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Research Article

Healthcare Delivery and Beneficiary Satisfaction: A Focused Study on AB-PMJAY Beneficiaries at a Tertiary Care Hospital of North India

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Abstract:
Patient satisfaction is a crucial measure of healthcare quality as it provides information on the provider's success at meeting patients' expectations. AB-PMJAY scheme is designed to enhance access to hospitalization, thereby increasing the reach of healthcare services despite this the primary objectives of PM-JAY are to provide comprehensive coverage for catastrophic illnesses, reduce out-of-pocket expenses, enhance access to hospitalization, increase accessibility, and expand health insurance coverage. The researcher employed a cross-sectional survey design to evaluate the satisfaction of AB-PMJAY beneficiaries with patient care services at AIIMS Rishikesh. The study utilized a stratified random sampling method to ensure a representative sample of AB-PMJAY beneficiaries. As per results, patients were highly satisfied with receiving medical care without financial setbacks, with the treatment and care they received from doctors and nurses too. Some other areas like cleanliness inwards, patient care areas, and out-of-pocket expenditures are crucial aspect and needs to be prioritized.

Keywords: AB-PMJAY, AIIMS, Patients Satisfaction, Healthcare Services, Empirical Study, North India

Introduction

The Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (ABPMJAY), a flagship initiative by the Government of India, was launched with a vision to transform the lives of about 100 million families and 500 million individuals. This scheme, based on the socio-economic caste census of 2011, is a testament to the government's commitment to its people. It offers a cashless cover of Rs. 500,000 (€5800), a sum that is at least 50 times the monthly earnings of more than 80% of the Indian workforce.

One of the standout features of ABPMJAY is its inclusivity. From day one, it covers all pre-existing conditions. It also takes care of costs related to diagnostics and medicines up to 3 days before hospitalization and 15 days after hospitalization. With a comprehensive coverage of over 1300 procedures, the scheme is a safety net for many. It is administered by the National Health Authority (NHA), which operates under the aegis of the Ministry of Health and Family Welfare. The

financing of this ambitious project is a joint venture, with the central and state governments sharing the costs in a 60:40 ratio. This initiative is a significant step towards mitigating the out-of-pocket catastrophic healthcare expenditure (OOPHE), which equals or exceeds 10% of the household expenditure and varies from 19% to 30% across states in India [1].

The scheme is designed to enhance access to hospitalization, thereby increasing the reach of healthcare services. The primary objectives of PM-JAY are to provide comprehensive coverage for catastrophic illnesses, reduce out-of-pocket expenses, enhance access to hospitalization, increase accessibility, and expand health insurance coverage. PM-JAY also aims to establish national standards for health assurance systems and provide national portability of care. At the implementation level, flexibility is granted to states, ensuring coverage for all families eligible as per the SECC data [2].

Patient satisfaction is a crucial measure of healthcare quality as it provides information on the provider's success at meeting patients' expectations and is a key determinant of patients' perspective behavioural intention [3].

In the case of the Ayushman Bharat scheme, patient satisfaction can serve as a valuable metric for assessing the scheme's effectiveness in meeting its goal of providing quality healthcare to India's vulnerable populations. Therefore, it's essential for policymakers to incorporate patients' perceived value as part of the ongoing efforts to increase satisfaction with health insurance by patients [4].

Review of literature:

Patient satisfaction entails numerous dimensions and is related to several factors, such as socio-economic background, cultural values, environmental characteristics of health care settings, accessibility and availability of care, patient's previous experiences with health care, the quality and effectiveness of the treatment, as well as health care providers' attitudes, experiences and knowledge. Demographic and socio-economic characteristics of patients including age, gender, place of residency, education, income, marital status, and race are considered to be among the main determinants of patient satisfaction with health care. These studies showed that availability is dependent on available workforce and affordability, as well as flexibility of payment mechanisms, insurance status, and insurance coverage; all of these increase patient ratings of satisfaction [5].

Increased access to health care does not always guarantee better health outcomes, potentially due to low-quality services. Therefore, improving the quality of care is crucial, but measuring it can be challenging. Patient-reported measures offer a promising opportunity for assessment. However, without a nuanced approach to identifying sources of systematic reporting error, using satisfaction ratings within value-based purchasing programs may obscure poor-quality interpersonal care for marginalized patient populations. Aspects of care interaction beyond the physical environment, such as the quality of interpersonal care, have a strong relationship with overall satisfaction. However, these results raise concerns about the use of satisfaction ratings within a nationwide performance policy. Observed differences in care ratings may not reflect true differences in patients' satisfaction, which may vary between socio-cultural groups. These findings are timely as the Indian government is considering using satisfaction ratings to hold hospitals accountable to patients [6].

Research Methodology:

This study employed a cross-sectional survey design to evaluate the satisfaction of AB-PMJAY beneficiaries with patient care services at AIIMS Rishikesh.

Questionnaire Development: A comprehensive questionnaire was developed to assess various dimensions of patient satisfaction, including admission, treatment, staff interaction, and discharge processes. The questionnaire was designed to be both quantitative and qualitative, allowing for a robust analysis of patient satisfaction levels.

Pilot Study: Prior to the main study, a pilot study was conducted with 30 participants to test the questionnaire's reliability and validity. Feedback from the pilot study was used to refine the questionnaire and ensure its effectiveness in capturing relevant data.

Questionnaire Validation: The questionnaire has also undergone a validation process involving experts in healthcare and research methodology. This have ensured that the questionnaire is accurate, reliable, and capable of measuring what it is intended to measure.

Sampling Method: The study utilized a stratified random sampling method to ensure a representative sample of AB-PMJAY beneficiaries. Participants were stratified, based on factors such as age, gender, and type of treatment received.

Inclusion Criteria: All AB-PMJAY beneficiaries at the time of discharge from AIIMS Rishikesh were eligible to participate in the study.

Exclusion Criteria: Patients with serious medical conditions that may impair their ability to provide informed consent or complete the questionnaire were excluded. Patients not willing to participate in the study were also excluded.

Data Collection: Trained research assistants have approached potential participants at the time of discharge to explain the study and invite them to participate. Informed consent was obtained from all participants who agreed to participate. Four hundred participants completed the questionnaire anonymously to ensure confidentiality.

Results

Initially, a pilot study was conducted on 30 AB-PMJAY beneficiaries to determine the reliability. The value of Cronbach's Alpha came out to be 0.73. The Cronbach's Alpha value reflected acceptable and good internal consistency of the study. This allowed us to continue the study further.

In the study, there were a total of 390 participants. The sociodemographic characteristics of these respondents are comprehensively detailed.

Sociodemographic details of the patients

The gender distribution among the participants was fairly balanced, with males constituting a slight majority of 55.27%, while females accounted for the remaining 44.73%. This provides a diverse perspective in the study, ensuring that the findings are not skewed towards one gender.

Table 1: Gender-wise distribution

Sr. No.	Gender	N	Percentage
1	Male	215	55.27
2	female	174	44.73

In terms of age distribution, a significant proportion of the participants were relatively young, falling within the age brackets of 18 to 30 years (33.42%) and 31 to 45 years (22.87%). This demographic representation is crucial as it reflects the health conditions and responses of the younger and middle-aged population, which are often underrepresented in medical studies.

The mean age of the patients, which is a critical indicator of the central tendency of the age distribution, was found to be within the range of 31 to 45 years. This further underscore the focus of the study on the younger and middle-aged demographic, providing valuable insights into the health conditions prevalent in this age group.

Table 2: Age-wise distribution

S. No.	Age	Percentage	N
1.	Less than 18	05.66	022
2.	18-30	33.42	130
3.	31-45	22.88	089
4.	46-60	17.48	068
5.	Above 60	20.57	080

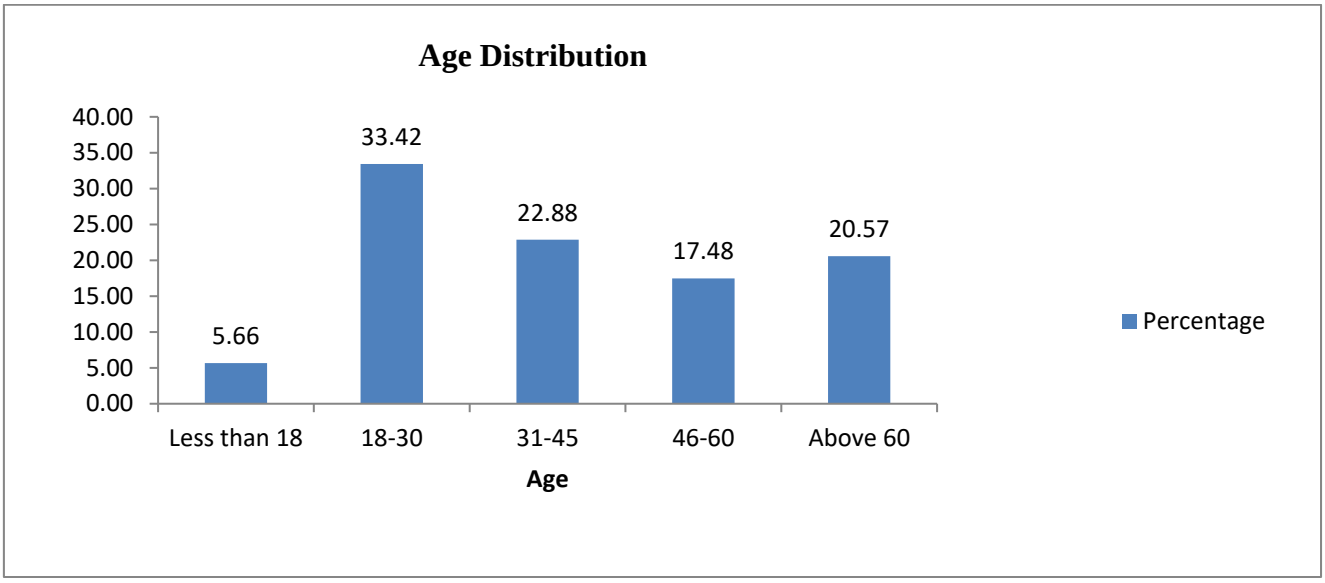

Figure 1: Age distribution

As delineated in Table 3, a substantial majority of the patients, precisely 316 or 81.23%, were administered medical treatment. In contrast, a relatively smaller cohort of 73 patients, representing 18.76% of the total, underwent surgical procedures.

Table 3: Package distribution

Sr. No.	Package Category	Percentage	N
1.	Medical	81.23	316
2.	Surgical	18.77	73

Table 4 provides a significant metric related to patient care - the average length of stay in the hospital. The data indicates that the overall average duration of hospitalization is 14.05 days. This implies that, on average, a patient admitted to the hospital under the study remained under medical supervision and care for approximately 14.05 days.

Table 4: Average length of stay distribution

Sr. No.	Average length of stay (ALS)	Average
1.	Overall	14.05
2.	Medical	14.69
3.	Surgical	14.05

Table 5 presents a detailed analysis of the patient's family income, revealing critical socioeconomic patterns among the beneficiaries. The data indicates that the majority of patients, specifically 49.23%, come from families with a monthly income ranging from ₹5001 to ₹10000.

In addition, a significant proportion of patients, amounting to 45.90%, have a family income that falls within the bracket of ₹10001 to ₹15000 per month.

Table 5: Income distribution

Sr. No.	Income (in INR)	Percentage	N
1.	Less than 5000	01.28	005
2.	5001-10000	49.23	192
3.	10001-15000	45.90	179
4.	15001-20000	02.82	011
5.	Above 20000	00.51	002

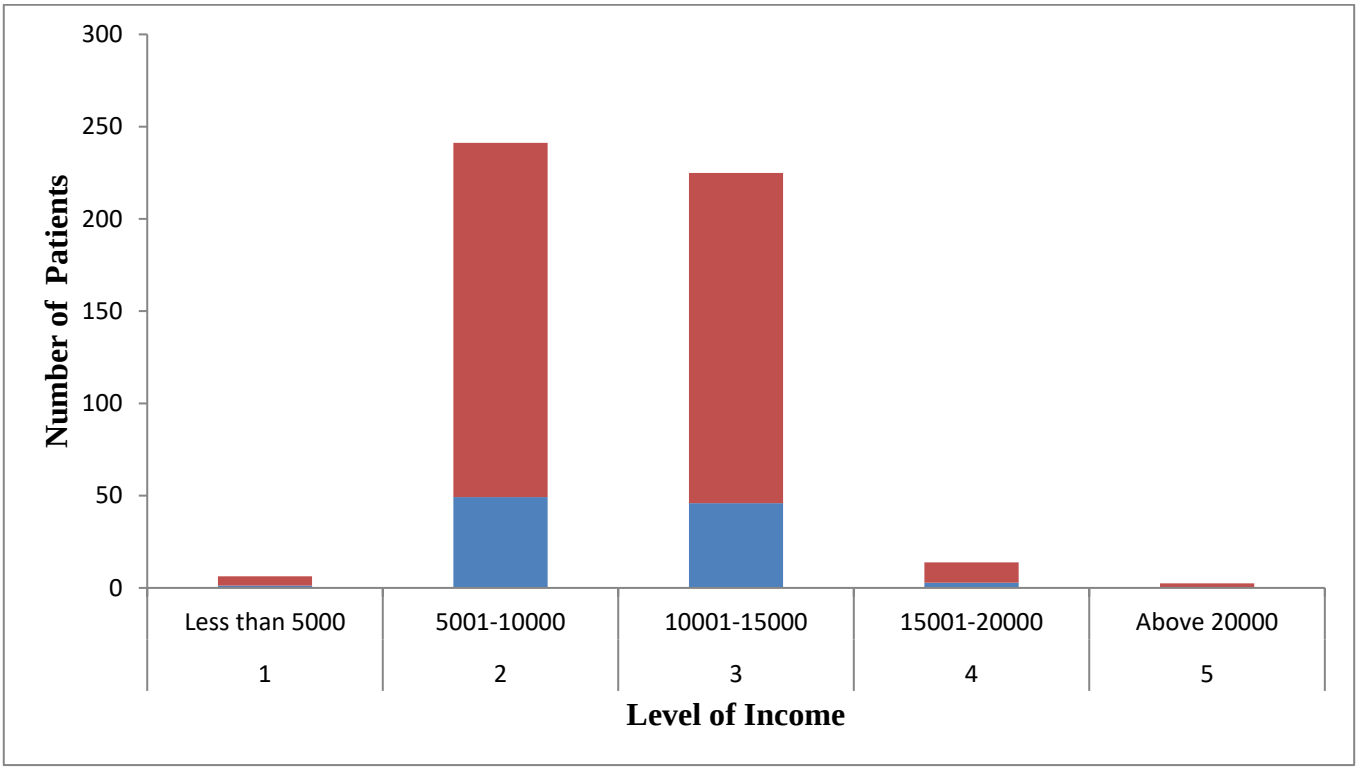

Figure 2: Income distribution

Waiting times details:

The study observed that the longest waiting times were experienced at the AMRIT PHARMACY, where the average waiting time exceeded 2 hours. This extended duration could potentially impact patient satisfaction and needs to be addressed for improved service delivery.

When considering the overall average waiting times across various service points, including admission, billing, and the AMRIT PHARMACY counters, the duration ranged from 90 minutes to 2 hours. This suggests that patients and their attendants spend a significant amount of time waiting for services, which could be utilized more productively in patient care.

Specifically, the waiting time of maximum patients at both the billing counter and the admission counter was found to be above 2 hours. This indicates a need for process optimization and resource allocation to reduce waiting times and enhance patient experience.

Table 6: Waiting time distribution

Sr. No.	Waiting Times	Admission Counter	Billing Counter	Amrit Pharmacy
1.	Less than 30min.	025(6.41%)	020(5.13%)	0
2.	30-60min.	004(1.03%)	009(2.31%)	0
3.	60-90min.	003(0.77%)	009(2.31%)	0
4.	90-120min.	007(1.79%)	005(1.28%)	0
5.	Above 2hours	350(89.74%)	346(88.72%)	389(99.74%)

Cleanliness and hygiene details:

Table 7: Cleanliness and hygiene distribution

Sr. No.	Cleanliness and Hygiene	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	Wards were clean	002(0.51%)	7(1.79%)	85(21.79%)	211(54.10%)	84(21.54%)
2.	Safe drinking water was available	370(94.87%)	3(0.77%)	02(0.51%)	004(1.03%)	10(2.56%)
3.	Toilets were clean	371(95.13%)	1(0.26%)	05(1.28%)	002(0.51%)	05(1.28%)

A critical area of concern highlighted by the patients was cleanliness and hygiene. A majority of the patients strongly disagreed with the adequacy of these facilities, indicating a pressing need for improvement in these areas to enhance patient satisfaction and safety. Table 7 indicates that 211(54.10%) patients agree about cleanliness in wards and patient care areas while on the other hand majority of the patients strongly disagree on cleanliness in toilets and availability of safe drinking water.

Out-of-pocket expenditure details

Table 8: Out-of-pocket expenditure distribution

Sr. No.	Out-of-pocket expenditure	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	Faced OOPE in buying medicines	09(2.31%)	21(5.38%)	47(12.05%)	167(42.82%)	145(37.18%)
2.	Faced OOPE in buying consumables	19(4.87%)	26(6.67%)	94(24.10%)	126(32.31%)	122(31.28%)

In a health system where out of pocket expenses are the predominant source for meeting medical costs, the opportunity for appropriate health care services is constrained by the ability to pay. Table 8 represents the OOPE faced by the patients in buying medicines and other consumables. 167(42.82%) patients agree on facing out-of-pocket expenses in buying medicines and 126(32.31%) patients agree on facing out-of-pocket expenses in buying consumables.

Table 9: Mean rating distribution of different categories

Sr. NO.	Category	Mean Rating (S.D)
1.	Ward Cleanliness	3.95(0.74)
2.	Toilets	1.11(0.55)
3.	Safe drinking Water	1.15(0.71)
4.	Waiting Area	1.94(1.13)
5.	Adequate information on Packages	2.58(1.07)
6.	Care without financial setback	4.84(0.44)
7.	Out-of-pocket expenses on med.	4.07(0.96)
8.	Out-of-pocket expenses on consumables	3.79(1.11)
9.	Behavior of staff	2.41(1.13)
10.	Treatment from doctors and nurse	4.63(0.49)
11.	Overall	3.05(0.26)

A significant observation from the data is that a majority of the patients concurred that they received services without any financial discrimination. This suggests that the healthcare facility is successful in providing equitable services, irrespective of the patient's financial status.

The overall average feedback score from the patients was 3.05, which falls in the middle of the rating scale. This indicates a neutral response, suggesting that while some aspects of the service were appreciated, there are areas that require improvement.

Discussions:

From our study, we observed that the patients were highly satisfied with receiving medical care without financial setbacks. Majority of the patients i.e. 335(85.90%) have agreed that they did not face any discrimination on the basis of their financial status. The majority of the patients have experienced equality irrespective of their financial status.

Secondly, the patients were highly satisfied with the treatment and care they received from doctors and nurses. The majority of the patients i.e. 249(63.85%) agreed that the treatment of the

medical staff was satisfactory, the doctors used to take regular rounds of the ward or patient care area. Nurses were also dedicated to their duty and served at regular intervals. Patients experienced excellent services from the medical staff. In a similar cross-sectional study conducted at a tertiary care teaching hospital in South India, It was observed that Major satisfiers were courtesy and behavior of doctors, explanation about medications (98.5% of respondents), explanation about disease and treatment by doctors (97%), and behavior and courtesy of nursing staff (98.5%) at OPD's(7).

Cleanliness inwards and patient care areas is a crucial aspect and needs to be prioritized. Cleanliness and hygiene are first and foremost areas of concern. In our study it was observed that 211(54.10%) patients agreed that the wards were clean and hygienic. A similar cross-sectional study conducted at a tertiary care teaching hospital in South India revealed that 91.4% of the patients were satisfied with the cleanliness maintained in the OPD [7].

Out-of-pocket expenditure is also a critical factor while receiving medical care through any insurance scheme. In a health system where, out-of-pocket expenses are the predominant source for meeting medical costs, the opportunity for appropriate healthcare services is constrained by the ability to pay. AB-PMJAY scheme provides financial support in receiving medical care but in our study, it was observed that 167(42.82%) patients highly agreed that they faced out-of-pocket expenditure in buying medicines and consumables. Patients were not receiving the medicines through the AB-PMJAY scheme due to which the patients had to buy medicines by themselves. A similar study conducted at a public sector hospital in Kerala observed that among the insured, around 45% of those who availed of insurance were not satisfied with the services as not all the cost of hospitalization was covered by insurance. The short duration of stay, unavailability of funds and medicines, emergency procedures, and non-coverage of services such as electrocardiogram were some of the factors that hindered availing of services, Among the participants, 85 (70.8%) people had taken loans from some source and were in debt due to multiple inpatient hospitalizations [8].

Providing adequate information regarding the scheme, packages is very essential in order to get the patient and attendant aware of the whole procedure of medical care at the registration counter itself. It is the responsibility of the insurer to provide information to the patient regarding the coverage, inclusions exclusions, etc. of the insurance scheme. Our study suggests that the majority of the patients have a neutral point of view on the provision of adequate services regarding the packages at the registration counter. 180(46.15%) patients agree that they have not received adequate information regarding packages at the AB-PMJAY counter. In a similar study conducted at a public apex tertiary care hospital, it was observed that 94% of respondents were satisfied with the services availed from the registration counters, whereas 5% of respondents were dissatisfied and 1% of respondents were neutral. It was observed that patient satisfaction regarding the consultation services was more than 95% [9].

While delivering the services the behaviour and attitude of the staff play a crucial role in influencing the satisfaction of the patient as well as attendant. The staff must be polite and respectful to the patient and attendant. Our study reveals that the majority of the patients i.e. 219(56.15%) disagreed on experiencing friendly and courteous behavior from the staff at the AB-PMJAY counter, the staff was rude and ignorant to the patients and their attendants.

Waiting times play a significant role in the satisfaction levels of the patient. Waiting times must be minimal so that the patient can receive medical care as soon as possible. In our study, it was observed that 350(89.74%) patients had waiting times of more than 2 hours at the admission counter, 346(88.72%) patients experienced waiting times of more than 2 hours for billing procedures and 389(99.74%) patient's attendants waited for more than 2 hours to buy medicines AMRIT PHARMACY. Patient attendants faced maximum waiting to buy medicines at AMRIT

PHARMACY. The patient's attendants were highly dissatisfied with the waiting times at every counter. In a similar cross-sectional study conducted at a tertiary care teaching hospital in South India, it was found that 49.5% of the patients were registered within 15 min, while 17.7% of the patients were registered within 15–20 min. Registration time may be affected by factors such as the number of registration counters, day and time of visit to the hospital, etc., In this study, it was found that waiting time for registration was more than 30 min for only 9% of patients [7].

Cleanliness and hygiene are the most important factor that may influence the satisfaction of patient. Washrooms must be properly clean and safe drinking water must be available. Our study reflects that the major areas of dissatisfaction were cleanliness in washrooms and the availability of safe drinking water. Majority of the patients 371(95.13%) strongly disagreed on cleanliness in washrooms and 370(94.87%) patients strongly disagreed on the availability of safe drinking water. In a similar study at a tertiary care hospital it was revealed that more than 87% of the respondents were satisfied with the physical facilities of the hospital, This included various aspects such as signages, cleanliness, drinking water, and toilet facilities[7].

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