International Journal of Pharmacy and Pharmaceutical Research (IJPPR)
Volume 32, Issue 5, May 2026 **ijppr.humanjournals.com** ISSN: 2349-7203

Comparative Evaluation of Price and Perception of Jan Aushadhi and Branded Medicines in Kottayam Taluk, Kerala

***Ebin Raja, Shawn Abraham, Sonu Sajan Peter, Ahilamol T Markose, Dr. Arun Raj R**

Department of Pharmaceutical Sciences, School of Medical Education (SME), Centre for Professional and Advanced Studies (CPAS), Puthuppally, Kottayam, Kerala, India

Received: 22 March 2026 Revised: 15 April 2026 Accepted: 23 April 2026

ABSTRACT:

The increasing cost of medicines continues to be a significant concern in healthcare, especially in developing nations like India where patients largely rely on out-of-pocket expenditure. The Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) was introduced to improve access to affordable generic medicines. This study aimed to evaluate the price variation between Jan Aushadhi medicines and branded counterparts while also examining customer awareness and retailer perspectives in the Kottayam region of Kerala. A cross-sectional study design was adopted, incorporating price comparison and survey-based analysis involving 30 customers and 10 retailers. The findings revealed that Jan Aushadhi medicines were considerably less expensive, with price reductions ranging between 54% and 92%. Statistical evaluation using a paired t-test confirmed that the price differences were significant ($p < 0.05$). Survey results indicated strong agreement regarding affordability and economic benefit, whereas perceptions of quality and trust were moderately positive. Retailers identified affordability as a major factor influencing consumer preference but also reported issues related to stock availability and limited awareness. Overall, the study highlights the role of PMBJP in reducing treatment costs and improving medicine accessibility. Enhanced awareness initiatives and improved supply mechanisms may further strengthen its impact.

Keywords: Jan Aushadhi, Generic medicines, Price comparison, Pharmaceutical marketing, Affordability, PMBJP, Branded alternatives.

INTRODUCTION:

The cost of healthcare continues to rise globally, and among all healthcare expenses, the cost of medicines remains one of the most significant burdens, especially in developing countries like India. A large proportion of the Indian population relies on out-of-pocket expenditure for medical treatment, making affordability a critical factor in accessing essential medicines. For patients with chronic diseases such as hypertension, diabetes, and dyslipidemia, long-term medication further increases the financial strain, often leading to poor adherence and compromised health outcomes.[1]

India is widely recognized as the “pharmacy of the world” due to its strong capacity in manufacturing generic medicines. Generic drugs are therapeutically equivalent to branded medicines, containing the same active pharmaceutical ingredient, dosage form, strength, and intended use. However, despite this equivalence, branded medicines continue to dominate the market. This dominance is largely influenced by factors such as aggressive pharmaceutical marketing, brand perception, prescriber habits, and lack of awareness among patients. As a result, many patients end up paying significantly higher prices for medicines that could otherwise be obtained at a much lower cost.[2]

To address the issue of medicine affordability and improve access to essential drugs, the Government of India launched the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP). This initiative aims to provide quality-assured generic medicines at affordable prices through dedicated outlets known as Jan Aushadhi Kendras.[3] These medicines are sourced from WHO-GMP certified manufacturers and undergo stringent quality testing in NABL-accredited laboratories to ensure safety and efficacy. One of the key features of the scheme is that medicines are offered at prices that are 50% to 80% lower than their branded counterparts, making them highly beneficial for economically weaker sections of society.Over the years, the Jan Aushadhi scheme has expanded significantly across the country, with thousands of Kendras established to improve medicine accessibility.[4] Despite its wide reach and economic advantages, the adoption of Jan Aushadhi medicines is still influenced by several factors, including awareness levels, trust in generic medicines, perceived quality, availability of products, and recommendations from healthcare professionals.

Misconceptions regarding the effectiveness and safety of generic medicines continue to act as barriers to their widespread acceptance.[5]

In this context, the present study was undertaken to evaluate the price differences between Jan Aushadhi generic medicines and their branded alternatives in the Kottayam region of Kerala. In addition to price comparison, the study also explores customer awareness, perception, and satisfaction, as well as retailer perspectives regarding the availability, acceptance, and challenges associated with Jan Aushadhi medicines. By combining economic analysis with real-world insights from consumers and pharmacists, this study aims to provide a comprehensive understanding of the role of Jan Aushadhi in improving healthcare affordability.

Aim:

To conduct a comparative analysis of price differences between Jan Aushadhi generic medicines and equivalent branded medicines in the Kottayam region, along with evaluating customer awareness, perception, and retailer perspectives regarding affordability, quality, and accessibility.

Review of literature:

Several studies have highlighted the importance of generic medicines in reducing healthcare expenditure and improving access to treatment.

A study conducted by Mission for Ethics and Science in Health (2025) evaluated over 100 generic and branded medicines and reported that generic medicines were therapeutically equivalent to branded drugs while being significantly cheaper, often costing 5 to 14 times less. This finding supports the rational use of generic medicines as a cost-effective alternative.[6]

Prakash et al. (2025) assessed public awareness and perception of Jan Aushadhi medicines among 1,316 participants in Mysore. The study found that although a majority of respondents were aware of the scheme and recognized its cost benefits, only a smaller proportion trusted the effectiveness of generic medicines, indicating the presence of knowledge gaps and misconceptions.[7]

Premanath et al. (2024) conducted a comparative clinical evaluation between generic and branded medicines and demonstrated that generic drugs were non-inferior in terms of therapeutic outcomes. This study provided strong evidence supporting the clinical equivalence of generic medicines.[8]

Mukherjee (2017) analyzed the economic impact of the Jan Aushadhi Scheme and concluded that it plays a significant role in reducing out-of-pocket expenditure on medicines, particularly among low- and middle-income populations.[9]

Similarly, studies highlighted that limited awareness, lack of trust, and inadequate promotion were major barriers affecting the success of the scheme. They emphasized the need for improved education, better supply chain management, and active involvement of healthcare professionals to enhance the utilization of generic medicines.

These studies collectively indicate that while generic medicines offer substantial economic benefits, their acceptance depends largely on awareness, perception, and system-level support.

Objectives:

- To compare the prices of selected Jan Aushadhi generic medicines with their branded counterparts in the Kottayam taluk.
- To evaluate customer awareness, perception, and satisfaction regarding Jan Aushadhi medicines.
- To assess retailer perspectives on availability, customer behavior, and challenges associated with generic medicines.
- To analyze the statistical significance of price differences using paired T-test.
- To identify factors influencing the adoption and acceptance of generic medicines.

Materials and Methods:

Study Design and Setting: A cross-sectional comparative study was conducted to evaluate the price differences between Jan Aushadhi generic medicines and branded alternatives, along with assessing customer and retailer perspectives. The study was carried out in the Kottayam region of Kerala, India.

Study Period: The study was conducted over a period of one month, from December 2025 to January 2026.

Study Site: Data collection was performed at selected Jan Aushadhi Kendras and nearby private retail pharmacies in Kottayam taluk. A total of 10 Jan Aushadhi outlets and 5 private pharmacies were included in the study.

Study Population: The study involved two groups:

- **Customers (n = 30):** Individuals visiting Jan Aushadhi stores and purchasing medicines
- **Retailers (n = 10):** Pharmacists or store owners working in Jan Aushadhi outlets

Inclusion Criteria:

- Customers aged above 18 years
- Individuals aware of or purchasing Jan Aushadhi medicines
- Retailers willing to participate in the study

Exclusion Criteria:

- Individuals below 18 years of age
- Participants unwilling to provide consent
- Incomplete survey responses

Materials Used:

- Price list of selected Jan Aushadhi medicines
- Corresponding branded medicine price data from retail pharmacies
- Structured questionnaires (customer and retailer survey forms)
- Google Forms for data collection
- Microsoft Excel for data analysis

Data Collection Methods

1. Price Comparison

Five commonly used therapeutic categories were selected:

- Antihypertensive (Telmisartan 40 mg)
- Hypolipidemic (Atorvastatin 10 mg)
- Antidiabetic (Metformin 500 mg)

- Antiulcer (Pantoprazole 40 mg)
- Antibiotic (Azithromycin 500 mg)

The Maximum Retail Price (MRP) of Jan Aushadhi medicines was compared with equivalent branded products. The price per tablet was calculated, and percentage price difference was determined using the formula:

$$\text{Percentage Price Difference} = ((\text{Branded Price} - \text{Jan Aushadhi Price}) / \text{Branded Price}) \times 100$$

2. Survey Method

Structured questionnaires were used to collect primary data.

Customer Survey

A questionnaire consisting of close-ended questions based on a 5-point Likert scale was administered to assess:

- Awareness
- Affordability
- Perceived quality
- Trust
- Satisfaction

Retailer Survey

Retailers were interviewed using a structured questionnaire to evaluate:

- Customer behavior
- Stock availability
- Sales trends
- Challenges in dispensing Jan Aushadhi medicines

Statistical Analysis

Data were analyzed using Microsoft Excel.

- Descriptive statistics such as mean, percentage, and standard deviation were calculated.
- Likert scale analysis was used to interpret survey responses.
- A **paired t-test** was applied to compare the mean prices of Jan Aushadhi and branded medicines.

Level of Significance

A p-value of **< 0.05** was considered statistically significant.

Ethical Considerations

Participation in the study was voluntary, and informed consent was obtained from all participants prior to data collection. Confidentiality of the respondents was strictly maintained, and no personal identifiers were recorded.

As this study involved survey-based data collection without any clinical intervention, formal ethical committee approval was not required. However, the study was conducted in accordance with standard ethical guidelines for research involving human participants.

Result & Discussion:

The present study was conducted to achieve the objectives of comparing the prices of Jan Aushadhi medicines with branded alternatives and to understand the perception of customers and retailers regarding affordability, quality, and accessibility. The findings of the study provide both quantitative and experiential insights into the effectiveness of Jan Aushadhi medicines in real-world settings.

Price Comparison Analysis:

Brand Names/Drug names	Telmisartan 40 mg	Atorvastatin 10 mg	Metformin 500 mg	Pantoprazole 40 mg	Azithromycin 500 mg
Brand 1	7.09	5.3	1.94	11.68	25.17
Brand 2	4.1	5.3	1.98	13.06	25.17
Brand 3	7.21	5.3	1.31	25.74	25.17
Brand 4	6.3	5.3	1.99	9.86	25.17
Brand 5	7.22	2.9	1.97	10.62	41.93
JAN AUSHADHI GEN	1.12	0.82	0.61	1.13	13.12
Branded Avg	6.384	4.82	1.838	14.19	28.52
% difference	82.47%	83%	66.80%	92.40%	54%
Calculated p Value	0.0009	0.0011	0.0007	0.011	0.009

Statistical Test Interpretation (Paired T-test)

Step 1: hypotheses

• Null hypothesis (H_0): There is no significant difference in mean prices between branded drugs and Jan Aushadhi.

• Alternative hypothesis (H_1): There is a significant difference in mean prices between branded drugs and Jan Aushadhi.

Step 2: Prepare paired data For each drug category (e.g., Telmisartan 40 mg):

• Pair mean branded price per tablet with Jan Aushadhi price per tablet

Example (Telmisartan 40 mg): • Mean branded price = ₹6.384

• Jan Aushadhi price = ₹1.12 Step 3: Compute differences Difference = Branded price − Jan Aushadhi price Example: 6.384 − 1.12 = 5.264

NOTE: This is done for each drug category

Step 4: Calculate t statistic

$$t = \frac{\bar{d}}{s_d/\sqrt{n}}$$

Step 5: Decision rule

• If $p < 0.05$, reject H_0

Step 6: Result & Interpretation

Discussion:

The comparison of selected medicines across different therapeutic categories clearly showed a substantial reduction in cost when using Jan Aushadhi medicines. The percentage price difference ranged approximately from **54% to 92.4%**, indicating a consistent and significant economic advantage over branded counterparts.

Among the selected drugs, **Pantoprazole 40 mg** exhibited the highest price variation, while **Azithromycin 500 mg** showed comparatively lower, yet still significant, cost savings. Medicines used for chronic conditions such as hypertension and diabetes also demonstrated considerable price differences, which is particularly important as these conditions require long-term therapy.

Statistical analysis using a paired t-test confirmed that the difference in prices between Jan Aushadhi and branded medicines was **statistically significant ($p < 0.05$)**. This finding strongly supports the primary objective of the study, validating that Jan Aushadhi medicines offer a reliable and cost-effective alternative to branded drugs.

From a practical perspective, these cost differences can greatly reduce the financial burden on patients, especially those belonging to low- and middle-income groups. Over time, the cumulative savings from switching to generic medicines can be substantial, improving medication adherence and overall treatment outcomes.

Customer survey:

The present customer survey provides useful insights into the demographic profile, awareness sources, and health conditions of respondents. The gender distribution was equal, with males and females each constituting 50% of the sample, indicating a balanced representation and reducing gender bias in the findings.

The age group analysis revealed that a majority of respondents belonged to the older population, with 46.7% aged 45 years and above, followed by 30% in the 25–45 age group and 23.3% between 18–25 years. This suggests that middle-aged and elderly individuals are more engaged in healthcare-related decisions, likely due to a higher prevalence of chronic conditions.

Monthly income data showed that most participants (66.7%) earned below ₹15,000, while 23.3% were in the ₹15,000–30,000 range and only 10% earned above ₹30,000. This indicates that a significant portion of the population falls under lower-income groups, emphasizing the importance of affordable healthcare solutions such as generic medicines.

Regarding awareness, the majority of respondents (70%) learned about healthcare services or medicines through family, friends, doctors, or other personal contacts. Jan Aushadhi stores contributed to 26.7% of awareness, whereas advertisements played a minimal role (3.3%). This highlights the strong influence of interpersonal communication over formal promotional strategies.

In terms of disease conditions, diabetes was the most commonly reported condition (37.9%), followed by hypertension and other chronic illnesses. Minor conditions such as allergies and dermatological issues were less frequently reported. The higher prevalence of chronic diseases among respondents aligns with the dominance of older age groups in the sample.

S.NO	QUESTIONS	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	LIKERT SCALE
1	Jan aushadhi medicines help save money on health care expenses?	0.00%	0.00%	10.00%	76.70%	13.30%	4.03
2	Level of Trust on Jan aushadhi medicines are as same as branded once?	3.30%	3.30%	36.70%	46.70%	10.00%	3.57
3	Would recommend Jan Aushadhi medicines to others based on your experience.	0.00%	0.00%	13.30%	70.00%	16.70%	4.03
4	The quality of Jan Aushadhi medicines meets the expectations compared to branded medicines.	0.00%	3.30%	26.70%	56.70%	13.30%	3.8
5	Have experienced similar side effects from Jan Aushadhi medicines as compared to branded medicines.	6.70%	50.00%	20.00%	13.30%	10.00%	2.7
6	Jan Aushadhi medicines are more affordable than branded medicines without compromising quality.	3.30%	0.00%	13.30%	66.70%	16.70%	3.94
7	Switching from branded medicines to Jan Aushadhi medicines did not affect the treatment outcome.	3.30%	10.00%	10.00%	73.30%	3.30%	3.63
8	The packaging and labeling of Jan Aushadhi medicines are clear and informative.	0.00%	30.00%	20.00%	36.70%	13.30%	3.33
9	Jan Aushadhi medicines are worth the money and they give similar benefits as branded medicines but at a lower cost.	0.00%	3.30%	6.70%	80.00%	10.00%	3.97
10	Accessibility of Jan Aushadhi medicines is convenient as compared to branded medicines.	0.00%	26.70%	3.30%	60.00%	10.00%	3.53

Likert Value	Interpretation
1.00 – 2.49	Negative perception
2.50 – 3.49	Neutral perception
3.50 – 5.00	Positive perception

The customer survey provided valuable insights into how individuals perceive Jan Aushadhi medicines. A majority of respondents expressed strong agreement regarding the **affordability** of these medicines, highlighting that cost is a major factor influencing their preference. Many participants also agreed that Jan Aushadhi medicines provide good value for money and are suitable for long-term use.

However, when it came to **trust and perceived quality**, the responses were moderately positive rather than strongly affirmative. This suggests that although customers recognize the economic benefits, a certain level of hesitation still exists regarding

effectiveness and reliability. Such perceptions may be influenced by long-standing beliefs that higher-priced branded medicines are superior.

Interestingly, most respondents reported **no significant difference in therapeutic outcomes or side effects**, indicating that actual user experience tends to support the safety and efficacy of Jan Aushadhi medicines. This gap between perception and experience highlights the need for better awareness and education among the public.

Overall, the findings suggest that while acceptance of Jan Aushadhi medicines is steadily increasing, improving confidence and trust remains an important area to address.

Retail Survey:

S.NO	QUESTIONS	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	LIKERT SCALE
1	Customers frequently ask about the price difference between Jan Aushadhi and branded medicines.	0.00%	0.00%	10.00%	70.00%	20.00%	4.1
2	Many customers perceive Jan Aushadhi medicines to be of comparable quality to branded medicines.	0.00%	0.00%	0.00%	100.00%	0.00%	4
3	There is occasional customer hesitation about switching from branded medicines to Jan Aushadhi generics.	0.00%	0.00%	20.00%	70.00%	10.00%	3.9
4	Customers often inquire about the availability of specific medicines in Jan Aushadhi stock.	0.00%	0.00%	0.00%	90.00%	10.00%	4.1
5	The affordability of Jan Aushadhi medicines is a key factor influencing customer purchase decisions.	0.00%	0.00%	0.00%	80.00%	20.00%	4.2
6	Some customers request information on the safety and side effects of Jan Aushadhi medicines.	0.00%	0.00%	0.00%	90.00%	10.00%	4.1
7	Jan Aushadhi medicines help attract price-conscious customers to the retail outlet	0.00%	0.00%	0.00%	70.00%	30.00%	4.3
8	Healthcare professionals' recommendations influence customer acceptance of Jan Aushadhi medicines.	0.00%	20.00%	10.00%	60.00%	10.00%	3.6
9	Packaging differences between Jan Aushadhi and branded medicines sometimes cause confusion among customers.	0.00%	10.00%	20.00%	70.00%	0.00%	3.6
10	Promotional activities and awareness campaigns improve sales of Jan Aushadhi medicines at the retail point.	0.00%	0.00%	0.00%	80.00%	20.00%	4.2
11	Stock management challenges occasionally	0.00%	0.00%	10.00%	80.00%	10.00%	4

	affect the consistent supply of Jan Aushadhi medicines.						
12	Branded generics are sometimes sold at Jan Aushadhi stores instead of pure generics, raising concerns about scheme adherence.	10.00%	10.00%	0.00%	80.00%	0.00%	3.6

Likert Value	Interpretation
1.00 – 2.49	Negative perception
2.50 – 3.49	Neutral perception
3.50 – 5.00	Positive perception

Retailers play a crucial role in influencing patient choices, and their responses provided important insights into the practical challenges of implementing the Jan Aushadhi scheme. Most retailers identified **price advantage** as the primary factor driving customer interest in these medicines. They also observed that an increasing number of customers actively inquire about lower-cost alternatives.

Despite this positive trend, retailers reported certain limitations, particularly related to **stock availability and supply consistency**. Occasional shortages of specific medicines can discourage both pharmacists and customers from relying fully on Jan Aushadhi products.

Another key observation was that some customers remain hesitant to switch from branded medicines, especially when prescriptions specifically mention brand names. In such cases, the role of the pharmacist becomes essential in guiding patients and providing reassurance about the equivalence of generic medicines.

Retailers also noted that **awareness campaigns and promotional efforts** significantly improve customer acceptance, suggesting that consistent outreach can enhance the success of the scheme.

Suggestions and Improvements:

- Continuous supply and availability
- Uniform packaging and consistent MRP display
- Coordination with supply chain authorities
- Experienced pharmacists and trained staff
- Product knowledge among pharmacists
- Awareness campaigns, advertisements, and medical camps
- Public awareness and acceptance of generic medicines

Conclusion:

The findings of this study align with previous research indicating that generic medicines offer substantial cost savings without compromising therapeutic efficacy. The statistically significant price differences reinforce the economic value of Jan Aushadhi medicines, particularly for chronic disease management.

However, the study also highlights a critical gap between **economic benefit and psychological acceptance**. While affordability is widely recognized, factors such as trust, awareness, and prescriber influence continue to affect utilization. This suggests that policy-level interventions alone are not sufficient; behavioral and educational strategies are equally important.

The role of healthcare professionals, especially doctors and pharmacists, emerges as a key factor in promoting the use of generic medicines. Encouraging generic prescribing and improving patient counseling can help bridge the gap between perception and actual benefit.

Additionally, addressing operational challenges such as supply chain inefficiencies and ensuring consistent availability of medicines is essential for building long-term trust among users.

Acknowledgement

We would like to express our sincere gratitude to all those who contributed to the successful completion of this study. First and foremost, We extend our heartfelt thanks to our guide Dr.Arun Raj R for his valuable guidance, continuous support, and constructive suggestions throughout the course of this research. His insights and encouragement played a crucial role in shaping this work.

We are also deeply thankful to the faculty members of our department for providing the necessary academic foundation and resources required for this study. Their support has been instrumental in enhancing our understanding of the subject.

We would like to acknowledge the cooperation of the pharmacists, retailers, and customers in the Kottayam region who willingly participated in this study. Their time, honest responses, and practical insights greatly enriched the quality and relevance of the research findings.

Finally, We extend our heartfelt thanks to our family for their unwavering support, patience, and motivation throughout this endeavor. Their encouragement has been a constant source of strength.

We sincerely acknowledge all those who directly or indirectly contributed to the successful completion of this study.

REFERENCES:

1. Lavtepatil S, Ghosh S. Improving access to medicines by popularising generics: a study of India's People's Medicine scheme in two districts of Maharashtra. BMC Health Serv Res. 2022;22:643. [cited 2026 Apr 19]. Available from: https://pmc.ncbi.nlm.nih.gov/articles/PMC12183295/
2. Abrol DK, John R, Singh N. The quality challenge for generic medicines in India: an industrial policy-sensitive perspective. Indian J Med Ethics. 2026 Mar 25. Available from: https://ijme.in/articles/the-quality-challenge-for-generic-medicines-in-india-an-industrial-policy-sensitive-perspective/
3. Press Information Bureau, Government of India. Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) strengthens affordable healthcare access [Internet]. New Delhi: Ministry of Chemicals and Fertilizers; 2026 [cited 2026 Apr 19]. Available from: https://www.pib.gov.in/PressReleseDetailm.aspx?PRID=2236292&reg=3&lang=2
4. Pharmaceuticals and Medical Devices Bureau of India (PMBI). About Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) [Internet]. New Delhi: Department of Pharmaceuticals, Government of India; [cited 2026 Apr 19]. Available from: https://janaushadhi.gov.in/about-pmbjb
5. Chandhok M, Gautam S. Effectiveness, accessibility, affordability, availability, and customer satisfaction of generic medicines in Pradhan Mantri Jan Aushadhi Yojana. Int J Pharm Sci. 2024;2(4):153–160. Available from: https://www.scribd.com/document/752308335/Effectiveness-Accessibility-Affordability-Availability-And-Customer-Satisfaction-Of-Generic-Medicines-In-Pradhan-Mantri-Jan-Aushadhi-Yojana
6. Mission for Ethics and Science in Health. Comparative evaluation of generic and branded medicines [Internet]. India: MESH; 2025 [cited 2026 Apr 19]. Available from: https://www.meshasia.org
7. M. D., M. P., Panyala, S. M., James, J., Krishna, M. H., & Jaidev Kumar, B. R. (2025). Public perception of Jan Aushadhi medicines in Mysore city: a prospective observational study. *International Journal Of Community Medicine And Public Health*, *12*(12), 5681–5685. https://doi.org/10.18203/2394-6040.ijcmph20254048
8. **Premanath M, Kulkarni P.** Generic Drugs or Branded Generics, Which One You Prefer to Prescribe? Semantic Scholar [Internet]. [cited 25 Apr 2026]. Available from: https://www.semanticscholar.org/paper/Generic-Drugs-or-Branded-Generics%2C-Which-One-You-to-Premanath-Kulkarni/1c6314531a2a697fda4a190004a3555b7010a1ba
9. Mukherjee K. A cost analysis of the Jan Aushadhi scheme in India. Int J Health Policy Manag. 2017;6(5):253–256. doi:10.15171/ijhpm.2017.02

International Journal of Pharmacy and Pharmaceutical Research (IJPPR)
Volume 32, Issue 5, May 2026 **ijppr.humanjournals.com** ISSN: 2349-7203

How to cite this article:
Ebin Raja et al. Ijppr.Human, 2026; Vol. 32 (5): 66-76.

Conflict of Interest Statement: All authors have nothing else to disclose.