

# Assessment of Beneficiaries Satisfaction under Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) in Banda District of Uttar Pradesh

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## Abstract

**Background:** Pradhan Mantri Jan Arogya Yojana, launched in 2018, is a government-funded health insurance scheme under Ayushman Bharat, targeting 12 crore poor families (~50 crore beneficiaries). It provides ₹5 lakh per family per year for cashless hospital care in empanelled hospitals (public & private)<sup>(1)</sup>.

**Objectives:** This study aimed to assess the satisfaction level of beneficiaries utilizing AB-PMJAY services in the Banda district of the Bundelkhand region and to identify factors influencing their healthcare experiences.

**Methods:** A hospital-based cross-sectional study was conducted among 300 AB-PMJAY beneficiaries selected through population proportion sampling from government and private empanelled hospitals. Data were collected using a pretested, semi-structured questionnaire covering demographics, healthcare utilization, satisfaction levels, and encountered barriers. Statistical analysis was performed using descriptive and inferential methods.

**Results:** The study in Banda district reveals that AB-PMJAY effectively serves rural, elderly, and economically vulnerable populations, with 79% from rural areas and 45.33% unemployed. Satisfaction with services was generally high, especially with doctors (72%) and nursing staff (72.3%). Ayushman Mitras had the highest dissatisfaction (7.3%), indicating scope for improvement. Beneficiaries without treatment issues reported greater satisfaction (28.3% extremely satisfied). Positive outcomes strongly influenced satisfaction, while dissatisfaction was higher among those with no improvement. Surgical treatment yielded higher satisfaction despite issues. Interestingly, even those unaware of the scheme reported good experiences, highlighting the impact of service quality on user perception.

**Conclusion:** The study highlights high overall satisfaction under AB-PMJAY but reveals critical areas needing improvement, including procedural simplifications and medication coverage enhancements.

Keywords: Patient Satisfaction; Health Services Accessibility; Universal Health Coverage; Ayushman Bharat; Government Health Insurance Scheme.

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## Introduction

Access to affordable healthcare has long been a critical challenge in India, particularly in rural regions where disparities in infrastructure and health-seeking behavior are profound.<sup>[1]</sup> Recognizing the burden of catastrophic healthcare expenses, largely driven by out-of-pocket expenditures (OOPE), the Government of India launched the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) in 2018.<sup>[2]</sup> As one of the largest publicly funded health insurance schemes in the world, AB-PMJAY was designed to provide a financial safety net, offering ₹5 lakh annual coverage per eligible family for secondary and tertiary healthcare services.<sup>[2,3]</sup> The scheme, leveraging the Socio-Economic Caste Census (SECC) 2011 data, prioritizes vulnerable rural and urban households, aiming to make significant strides towards Universal Health Coverage (UHC) by 2030.<sup>[4,5]</sup>

Despite its ambitious framework, gaps remain between policy intent and actual outcomes, especially in rural areas where challenges like low awareness, limited empanelled facilities, and administrative bottlenecks persist. While AB-PMJAY promises nationwide portability and broad service coverage, the real-world experience of beneficiaries, particularly their satisfaction with services accessed under the scheme, is a crucial yet under-explored dimension. Satisfaction levels directly influence not just healthcare utilization rates but also public trust and the long-term success of health interventions.<sup>[6]</sup>

Banda district, situated in the Bundelkhand region, presents a uniquely important context for evaluating the performance of AB-PMJAY. Characterized by socio-economic vulnerabilities, limited healthcare infrastructure, and a predominantly rural demographic,<sup>[7]</sup> Banda serves as a representative microcosm of the scheme's challenges and potential in rural India.

### Aim and Objective:

To assess satisfaction levels of beneficiaries regarding healthcare services under AB-PMJAY.

### Materials and Methods

The study was conducted in Banda district, located in the Bundelkhand region of Uttar Pradesh, India, a predominantly rural area marked by significant socio-economic vulnerabilities. The

district, characterized by limited healthcare access and high out-of-pocket health expenditures, offered an appropriate context for assessing the satisfaction levels among beneficiaries of the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY). Data collection took place in a combination of government and private healthcare facilities empanelled under the scheme, including Rani Durgawati Medical College, the District Hospital Banda, Kamla Hospital Atra, and MM Hospital Baberu. A hospital-based cross-sectional study design was employed, enabling the collection of real-time data to evaluate beneficiaries' experiences and satisfaction with services accessed under AB-PMJAY.

The study population consisted of residents of Banda district who had utilized AB-PMJAY benefits within the preceding year. To ensure the sample accurately reflected the diversity of healthcare providers, a population proportion sampling was adopted, stratifying by the type of hospital attended. The sample size was determined using the formula for estimating proportions, assuming a 50% satisfaction prevalence for maximum sample variability, a 95% confidence level, and a 6% margin of error, resulting in an initial sample size of 267. Accounting for a possible 10% non-response rate, the final target was set at 294 participants so round figure was 300 participants. On each hospital visit, investigators collected lists of AB-PMJAY beneficiaries scheduled for discharge within 24 hours and conducted bedside interviews after obtaining written informed consent. When direct interviews with patients were not feasible, a close attendant was selected for participation.

A pretested, semi-structured questionnaire was utilized to gather information on sociodemographic characteristics, awareness and utilization of AB-PMJAY services, healthcare expenditures, and the perceived impact of the scheme on family health and financial security. Data were recorded manually and later entered into Microsoft Excel using double-entry to ensure accuracy. Descriptive and inferential statistical methods were applied for analysis, with findings interpreted in the context of the study's objectives. Ethical approval was obtained from the Institutional Ethics Committee of Rani Durgawati Medical College, Banda, Ref No.IEC/RDMC/Cert/19 and strict confidentiality and voluntary participation were maintained throughout the study.

## Results

**Table 1: Demographic and Socioeconomic Characteristics of AB-PMJAY Beneficiaries in Banda District**

Characteristics		Frequency (n=300)	Percentage (%)
Age (Years)	Infant (<1 year)	29	9.67%
	Child (1-12 years)	46	15.33%
	Adolescent (12-18 years)	25	8.33%
	Adult (18-60 years)	86	28.67%
	Geriatric (>60 years)	114	38.00%
Gender	Male	141	47.00%
	Female	159	53.00%
Residence	Urban	63	21.00%
	Rural	237	79.00%
Education	Illiterate	39	13.00%
	Primary school	21	4.00%
	Middle school	24	8.00%
	High school	38	12.66%
	Intermediate	78	26.00%
	Graduate	48	16.00%
	Postgraduate	27	9.00%
	Non-school going child	25	8.30%
Occupation	Semi-professional or above	0	0.00%
	Skilled/Shop/Farmer	44	14.66%
	Semi-skilled	30	11.00%
	Unskilled	90	30.00%
	Unemployed	136	45.33%

In our study, the demographic and socioeconomic profile of AB-PMJAY beneficiaries in Banda district revealed that the majority were elderly (38%) and adults aged 18-60 years (28.67%), with a slightly higher representation of females (53%) compared to males (47%). A significant proportion belonged to rural areas (79%), reflecting the scheme's outreach

among under-served populations. Educational status varied, with 13% illiterate and 26% educated up to intermediate level. Occupationally, 45.33% were unemployed and 30% were unskilled workers, highlighting the economic vulnerability of the beneficiary population, as shown in Table (1).

**Table 2: Satisfaction level of beneficiaries from Paramedical Staff, Ayushman-Mitra, Behaviour of Staff, and Overall Level of Satisfaction.**

	Staff Category	Extremely Satisfied	Satisfied	Neutral	Dissatisfied	Extremely Dissatisfied
Paramedical Staff and Ayushman-Mitra	Nursing Staff	29 (9.7%)	190 (63.3%)	60 (20.0%)	13 (4.3%)	8 (2.7%)
	Ward Boy	26 (8.7%)	199 (66.3%)	53 (17.7%)	14 (4.7%)	8 (2.7%)
	Sweeper	26 (8.7%)	205 (68.3%)	51 (17.0%)	7 (2.3%)	11 (3.7%)
	Ayushman Mitra	38 (12.7%)	187 (62.3%)	48 (16.0%)	16 (5.3%)	11 (3.7%)

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Behaviour of Staff	Doctor	33 (11.0%)	216 (72.0%)	36 (12.0%)	6 (2.0%)	9 (3.0%)
	Nursing Staff	20 (6.7%)	217 (72.3%)	39 (13.0%)	15 (5.0%)	9 (3.0%)
	Ward Boy	19 (6.3%)	212 (70.7%)	42 (14.0%)	19 (6.3%)	8 (2.7%)
	Sweeper	22 (7.3%)	218 (72.7%)	42 (14.0%)	9 (3.0%)	9 (3.0%)
	Ayushman Mitra	25 (8.3%)	190 (63.3%)	55 (18.3%)	22 (7.3%)	8 (2.7%)

Satisfaction levels with paramedical staff, Ayushman Mitra, and overall staff behavior indicated that most respondents were satisfied with services received. Nursing staff (63.3%), ward boys (66.3%), sweepers (68.3%), and Ayushman Mitras (62.3%) received high satisfaction ratings. In

terms of behavior, doctors and nursing staff were rated most favorably (72% and 72.3% satisfied, respectively), while Ayushman Mitras had the highest dissatisfaction (7.3%), suggesting room for service quality improvement, as shown in Table (2).

**Table 3: Satisfaction level of beneficiaries with problem faced and outcome**

Category	Subcategory	Extremely Satisfied	Satisfied	Neutral	Dissatisfied
Problem Faced	No	28 (28.3%)	56 (56.6%)	12 (12.1%)	3 (3.0%)
	Yes	9 (4.5%)	129 (64.2%)	39 (19.5%)	24 (11.8%)
Outcome	Cured	—	76 (83.5%)	—	—
	Improved	—	119 (83.2%)	—	—
	No difference	—	—	18 (48.6%)	—
	Deteriorated	—	—	—	9 (31.0%)

Beneficiaries who did not encounter problems during treatment reported significantly higher satisfaction (28.3% extremely satisfied) compared to those who did (4.5% extremely satisfied), with a notable rise in dissatisfaction among the latter (11.8%).

Regarding outcomes, satisfaction was high among those who were cured (83.5%) or improved (83.2%), while neutrality and dissatisfaction were seen in cases with no improvement (48.6%) or deterioration (31%), respectively, as shown in Table (3).

**Table 4. Satisfaction level of beneficiaries during treatment**

Variables		Problem Faced (%)	Extremely Satisfied (%)	Dissatisfied (%)
Modality	Surgical	179 (59.6%)	58(19.2%)	13(4.2%)
	Conservative	2201(73.6%)	17(5.7%)	28(9.4%)
Awareness Status	Used in Past	180(60.0%)	39(13.0%)	21(7.0%)
	Aware but Not Used	178(59.4%)	39(12.9%)	23(7.8%)
	Unaware	257(85.7%)	32(10.8%)	18(5.9%)

Treatment modality and awareness levels also influenced satisfaction. Surgical treatment was associated with higher extreme satisfaction (19.2%) despite a 59.6% problem rate, whereas conservative

treatment had lower extreme satisfaction (5.7%) and a higher problem rate (73.6%). Even among those unaware of the scheme, 10.8% reported extreme satisfaction and only 5.9% were dissatisfied,

indicating a generally positive reception of services regardless of prior knowledge, as shown in Table (4).

### Discussion

The study evaluated the largest proportion of beneficiaries (38%) belonged to the geriatric age group (>60 years), with adults (18–60 years) comprising 28.67%, and children (1–12 years) accounting for 15.33%. This elderly predominance aligns with Nandi et al. (2012)<sup>[4]</sup> and Ghosh et al. (2014)<sup>[5]</sup>, who noted similar trends but highlighted limited benefit utilization among older adults. Female beneficiaries constituted 53%, slightly higher than males (47%), consistent with Dewan et al. (2016)<sup>[8]</sup> and Hooda et al. (2017)<sup>[9]</sup>, who found higher scheme utilization among women due to health vulnerabilities.

A majority (79%) of participants were from rural areas, reflecting the scheme's strong rural outreach, similar to findings by Dewan et al. (2016)<sup>[8]</sup> and Karan et al. (2017)<sup>[10]</sup> who noted higher government scheme reliance among rural populations.

Educational attainment among beneficiaries was modest, with 19.66% of heads of families being illiterate and 21.66% educated up to middle school. These findings align with studies by Nandi et al. (2012)<sup>[4]</sup> and Ghosh et al. (2014)<sup>[5]</sup>, which reported low education levels among rural insurance beneficiaries. Occupationally, 45.33% of participants were unemployed and 30% engaged in unskilled labor, similar to findings by Ghosh et al. (2014)<sup>[5]</sup>, Dewan et al. (2016)<sup>[8]</sup>, and Srivastava et al. (2018)<sup>[11]</sup>.

Overall, 61.4% of beneficiaries reported being satisfied and 12.3% extremely satisfied, closely aligning with Pareek et al. (2018)<sup>[12]</sup> and Angell et al. (2019)<sup>[13]</sup>, although dissatisfaction (9%) still warrants attention for service improvement.

Regarding treatment outcomes, 47.7% of beneficiaries improved and 30.3% were cured. Similar trends were observed by Pareek et al. (2018)<sup>[12]</sup> and Angell et al. (2019)<sup>[13]</sup>, although our study recorded slightly higher deterioration rates (9.7%).

Satisfaction was notably higher among those who did not face problems during service access. Awareness, positive clinical outcomes, and shorter

hospital stays were associated with higher satisfaction levels, a trend corroborated by Khetrapal & Acharya (2019)<sup>[14]</sup> and Venkatesh et al. (2019)<sup>[15]</sup>.

### Conclusion

We concluded that the majority of AB-PMJAY beneficiaries in Banda district reported high satisfaction with healthcare services, especially with doctor care and hospital facilities. However, procedural barriers and partial gaps in medicine coverage persist. Addressing these challenges and enhancing scheme awareness can significantly improve the overall effectiveness and reach of AB-PMJAY in rural populations.

### Future Research Recommendations:

Future research should focus on multi-district or state-wide studies to improve generalizability beyond Banda district. Qualitative studies exploring beneficiary experiences in-depth could help understand the reasons behind dissatisfaction, especially with Ayushman Mitra services. Further investigation into the impact of awareness levels on service utilization and outcomes is needed. Comparative studies assessing satisfaction across different healthcare settings (public vs private empanelled hospitals) under AB-PMJAY would provide valuable insights. Additionally, longitudinal studies examining long-term health and financial outcomes post-treatment could help assess the scheme's sustained impact on economically vulnerable populations and inform targeted service quality improvements.

### Limitations

This study was limited to hospitalized AB-PMJAY beneficiaries in selected facilities of Banda district, which may not capture the experiences of outpatient beneficiaries or non-users. Potential response bias during interviews and the cross-sectional design, which restricts causality assessment, are additional limitations. Broader, multi-district studies could offer more generalizable insights for policy enhancements.

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