and the management of common communicable diseases had relatively higher awareness levels (58.8%), as did the screening and control of non-communicable diseases (63.2%). However, utilization remained modest. On the other hand, some services such as emergency medical care and oral health showed full utilization (100%) despite being less known, suggesting that service use was driven more by immediate or urgent need than by prior knowledge or planned behavior. Similarly, awareness of newer or recently integrated services like mental health (75%), elderly and palliative care (64.3%), and reproductive health services (64.3%) was moderate to high, yet these services were accessed by very few respondents, underscoring the limited role of awareness in determining utilization.

This disconnection between awareness and utilization has been echoed in national-level evaluations. Reports such as the Rural Health Statistics 2021–22 and the 15th Common Review Mission under the National Health Mission have observed that despite infrastructural upgrades and service package expansions at HWCs (14), the actual uptake of care remains low, particularly for services that go beyond basic outpatient or curative care. Structural barriers—such as irregular staff deployment, inadequate diagnostic and drug availability, limited training of health personnel, and inconsistent monitoring—have been identified as major hindrances. These challenges are especially acute in states like Uttar Pradesh, where the healthcare system is overburdened and under-resourced. Previous research further supports these findings. Hooda (2023), in a political economy analysis of Ayushman Bharat, noted that structural constraints in public health facilities overshadow policy ambitions, leading to underutilization of services (15). Studies by the Institute of Economic Growth have similarly shown that while service packages have expanded on paper, ground-level implementation remains weak. The present study reaffirms these insights. For instance, despite maternal and child health services being a national priority, the merged analysis of neonatal, infant, and adolescent healthcare revealed poor utilization, indicating shortcomings in follow-up systems, community outreach, and public trust. Social and cultural factors also appear to influence service uptake. Services related to mental health, oral health, and reproductive care were underutilized, possibly due to stigma, taboos, and gendered health-seeking patterns—particularly in rural and marginalized communities. This aligns with findings from Baru et al. (2010) and the Annual Health Survey, which highlighted how caste, class, and geographical location mediate access to healthcare services in India (16). Even when individuals are aware of services, fears of discrimination, past negative experiences, or perceptions of poor quality may deter them from seeking care.

Sociological theories help explain this phenomenon. Talcott Parsons' concept of the "sick role" suggests that individuals are expected to seek competent help and follow medical advice when ill (17). However, when the public health system is perceived as ineffective or untrustworthy, this normative behavior breaks down. Likewise, Pierre Bourdieu's notion of habitus and symbolic capital sheds light on how healthcare decisions are shaped by lived experiences, social positioning, and perceived legitimacy of institutions. Beneficiaries may avoid government services not due to ignorance, but due to deeply embedded perceptions of inefficacy, neglect, or low dignity associated with public healthcare. Further, the Andersen Behavioral Model of health service utilization posits that three components—predisposing factors (e.g., demographic and social characteristics), enabling resources (e.g., availability of services, infrastructure), and perceived or evaluated need—jointly determine health-seeking behavior (18). In this study, while awareness as a predisposing factor existed, the lack of enabling resources at many AAMs appears to have

constrained utilization. Perceived need alone could not overcome structural and cultural barriers, particularly in services that are preventive or stigmatized.

CONCLUSION

There is significant gap between general awareness of these AAMs and an understanding of the specific services they offer. While a majority of respondents were aware of the existence of HWCs, less than half were informed about the full range of services, and actual utilization—particularly of specialized services like mental health, palliative care, and dental care—remained low. The lack of statistically significant association between awareness and service utilization indicates that awareness alone does not necessarily translate into healthcare-seeking behaviour. Structural challenges such as human resource shortages, weak referral systems, limited outreach, and infrastructural constraints continue to hamper effective service delivery and access. A common pattern of observation of gap between knowledge and behaviour change is being seen in this study, too. This disconnection between awareness and utilization has remained a matter of worry; and further study is required to explore the predisposing factors (e.g., demographic and social characteristics), enabling resources (e.g., availability of services, infrastructure), and perceived or evaluated need.

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