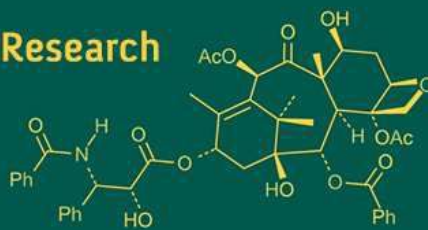


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A study on impact of AB-PMJAY on rural population of Uttar Pradesh

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Abstract

On September 23, 2018, the Indian government launched the Ayushman Bharat plan, a national health protection initiative. The purpose of the study was to gauge the knowledge and usage of the Ayushman Bharat initiative among Uttar Pradesh rural beneficiaries. A comparative cross-sectional research was carried out among 1643 respondents in the field practice areas of the Uttar Pradesh, Department Shalom Institute of Health and Allied Sciences, Sam Higginbottom University of Agriculture, Technology and Sciences Prayagraj, Uttar Pradesh. Data was gathered using a semi-structured questionnaire and simple random sampling. According to our research, majority of respondents were from Rural area (99.8%), while urban area only (0.2%). Based on finding AB-PMJAY awareness is generally high (about 99.3% knew about it), but knowledge of specifics like benefits, cashless treatment, or how to use it is lower. Utilization rates vary greatly (from 1.41% to over 43% in some studies), but they frequently lag behind general awareness. This indicates a gap between knowing the scheme and actively using it, underscoring the need for improved ground-level communication via health workers and the media.

Keywords: Pradhan Mantri Jan Arogya Yojana, Ayushman Bharat, utilization, and awareness

Introduction

In India, healthcare expenditure constitutes 3.8% of the gross domestic product (GDP), with out-of-pocket expenses making up 58.78%. According to the National Sample Survey Office (NSSO) 75th round report, approximately 55% of the Indian populace (rural: 52% and urban: 61%) utilizes healthcare services from the private sector. In rural regions, nearly INR 15,937, and in urban areas, INR 22,031 are incurred as out-of-pocket medical costs for hospitalization [National Health Authority 2021] ^[1]. Healthcare expenses often lead many families into debt, as a significant portion of the Indian population belongs to the middle or lower socio-economic classes. India, a developing nation with a growing population of 1.4 billion [Worldometer: India population (2022)] ^[18], sees Bihar as one of its most densely populated states/UTs [Census of India Website]. Bihar ranks among the least effective states in India regarding healthcare service provision, as indicated by various health metrics [NITI Aayog: INDIA 2015-16:] ^[3]. The percentage of families living below the poverty line in Bihar stands at 52.2% [Ministry of Statistics and Programme Implementation 2022] ^[4]. Numerous healthcare models exist, with the out-of-pocket model being the most common in underdeveloped regions and countries lacking the financial means to establish a medical system akin to the other three models previously mentioned. The affluent receive specialized medical care, while the impoverished do not unless they can secure the necessary funds to afford it [Vera Whole Health 2022] ^[5].

A high-level meeting convened by the United Nations proposed the establishment of universal health coverage to address the inequities in healthcare costs and the disparities in access to health services [Watkins *et al.* 2017] ^[6]. The current movement advocating for universal health coverage (UHC) emerged in response to the increasing global awareness of challenges such as restricted access to healthcare, inadequate treatment, and substantial financial risks [Watkins *et al.* 2017] ^[6]. In an effort to mitigate healthcare expenditures and ensure sufficient health services, the Indian government, encompassing both state and central authorities, has launched various health security initiatives, including Ayushman Bharat, a scheme entirely funded by the central government [National Health Authority 2021] ^[1].

This initiative was officially launched in Ranchi on September 23, 2018, by the esteemed Prime Minister of India. The objective of realizing the vision of universal health coverage is to guarantee that no individual is overlooked [National Health Authority 2021] ^[1]. Ayushman Bharat stands as one of the principal programs designed to offer financial protection for accessing secondary and tertiary healthcare services. This scheme comprises two main components: the health and wellness center and the Pradhan Mantri Jan Arogya Yojana (PMJAY). PMJAY is recognized as the largest public-funded health insurance initiative globally, catering to both rural and urban populations in India. The primary goal of PMJAY is to alleviate catastrophic out-of-pocket expenses, provide extensive coverage in a timely manner, and enhance the quality of prolonged hospital stays [Press Information Bureau 2022] ^[7].

The awareness level of PMJAY in the rural areas of Bihar was found to be only 6.7% [Dash U, Muraleedharan VR]. While other individual studies in India also reported a low level of awareness [Kusuma *et al.*, 2018] ^[9]. There is a dearth of literature in the community-level assessment of the awareness of Ayushman Bharat-PMJAY in India. Very limited studies have assessed PMJAY at the community level [Sriee *et al.*, 2021 and V.Pugazhenthir 2021] ^[10]. As per data from the government of Bihar, in the year 2020, only 50% of the population was eligible for Ayushman Bharat [Bihar Swasthya Suraksha Samiti 2022] ^[12]. It has been nearly three years since the implementation of Ayushman Bharat-PMJAY in Bihar, which signifies that there will be a change in the level of awareness. Hence, this study is intended to explore the utilization and awareness of Ayushman Bharat-PMJAY in a selected rural area of Bihar. In India, out-of-pocket expenses account for 59.18% of healthcare spending, which makes for 3.8% of GDP. About 56% of Indians rely on private healthcare services, with out-of-pocket hospitalization expenditures average INR 16,658 in rural regions and INR 23,011 in urban settings, according to the National Sample Survey Office's (NSSO) 75th round report (National Health Authority 2021) ^[1]. In light of India's growing population of 1.48 billion, this financial strain drives many households into debt, especially those in the middle and lower socioeconomic groups (Census of India Website 2022) ^[2]. A startling 37.68% of households in Uttar Pradesh lived below the poverty line in 2022-2023, making it one of the states with the worst healthcare systems.

Due to a shortage of funding for the establishment of comprehensive healthcare systems, the out-of-pocket payment model is prevalent in these emerging regions. According to Watkins *et al.* (2017) ^[6], this strategy frequently leads to an imbalance in which the impoverished population remains underserved unless they can afford care, whereas wealthier persons may obtain high-quality medical treatment. In order to reduce healthcare cost disparities and increase access to healthcare services, the UN has promoted universal health coverage, or UHC. Global awareness of problems including poor accessibility, subpar care, and substantial financial concerns related to medical costs gave rise to the UHC movement. [Press Information Bureau, 2022] ^[7].

The Indian government launched a number of health security initiatives, most notably the federal government-funded Ayushman Bharat project, to address these

problems. Ayushman Bharat, which the Prime Minister introduced in Ranchi on September 23, 2018, seeks to provide universal health coverage so that no one is denied access to essential medical treatment. Health and wellness centers and the Pradhan Mantri Jan Arogya Yojana (PMJAY), the largest publicly financed health insurance program in the world serving both rural and urban populations, are the two main elements of this program. PMJAY's main objectives are to reduce catastrophic out-of-pocket costs, offer prompt coverage, and lengthen hospital stays.

Studies on PMJAY awareness in rural Uttar Pradesh provide a mixed picture: some report low awareness (over 50%), some report moderate awareness (between 20 and 30%), and some propose two-Studies reveal a mixed picture of PMJAY awareness in rural Uttar Pradesh: some find poor awareness (above 50%), others note moderate awareness (between 20 and 30%), and some suggest two-thirds are aware. However, despite health workers and media campaigns, utilization remains low (between 1.3% and 15%) due to lack of information, card possession, and comprehension of benefits. Lack of cards, unclear eligibility, and a lack of knowledge about how to use it are the main problems; health professionals and special programs are important sources of information. [Policy Bazar: Niti Aayog 2023 Report] ^[14].

Objectives

To find out the awareness level of AB-PMJAY regarding utilization

Methodology

This study employed a cross-sectional design to assess knowledge, awareness, and practices regarding the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) among the population of Uttar Pradesh. The study was conducted over a period of five months (November 2021 to March 2022). A simple random sampling method was used to select beneficiary families from rural areas of Uttar Pradesh under the PMJAY scheme. The survey data was collected through face-to-face interviews or written questionnaires, a common primary data collection method for gathering information directly from the source. It has been used to obtain quantitative or qualitative information to understand the research topic.

First stage: Uttar Pradesh state were selected purposively as the respondent belong to the same region. **Second stage:** Among total 75 districts of Uttar Pradesh state each 9th District were selected by random sampling method. **Third stage:** From each selected district 185 households who utilized services under PMJAY mission were selected purposively. **Fourth stage** one person were selected as a respondent from each household. According to the sample size, responses were collected from a total of 1646 respondents. A total of 38 questionnaires were printed and distributed directly to the respondents. In this survey, some individuals did not fill out the printed questionnaires correctly, resulting in the exclusion of three participants. 1643 individuals completed the questionnaires correctly, and their responses were deemed usable and valid for the survey. This represented an 85% response rate for the entire survey. Therefore, the sample size used for this study is 1643. The collected data were entered into Microsoft Excel

2019 and analysed using SPSS version 30. Descriptive statistics, including frequencies and percentages, were computed. A T-test was performed to assess associations between categorical variables, with a p value.

Result and Discussion

The reporting and explanation of empirical data gathered in accordance with the study's suggested objectives are covered in this chapter. The researcher further simplifies the objectives into a number of subheadings. The following is a presentation and discussion of the outcomes of the statistical analysis of the data.

Overview of Ayushman Bharath Yojana

A total of 1643 participants took part in the study from urban areas of Uttar Pradesh. Table 1 is showing the socio demographic characteristics of the study participants in rural as well as urban area.

Table 1: Socio-demographic characteristics of the study participants (n = 1643).

Characteristics	Frequency	Percentage
Urban/rural		
Rural	1639	99.8
Urban	4.00	0.20
Total	1643	100.0
Gender		
Male	973	59.20
Female	670	40.80
Total	1643	100
Caste		
General	43	2.60
OBC	438	26.70
SC	1136	69.10
ST	26	1.60
Total	1643	100
Religion		
Hindu	1623	98.8
Muslim	20	1.2
Total	1643	100
Family type		
Nuclear	6	0.4
joint	1637	99.6
Total	1643	100
Size of family		
One member only	8	0.5
Two member in family	24	1.5
3-5 member in family	651	39.6
More than 5 member in family	960	58.4
Total	1643	100.0
Marital status		
Single	118	7.2
Married	1506	91.7
Widowed/divorced/separated	19	1.2
Total	1643	100
Monthly income (In ₹) wise		
Up to 5000	1580	95.99
5001-10000	56	3.4
10000 or more	10	0.61
Total	1646	100
Education		
No formal education	405	24.70
Primary school	392	23.90
Secondary school	267	16.30
Higher secondary	339	20.60
Other	240	14.60
Total	1643	100.00

In our study it was observed that the majority of the respondents were rural 1639 (99.8%), in the gender group of Male 973 (59.20%), Hindu by religion 1623 (98.8%), SC by caste 1136 (69.10%), married 1506 (91.7%), joint family of Family type 1637 (99.60%), in Size of family More than 5 member in family 960 (58.40%), Monthly income wise Up to 5000 (95.99%) and No formal education (24.70%).

Table 2: Distribution of respondents based on Knowledge about AB-PM JAY.

Variables	Frequency	Percentage
Yes	1632	99.3 %
No	11	0.7%
Total	1643	100.0%

Studies on the Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) Uttar Pradesh show that knowledge levels vary significantly among different respondent groups, with a common finding of moderate to low overall awareness and low utilization rates. Awareness is notably influenced by socio-economic and geographic factors. As seen in the current study table 2 shows that majority of respondents were Hear about AB-PM JAY in response yes 1632 (99.3 %) while response in no were 11 (0.7%).

Table 3: Distribution of respondents based on whom/where you heard about AB-PM JAY.

Variables	Frequency	Percentage
Family	10	0.6
friends	27	1.6
neighbours/relatives	26	1.6
Social media/Radio	10	0.6
Health Staff/helpdesk at hospital	1231	74.9
Information van/PM Letter	5	0.3
Registration officer	4	0.2
kotedar/pradhan	321	19.5
Other	9	0.5
Total	1643	100.0

Awareness of the AB-PM JAY scheme varies by region, but studies consistently show that respondents learn about it primarily through Health Staff/helpdesk at hospital (74.9%), followed by 19.5 % kotedar/pradhan, followed by 1.6% friends and neighbors/relatives and other followed by family and Social media/Radio 0.6%, Information van/PM Letter 0.3 %, Registration officer 0.2 %, other 0.5 % table 3. These findings indicate that a mix of both formal media campaigns and grassroots-level, personal communication methods are effective in disseminating information about the scheme. Healthcare providers were also a significant source of information for beneficiaries.

Table 4: Distribution of respondents think about registration by Household is useful

Variables	Frequency	Percentage
Yes	1292	78.6
No	351	21.4
Total	1643	100.0

The usefulness of household registration is generally perceived in two primary ways: for administrative purposes by governments and institutions, and for individual benefits/rights among the population. This statement

presents a clear breakdown of survey or poll results. It indicates that out of all the people who responded, a significant majority answered in the affirmative 1292 (78.6 %), while a smaller proportion answered in the negative 351 (21.4%) table 4.

Table 5: Distribution of respondents based on suggest if do not have Ayushman card then what do you?

Variables	Frequency	Percentage
No suggestions	55	3.3
Create awareness about AB-PMJAY.	285	17.3
Where and how will Ayushman card be used	10	0.6
N/A	1293	78.7
Total	1643	100.0

Based on survey of available information, the distribution of respondents' suggestions for those without an Ayushman card typically falls into several key areas, reflecting a mix of official guidance, alternative options, and practical advice. The primary suggestions include: N/A (78.7%) and create awareness about AB-PMJAY ormal education (17.3%) followed by No Suggestion (3.3%), Where and how card be used (0.6%) in table 5.

Table 6: Distribution of respondents based on where was your Ayushman card made?

Variables	Frequency	Percentage
CSC centre	515	31.3
Empanned hospital	275	16.7
Panchyat bhavan	850	51.7
N/A	3	0.2
Total	1643	100.0

The present study examined the source of information about the benefits of the AB-PMJAY card. The statement describes a breakdown of survey responses, indicating that the vast majority of respondents had (51.7%) and CSC (31.3%) followed by Empanned hospital (16.7%) and N/A (0.2%) table 6.

Table 7: Distribution of respondents based on who made your card in the special camp of Ayushman Bharat.

Variables	Frequency	Percentage
VLE	515	31.3
Ayushman mitra	324	19.7
Sahyak panchyat operator.	732	44.6
Asha	69	4.2
N/A	3	0.2
Total	1643	100.0

Distribution of respondents indicates varied involvement regarding who facilitated the issuance of Ayushman Bharat cards during the special camp. Specific stakeholders—including Vle, Ayushman mitra, Sahyak panchyat operator and Asha played roles in making these cards available to the beneficiaries. Understanding the distribution of respondents sheds light on the operational dynamics of the camp and the effectiveness of different entities in delivering health service benefits under the Ayushman Bharat scheme. Status was shown in table 7 shows that majority of respondents were Sahyak panchyat operator (44.6%) and vle(31.3%), Ayushman mitra (19.7%),while Asha (4.2%) and N/A were (.2%).

Table 8: Distribution of respondents based on cashless scheme is usefulness

Variables	Frequency	Percentage
Hospital	1466	89.2
OPD	144	8.8
Other	33	2.0
Total	1643	100.0

The Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) scheme primarily focuses on covering hospitalisation expenses for secondary and tertiary care, while generally excluding most outpatient department (OPD) treatments. The statistics provided (Hospital 89.2%, OPD 8.8%, Other 2%) broadly reflect this intended focus table 8. The scheme's core design is to protect vulnerable families from catastrophic financial expenditures associated with major hospital stays, which is why the vast majority of claims are for in-patient care.

Table 9: Distribution of respondents based on nearest Health Insurance Participating Hospital from where you live?

Variables	Frequency	Percentage
CHC	1372	83.5%
District hospital	156	9.5%
Private Empanelled Hospital	23	1.4%
Other	92	5.6%
Total	1643	100.0

Determining the distribution of respondents based on their nearest health insurance participating hospital requires collecting specific location data from respondents and health facilities. Similarly finding was reported in table 9 shows that majority of respondents were nearest health participating hospital CHC (83.5%), (District hospital 9.5%) and Other (5.6%) while Private Empanelled Hospital (1.4%).

Table 10: Distribution of respondents based on Means of transport used

Variables	Frequency	Percentage
Walk	53	3.00
Bicycle	603	36.70
Commercial transport	966	58.80
Others (specify	21	1.30
Total	1643	100.0

Based on the response table 10 shows that majority of respondents were commercial transport (58.8%), bicycle (36.7%) and walk (3.2%) while others (1.3%). The distribution of respondents by their mode of transport varies based on location and purpose, but common trends show a high prevalence of walking and cycling, especially in rural areas, while public transport (bus, metro) and private vehicles (cars, two-wheelers) are also significant, particularly in urban settings. For instance, studies show walking/cycling can be a majority mode, while urban surveys often find public transport and private cars are popular choices for daily commutes, and a significant portion of respondents might use multiple mode.

Discussion

The study looked into the Ayushman Bharat Yojna's knowledge and use among eligible recipients in rural area of Uttar Pradesh. Although healthcare insurance plans are not a

novel idea in India, AB-PMJAY awareness and knowledge are still low, especially in metropolitan areas. By examining the motivations for using the program when necessary, the study illuminated the unfulfilled requirements of the program's rural recipients.

The results of the study indicate that a lack of awareness regarding AB-PMJAY is a significant factor contributing to the low utilization of the schemes. This pattern is also observed in other research conducted across various regions of the country. [Sriee *et al.*, 2021]^[10] A study carried out in the states of Haryana and Bihar revealed comparable findings. The uptake of schemes in both urban and rural settings continues to be inadequate. It is crucial to tackle the challenges encountered by the beneficiaries, especially during the early phases of the scheme; otherwise, patient satisfaction with the scheme will remain low. By simplifying and clarifying the process, we can improve the scheme's utilization among beneficiaries.

Low knowledge of the scheme's payment process is another cause for concern. Few users were required to pay co-payments at the hospital even though they were covered by the program, according to this research. Because they lack understanding and expertise, some hospitals and individuals exploit beneficiaries. There have also been reports of this from various regions of the nation. [The wire 2023, The Times of India 2023, CNBCTV18, Sriee *et al.*, 2021]^[15, 16, 10]. Hospitals were identified and humiliated for misconduct in a study. [Sriee *et al.*, 2021]^[10].

According to survey results and field observations, health professionals' effective awareness efforts and specific initiatives to inform beneficiaries of how and where to take advantage of the scheme's advantages are primarily responsible for higher use in rural regions. Urban regions did not exhibit this immediate awareness. The lack of appropriate instruction regarding the plan hinders the use of AB by beneficiaries in both locations.-PMJAY. Only by raising beneficiaries' knowledge and implementing appropriate oversight and governance can these problems be resolved.

Conclusion

Based on survey findings and field observations, the successful awareness campaigns and targeted initiatives by health professionals to educate beneficiaries on how and where to utilize the benefits of the scheme are chiefly responsible for the increased usage in rural areas. In contrast, urban areas did not demonstrate this level of immediate awareness. Rural beneficiaries faced challenges in obtaining sufficient information about the program, which impedes their utilization of AB.-PMJAY.

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