

Original Research Article

A cross-sectional study on knowledge, attitudes, practices and barriers regarding generic medicines and Jan Aushadhi initiatives among healthcare professionals and students in Hyderabad, India

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ABSTRACT

Background: Generic medicines are therapeutically equivalent to branded medicines and are promoted through government programmes such as the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) to reduce the economic burden of healthcare. However, misconceptions and concerns regarding their efficacy and acceptance may limit their use. This study assessed the knowledge, attitudes, practices, and barriers regarding generic medicines and Jan Aushadhi initiatives among healthcare professionals and students in Hyderabad, India.

Methods: A cross-sectional study was conducted among 300 healthcare professionals and healthcare students in Hyderabad using a pre-validated structured questionnaire. The questionnaire assessed knowledge, attitudes, practices, and perceived barriers related to generic medicines and Jan Aushadhi initiatives.

Results: Participants demonstrated reasonable awareness of generic medicines and PMBJP; however, preference for branded medicines remained high among both healthcare professionals and patients. A major barrier was the perception that lower-cost medicines are less effective than branded medicines. Concerns regarding the availability and acceptance of generic medicines also contributed to their limited use.

Conclusions: Despite reasonable awareness, preference for branded medicines and misconceptions regarding the efficacy of lower-cost medicines remain important barriers to the wider use of generic medicines. Targeted educational and awareness programmes are needed to address misconceptions, improve confidence in generic medicines, and promote the rational use of cost-effective medicines.

Keywords: Branded medicines, Generic medicines, Jan Aushadhi, Rational drug use

INTRODUCTION

Generic medicines are recognized globally as therapeutically equivalent and cost-effective alternatives to branded medicines, offering the same active ingredient, dosage form, strength, and route of administration while meeting regulatory safety and efficacy requirements.¹ Bioequivalence remains the scientific basis for substituting innovator products with generics and is mandated by major regulatory frameworks including the World Health

Organization (WHO) and national authorities such as the Central Drugs Standard Control Organization (CDSCO) in India.^{2,3}

To promote affordability and reduce economic burden, the Government of India launched the Pradhan Mantri Bhartiya Jan Aushadhi Pariyojana (PMBJP), which facilitates access to affordable quality-assured generic medicines through Jan Aushadhi Kendras (JAKs) located across the country.⁴ Studies indicate that medicines sold

under PMBJP are significantly cheaper than branded equivalents, leading to meaningful cost savings for patients and public healthcare systems.^{5,6}

Despite these benefits, widespread adoption of generics and utilization of Jan Aushadhi services remains limited. Research across India indicates that misconceptions regarding quality, safety, and therapeutic equivalence persist among healthcare providers and patients as well.⁷⁻⁹ Additionally, inconsistent supply chain management, limited formulary awareness, and lack of structured training on generic substitution have been identified as barriers to the effective implementation of PMBJP.^{10,11}

Improving uptake requires understanding the perspectives of key stakeholders. Knowledge, attitude, and practice (KAP) studies show variability across regions and professions, highlighting a need for localized assessment to inform policy, curriculum development, and awareness strategies.¹² However, limited research has examined the knowledge, attitudes, practices, and perceived barriers (KAPB) toward generic medicines and Jan Aushadhi initiatives among healthcare professionals and students in metropolitan cities such as Hyderabad.

Therefore, this study aimed to evaluate KAPB related to generic medicines and Jan Aushadhi initiatives among healthcare professionals and medical and allied students in Hyderabad, India, to identify gaps and opportunities for strengthening acceptance, prescribing trends, and implementation of affordable medicine policies.

Objectives

To assess knowledge, attitudes, and practices regarding generic medicines and the Jan Aushadhi initiative among healthcare professionals and students. To identify perceived barriers to prescribing or using generic medicines.

METHODS

A cross-sectional, questionnaire-based, observational study was conducted at Kamineni Academy of Medical Sciences and Research Centre, Hyderabad for duration of 3 months from January to April 2026.

All healthcare professionals and students including MBBS, BSc nursing, student and interns aged ≥ 18 years and those who were willing to give informed consent were included in the study. Individuals who have already participated in a similar KAP study within the last 6 months were excluded from the study.

Sample size of 300 participants selected according to the inclusion and exclusion criteria. Data was collected using a structured, self-administered questionnaire

developed from previously validated sources and relevant literature. The questionnaire consisted of five sections: demographic details, knowledge assessment (10 items), attitude assessment (7 items), practice assessment (5 items), and barriers related to the subject (6 items). The questionnaire served as the data collection tool for the study. The study was conducted after taking clearance from Institutional ethical committee. Descriptive statistics (frequencies, percentages, mean $\pm$ SD) were used accordingly to analyze the data.

RESULTS

Among 300 participants, 73% had heard of generic medicines (Table 3), while 57% knew that they are approved by government regulatory authorities (Table 3). Awareness of PMBJP was 62%, and 48% had heard of Jan Aushadhi Kendras (Table 3). However, 46% were unsure whether generic medicines were less effective than branded medicines, indicating a knowledge gap (Table 3).

Table 1: Demographic characters of study participants (n=300).

Variables	Category	n=300	%
Mean age		24	
Gender	Male	186	62
	Female	114	38
Year of study	Second year	121	40
	Third Year	48	16
	Fourth year	72	24
	Nursing	40	13
	Not a student	16	5

Table 2: Participants age distribution (n=300).

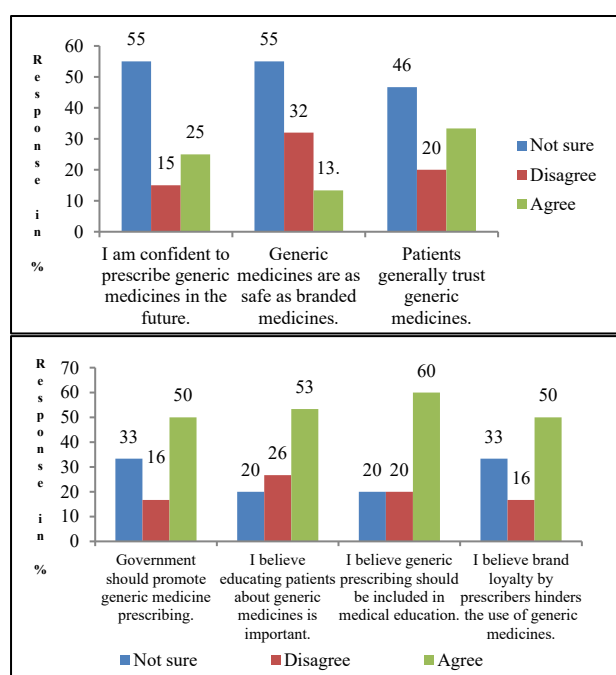
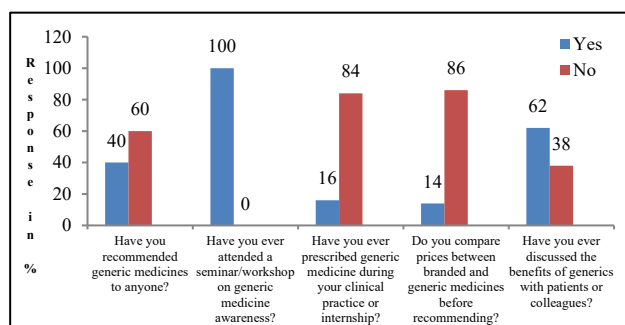
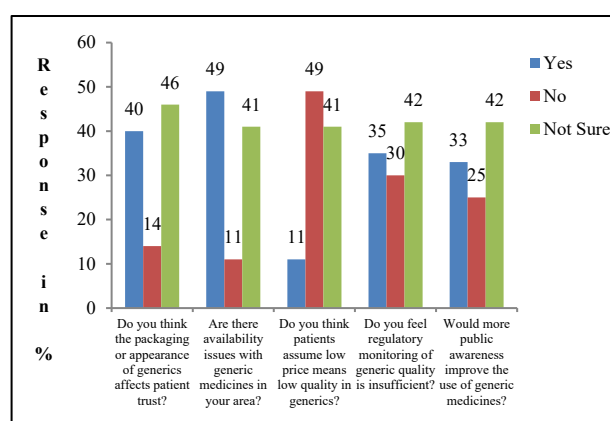
Age group	Percentage
19-21	28
22-24	26
25-27	22
30-44	24

Regarding attitudes, only 25% were confident about prescribing generic medicines in the future (Figure 1), while 55% were unsure (Figure 1). Although 32% agreed that patients generally trust generic medicines, uncertainty regarding the safety of generic medicines remained substantial (Figure 1).

In terms of practices, 40% had recommended generic medicines (Figure 2), and 62% had discussed their benefits with patients or colleagues (Figure 2). However, only 16% had prescribed generic medicines during clinical internship and 14% compared prices before recommending them (Figure 2).

Table 3: Knowledge of participants regarding generic medicines (n=300).

Statements assessing attitudes	Percentage of respondents		
	Yes	No	Not Sure
Have you heard about generic medicine	73	11	16
Generic medicines are less effective than branded medicines	11	43	46
Are generic medicines approved by government regulatory authorities?	57	35	8
Are you aware of the Pradhan Mantri Bhartiya Jan Aushadhi Pariyojana (PMBJP)?	62	24	13
Have you heard about Jan Aushadhi Kendras?	48	40	11
Have you seen any printed information (like brochures or posters) about Jan Aushadhi medicines or schemes?	13	70	16
Do you know that generic medicines are usually more affordable than branded medicines?	57	32	11
Do you know whether generic medicines must meet the same quality standards as branded ones?	48	38	13
Are generic medicines available for chronic diseases like diabetes and hypertension?	54	13	35
Are you aware of the price difference between branded and generic medicines for common illnesses?	54	27	19

**Figure 1: Attitude of participants regarding generic medicines (n=300).****Figure 2: Practice of participants regarding generic medicines (n=300).****Figure 3: Barriers to use generic medicines (n=300).**

DISCUSSION

This study found that healthcare professionals and students in Hyderabad demonstrated moderate knowledge and generally positive attitudes toward generic medicines and the Jan Aushadhi initiative, although these attitudes did not consistently translate into prescribing or usage practices. Similar patterns have been observed in previous studies from India, where awareness of generic substitution exists but behavioural adoption remains limited.^{13,14}

A major factor limiting uptake in our study was concern regarding the quality and therapeutic equivalence of generic medicines. This aligns with earlier findings reporting persistent misconceptions about bioequivalence, regulatory standards, and clinical outcomes despite established approval mechanisms.^{15,16} Limited availability of generic products in Jan Aushadhi outlets and inconsistent supply chains were also frequently reported barriers, echoing recent implementation reviews of the PMBJP scheme.^{17,18}

Awareness of Jan Aushadhi formularies and programme benefits was incomplete among respondents, consistent with studies showing insufficient dissemination among healthcare workers and the broader community.¹⁹ Targeted education, increased transparency regarding quality assurance, improved supply-chain management, and integration of generic prescribing modules into health professional curricula have been recommended as strategies to overcome these barriers.¹⁴⁻¹⁶

Although the inclusion of multiple respondent categories strengthens the findings, the study is limited by its cross-sectional design, use of self-reported practices, and its geographical focus within one metropolitan area. Future research should include real-world prescribing audits and longitudinal follow-up.

CONCLUSION

In conclusion, while attitudes toward generics and Jan Aushadhi are favourable, stronger educational, regulatory, and system-level strategies are necessary to facilitate consistent use and improve access to affordable medicines in India.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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