

Knowledge, Attitude, and Utilization of Pradhan Mantri Bhartiya Janaushadhi Pariyojana Services: A Cross-Sectional Study at a Tertiary Healthcare Centre in North-West Maharashtra

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ABSTRACT

Background: The Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) was launched to improve access to quality generic medicines at affordable prices through dedicated outlets across India. Despite its potential to reduce out-of-pocket healthcare expenditure, the utilization of PMBJP services remains suboptimal due to varying levels of awareness and perceptions regarding generic medicines. This study aimed to assess the knowledge, attitude, and utilization of PMBJP services among patients attending a tertiary healthcare center in North-West Maharashtra.

Methods: A hospital-based cross-sectional study was conducted among adult patients attending outpatient departments of a tertiary healthcare center in North-West Maharashtra. Data were collected using a structured questionnaire covering socio-demographic characteristics, awareness and knowledge of PMBJP, attitudes toward generic medicines, and utilization practices. Descriptive statistics were used to summarize the findings, and appropriate analytical tests were performed to identify factors associated with PMBJP utilization.

Results: Among the 274 participants, 52.2% had heard about PMBJP, while 47.8% were unaware. Awareness was significantly associated with socio-economic status ($p=0.0033$) and educational status ($p=0.0476$), but not with gender ($p=0.4287$). Among those aware, 78.0% identified lower medicine costs as the main benefit, whereas 21.2% believed medicines were free of cost. About 80.2% recognized Janaushadhi medicines as generic, and 61.0% perceived them to be as effective as branded medicines. However, 61.3% associated lower cost with poorer quality. Of the aware respondents, 47.4% had purchased PMBJP medicines within the previous six months. Lack of physician endorsement, limited accessibility, and distrust were the major barriers to utilization.

Conclusion: Although awareness and positive perceptions regarding PMBJP exist, misconceptions about medicine quality and inadequate physician support limit its utilization. Strengthening public education and promoting physician endorsement may enhance PMBJP uptake and improve access to affordable medicines.

Keywords: Pradhan Mantri Bhartiya Janaushadhi Pariyojana; Drugs, Generic; Health Knowledge, Attitudes, Practice; Health Services Accessibility; Health Care Costs; Cross-Sectional Studies; India.

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INTRODUCTION

Access to affordable and quality healthcare remains a significant challenge in developing countries, particularly in India, where a large proportion of healthcare expenditure is financed through out-of-pocket payments. Among various healthcare costs, expenditure on medicines constitutes a major share, often accounting for up to 60–70% of total out-of-pocket spending.¹ This financial burden disproportionately affects economically weaker sections of society and may lead to delayed treatment, non-adherence to prescribed therapy, or even catastrophic health expenditure. Therefore, ensuring the availability and accessibility of cost-effective medicines is a critical component of public health policy. In response to this challenge, the Government of India launched the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) with the objective of making quality generic medicines available at affordable prices to all sections of the population.² Under this

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scheme, dedicated outlets known as Janaushadhi Kendras are established across the country to provide unbranded generic medicines at significantly reduced costs compared to their branded counterparts.

Despite the clear advantages associated with generic medicines and the wide-reaching objectives of PMBJP, the success of the scheme largely depends on its acceptance and utilization by the public. The extent to which patients are aware of the scheme, their perceptions regarding generic medicines, and their actual usage patterns play a crucial role in determining its effectiveness.³ These factors can be systematically studied using the Knowledge, Attitude, and Practice (KAP) framework, which is widely employed in public health research to assess behavioral aspects related to health interventions.

Knowledge, in this context, is to the level of awareness among patients regarding PMBJP, including familiarity with Janaushadhi Kendras, understanding of the concept of generic medicines, and awareness of their cost benefits. Previous studies conducted in various parts of India have demonstrated that knowledge regarding generic medicines and PMBJP services is often inadequate among patients. Many individuals remain unaware of the availability of these services or lack sufficient information to differentiate between generic and branded medicines.⁴

Attitude encompasses the beliefs, perceptions, and predispositions of individuals toward PMBJP and generic medicines. Even when knowledge is present, negative attitudes can hinder acceptance and utilization. A common perception among patients is that lower-priced medicines are inferior in quality, less effective, or associated with higher risks compared to branded alternatives.⁵ Such misconceptions may stem from inadequate information, lack of trust in the healthcare system, or influence from pharmaceutical marketing. Additionally, the role of healthcare providers is pivotal in shaping patient attitudes, as physicians and pharmacists serve as primary sources of information and guidance for patients.⁶

Utilization, or practice, reflects the actual behavior of patients in terms of purchasing and using medicines from Janaushadhi Kendras. It has been consistently observed that a gap often exists between knowledge and practice, wherein individuals who are aware of PMBJP may still not utilize its services. Multiple factors contribute to this discrepancy, including limited accessibility of Janaushadhi Kendras, inconsistent availability of medicines, lack of prescriptions for generic drugs by healthcare professionals, and patient preference for branded medications. Furthermore, systemic issues such as supply chain inefficiencies and inadequate promotion of the scheme may also affect utilization rates.⁷ Despite the potential of the PMBJP to improve access to affordable medicines, limited information is available regarding patients' knowledge, attitudes, and utilization of its services in North-West Maharashtra. Therefore, this study was undertaken to assess the knowledge, attitude, and

utilization of PMBJP services among patients attending a tertiary healthcare center. It also aimed to identify factors and barriers influencing the utilization of Janaushadhi Kendras and to examine the association of socio-demographic characteristics with these outcomes. The findings may help guide interventions to enhance awareness, promote the acceptance of generic medicines, and improve the utilization of PMBJP services, thereby reducing out-of-pocket expenditure and improving access to essential medicines.

METHODOLOGY

This hospital-based cross-sectional observational study was conducted at a tertiary healthcare center in North-West Maharashtra, India, catering to both urban and rural populations. The study was carried out over a period of one month among adult patients attending the outpatient and inpatient departments of the institution.

Patients aged 18-years and above who were willing to participate and capable of providing written informed consent were included in the study. Critically ill patients, individuals unable to respond to the questionnaire due to physical or cognitive limitations, and healthcare professionals were excluded from participation to minimize response bias related to professional knowledge of generic medicines and PMBJP services.

The sample size was calculated using the standard formula for cross-sectional studies: $(n = Z^2 pq/d^2)$, where n represents the required sample size, Z is the standard normal deviate corresponding to a 95% confidence interval (1.96), p is the anticipated prevalence, q is calculated as $(1 - p)$, and d is the allowable error. Considering an expected prevalence based on previous literature and an allowable error of 9%, a sample size of 115 participants was determined. A convenience sampling technique was employed to recruit eligible participants during the study period.

Data were collected using a pre-tested, semi-structured questionnaire developed after reviewing relevant literature and the objectives of the study. The questionnaire comprised four sections covering socio-demographic characteristics, knowledge regarding PMBJP and generic medicines, attitudes toward the quality, safety, and effectiveness of generic medicines, and utilization practices related to PMBJP services.

Eligible participants were recruited from the outpatient and inpatient departments of the tertiary healthcare center. After explaining the study objectives and procedures in the local language, written informed consent was obtained from each participant. Data were collected using a pre-tested questionnaire administered either through face-to-face interviews or in a self-administered format based on the participant's literacy level and preference. Confidentiality and anonymity of the collected information were strictly maintained, and no personal identifiers were recorded. The study protocol was approved by the Institutional Ethics Committee, and all procedures were conducted in

accordance with the ethical principles of the Declaration of Helsinki.

The collected data were entered into Microsoft Excel and subsequently analyzed using the Statistical Package for the Social Sciences (SPSS) version 26.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics were used to summarize the data, and categorical variables were presented as frequencies and percentages. The Chi-square test was applied to assess associations between socio-demographic characteristics and knowledge, attitude, and utilization variables. A *p*-value of less than 0.05 was considered statistically significant.

RESULTS

Table 1 presents the socio-demographic characteristics of 138 study participants. The mean age of the participants was 33.86 ± 13.55 years, with ages ranging from 18 to 78 years. The majority of participants were male (58%), while 40% were female, and 2% preferred not to disclose their gender. Regarding educational status, more than half of the respondents (51%) had attained graduate-level education or higher, followed by 32% who had completed secondary education (6th–10th standard). A smaller proportion had primary education (9%), while 8% were illiterate. In terms of socio-economic status as assessed using ration card categories, 40% of participants possessed an orange ration card, followed by 25% with a yellow ration card and 14% with a white ration card. Approximately 21% of respondents reported not possessing any ration card. These findings indicate that the study population predominantly consisted of relatively young, educated individuals, with representation from diverse socio-economic backgrounds.

Table 1: Socio-demographic characteristics of participants (N = 138).

Variable	Category	Frequency (n = 138)	Percentage (%)
Age in years	Mean		33.86
	Std Dev		13.55
	Min		18
	Max		78
Gender	Male	80	58%
	Female	55	40%
	Prefer not to say	3	2%
Education	Illiterate	11	8%
	Primary (up to standard 5)	12	9%
	Secondary (6 th –10 th standard)	44	32%
	Graduate/Higher	71	51%
Ration card category	Orange card	55	40%
	Yellow card	34	25%
	White card	20	14%
	No card	29	21%

Table 2: Knowledge regarding PMBJP and generic medicines among participants (N = 138).

Variable	Category	Frequency (n)	Percentage (%)
Awareness of PMBJP	Yes	71	51.45%
	No	67	48.55%
Jan Aushadhi medicines are generic medicines	Yes	93	67.39%
	No	45	32.61%
Medicines undergo NABL quality testing	Yes	85	61.59%
	No	53	38.41%
Primary benefit of PMBJP	Lower-cost medicines	89	64.49%
	Free medicines	49	35.51%
Other perceived benefits of PMBJP	Awareness generation	23	16.67%
	Employment generation	13	9.42%
	Improved menstrual health access	11	7.97%
	Widespread availability	16	11.59%
	None of the above	17	12.32%
	All of the above	58	42.03%

Table 2 depicts the knowledge and awareness of participants regarding the PMBJP. Slightly more than half of the respondents (51.45%) had heard about the PMBJP scheme, while 48.55% were unaware of it. Regarding the nature of Jan Aushadhi medicines, 67.39% of participants correctly identified them as generic medicines, whereas 32.61% did not recognize this distinction. Furthermore, 61.59% of respondents were aware that Jan Aushadhi medicines undergo quality testing in NABL-accredited laboratories, while 38.41% were unaware of this quality assurance process.

When asked about the primary benefit of PMBJP, the majority (64.49%) identified lower-cost medicines as the main advantage of the scheme, whereas 35.51% perceived that the scheme provides free medicines. With respect to additional benefits of PMBJP, 42.03% of participants recognized all the listed benefits, including awareness generation, employment opportunities through Janaushadhi Kendras, improved access to menstrual health products, and widespread availability of medicines across the country. Individually, 16.67% acknowledged the role of PMBJP in generating awareness about generic medicines, 11.59% recognized its widespread availability, 9.42% identified employment generation as a benefit, and 7.97% were aware of its contribution to improving access to menstrual health products. However, 12.32% of

Table 3: Attitudes towards generic medicines among participants (N = 138).

Attitude Statement	Strongly Disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)
Generic medicines are as effective as branded medicines	5 (3.62%)	16 (11.59%)	33 (23.91%)	35 (25.36%)	49 (35.51%)
Low cost means the medicine is of low quality	35 (25.36%)	30 (21.74%)	50 (36.23%)	21 (15.22%)	2 (1.45%)
I trust the government's quality control for these medicines	7 (5.07%)	20 (14.49%)	70 (50.72%)	33 (23.91%)	8 (5.80%)
I feel comfortable telling others that I use Jan Aushadhi medicines	8 (5.80%)	15 (10.87%)	46 (33.33%)	54 (39.13%)	15 (10.87%)
Doctors should prescribe medicines using generic names	11 (7.97%)	20 (14.49%)	41 (29.71%)	36 (26.09%)	30 (21.74%)

respondents were unable to identify any additional benefits of the scheme. These findings suggest moderate awareness regarding PMBJP, with notable gaps in knowledge about the broader objectives and advantages of the programme.

Table 3 presents participants' attitudes toward Jan Aushadhi medicines and generic prescribing practices. More than half of the respondents (60.87%) agreed or strongly agreed that generic medicines are as effective as branded medicines, whereas only 15.21% disagreed with this statement. Regarding perceptions of medicine quality, 47.10% of participants disagreed that low-cost medicines are of inferior quality, while 16.67% agreed with the statement and 36.23% remained neutral. Trust in the government's quality control mechanisms for Jan Aushadhi medicines was moderate, with 29.71% expressing agreement, 19.56% expressing disagreement, and 50.72% reporting a neutral opinion.

In terms of social acceptance, approximately half of the respondents (50.00%) agreed or strongly agreed that they felt comfortable informing others about their use of Jan Aushadhi medicines, while 16.67% expressed discomfort and 33.33% remained neutral. Furthermore, 47.83% of participants supported the prescription of medicines using generic names by doctors, whereas 22.46% disagreed and 29.71% had a neutral attitude. Overall, the findings indicate a generally favorable perception toward generic medicines and PMBJP services among participants, although uncertainties regarding quality assurance and generic prescribing practices persist in a substantial proportion of the study population.

Table 4 summarizes the utilization-related characteristics of PMBJP services among the study participants. Approximately 40.58% of respondents were unaware of the distance to the nearest Jan Aushadhi Kendra, while 22.46% reported that the nearest outlet was located more than 10 km away. More than half of the participants (54.35%) stated that medicines were sometimes available at the

Table 4: Utilization of PMBJP services and barriers among study participants (N = 138).

Variable	Category	Frequency (n)	Percentage (%)
Distance from nearest Jan Aushadhi Kendra	<5 km	24	17.39%
	5–10 km	27	19.57%
	>10 km	31	22.46%
	Don't know	56	40.58%
Availability of medicines at the Jan Aushadhi Kendra	Always available	42	30.43%
	Sometimes available	75	54.35%
	Rarely available	21	15.22%
Experienced side effects from Jan Aushadhi medicines	Yes	42	30.43%
	No	96	69.57%
Main barrier to utilization of PMBJP services	Not prescribed by doctor	30	21.74%
	Personal distrust	24	17.39%
	Shop is too far	84	60.87%

Kendras, whereas 30.43% perceived that medicines were always available. Regarding safety, 69.57% of respondents reported not experiencing any side effects following the use of Janaushadhi medicines. The most commonly reported barrier to the utilization of PMBJP services was that the Jan Aushadhi shop was located too far away (60.87%), followed by the lack of prescription by doctors (21.74%) and personal distrust toward generic medicines (17.39%). These findings highlight that accessibility and physician endorsement

remain important for determinants influencing the utilization of PMBJP services.

DISCUSSION

The present study assessed the knowledge, attitude, and utilization of services under the PMBJP among patients attending a tertiary healthcare center in North-West Maharashtra. The findings demonstrated that 51.45% of participants were aware of the PMBJP scheme, while 67.39% correctly identified Jan Aushadhi medicines as generic medicines and 61.59% were aware that these medicines undergo quality testing in NABL-accredited laboratories. The majority of respondents (64.49%) recognized lower-cost medicines as the primary benefit of the scheme. With regard to attitudes, 60.87% of participants agreed that generic medicines are as effective as branded medicines, whereas 16.67% perceived that lower-cost medicines are of inferior quality. Approximately, 47.83% supported prescribing medicines by their generic names, and 50.00% reported feeling comfortable informing others about their use of Jan Aushadhi medicines. Regarding utilization-related factors, 54.35% of respondents reported that medicines were only sometimes available at Janaushadhi Kendras, and the most commonly perceived barrier to utilization was the distance of the Kendra from the participants' residence (60.87%). These findings suggest that although awareness and acceptance of PMBJP are reasonably encouraging, misconceptions regarding medicine quality, concerns about accessibility, and inadequate physician endorsement continue to influence the optimal utilization of PMBJP services.

The present cross-sectional study assessed the knowledge, attitude, and utilization of PMBJP services among patients attending a tertiary healthcare centre in North-West Maharashtra. The findings indicate that while awareness of PMBJP exists among a proportion of participants, there remains a considerable gap in comprehensive knowledge regarding the availability, affordability, and therapeutic equivalence of generic medicines provided under the scheme.¹

A moderate level of awareness observed in this study is consistent with previous research conducted in similar healthcare settings, where limited dissemination of information and inadequate counseling by healthcare professionals were identified as key barriers.⁷ Despite the government's efforts to promote PMBJP, many participants were unaware of the locations of Janaushadhi Kendras or the range of medicines available.¹ The attitude towards PMBJP services was generally positive among those who were aware of the scheme. Participants expressed trust in government initiatives and acknowledged the potential cost benefits. However, skepticism regarding the quality and efficacy of generic medicines persists, which has also been reported in earlier studies.^{2,4} This misconception may be attributed to insufficient patient education and the influence of branded drug marketing. Utilization of PMBJP services was found to

be lower than expected, even among individuals who had adequate knowledge. Factors contributing to underutilization include lack of physician endorsement, limited accessibility of Janaushadhi stores, and habitual preference for branded medications.^{6,7} The role of healthcare providers is critical, as their prescribing behavior significantly influences patient choices.²

The study highlights the need for targeted awareness campaigns, improved accessibility, and stronger involvement of healthcare professionals to bridge the gap between knowledge and utilization. Integrating PMBJP promotion into routine clinical practice could enhance acceptance and trust among patients³.

CONCLUSION

The present study revealed moderate awareness of PMBJP services among participants, with generally positive attitudes toward the effectiveness and affordability of generic medicines. However, gaps in knowledge, misconceptions regarding medicine quality, limited trust in quality control mechanisms, and barriers such as poor accessibility and inadequate physician endorsement hindered optimal utilization of PMBJP services. Strengthening public awareness, promoting generic prescribing practices among healthcare providers, and improving the availability and accessibility of Jan Aushadhi medicines may enhance the utilization of PMBJP and contribute to reducing out-of-pocket healthcare expenditure and improving access to affordable essential medicines.

CLINICAL SIGNIFICANCE

The findings of the present study underscore the importance of PMBJP in promoting affordable healthcare and reducing the financial burden associated with medication costs. Enhancing awareness and utilization of Janaushadhi medicines may improve access to essential medicines and support better treatment of adherence, particularly among economically vulnerable populations. The study also highlights the pivotal role of healthcare professionals, especially physicians and pharmacists, in fostering patient confidence in generic medicines through appropriate counseling and generic prescribing practices. Addressing misconceptions regarding the quality and effectiveness of generic medicines, along with improving the availability and accessibility of Janaushadhi Kendras, can facilitate greater acceptance and utilization of PMBJP services. Strengthening these efforts has the potential to reduce out-of-pocket expenditure and contribute toward achieving equitable, accessible, and cost-effective healthcare delivery in India.

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