# The Pharma Innovation

**Arunkumar R**
Research Scholar, Department of Agricultural and Rural Management Tamil Nadu Agricultural University Coimbatore, Tamil Nadu, India

**Venkatesa Palanichamy N**
Professor & Head, Department of Agricultural and Rural Management Tamil Nadu Agricultural University Coimbatore, Tamil Nadu, India

**Rohini A**
Professor, Department of Agricultural and Rural Management, Tamil Nadu Agricultural University Coimbatore, Tamil Nadu, India

**Nirmala Devi M**
Professor, Department of Agricultural Extension and Rural Sociology Tamil Nadu Agricultural University Coimbatore, Tamil Nadu, India

# A study on customer buying pattern of generic medicines from Jan Aushadhi medical stores in Coimbatore city of Tamil Nadu

## Arunkumar R, Venkatesa Palanichamy N, Rohini A and Nirmala Devi M

## Abstract
India is popularly called as the "Pharmacy of the World" since it exports many different medicines to other parts of the world. But it is facing a problem of higher per capita medical expenditure due to expensive branded medicines in the market. Hence, to reduce the medical expenditure of individuals, the government came out with the concept of providing generic medicines, which is similar to the branded medicines, to the general public at a lower price through the Jan Aushadhi Kendra under the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) scheme. This paper focused on the significant factors influencing the purchasing of generic medicines from Jan Aushadhi medical stores. It revealed cost and quality, promotional activities, customer awareness, and customer psychology and availability of required medicines in Jan Aushadhi medical stores were the key factors influencing customers buying behaviour.

**Keywords:** generic medicines, Jan Aushadhi medical store, key factors

## 1. Introduction
Everyone of us know that, India is a developing nation with the highest youth population, but poverty is still a significant problem in our developing economy. And the individual's medical expenditure is found to be very high due to the presence of expensive branded medicines in the market. Due to the expensive branded medicines, the middle class and low-class people are highly affected. Hence to eliminate this government has come up with the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) scheme. This scheme aims to provide quality medicines at a lower price to the general public. Hence to make this scheme a successful one, several Jan Aushadhi medical stores are to be created all around the country to provide generic medicines which are similar to the branded medicines in their chemical composition and quality. These Jan Aushadhi medical stores will have all kinds of medicines at a cheaper price. There are two types of medicines available in the market. The one which doctors and pharmacists highly promote is the expensive branded medicines that are patented. And the other one is the cheaply available and less promoted generic medicines. The interesting fact is that generic and branded medicines are similar in their chemical composition and quality [1].

In 2008, the Jan Aushadhi scheme was launched under the control of the Department of Pharmaceuticals, Ministry of chemical and fertilizers by the Government of India. This scheme is aimed to provide quality generic medicines at a cheaper price, especially to the poor and weaker section of the nation in all the Jan Aushadhi medical stores, which are to be established all around the country. These Jan Aushadhi medical stores are also known as the Jan Aushadhi Kendra. Sree Narendra Modi took several efforts in making this scheme a successful one by relaunching this scheme during 2014 with a noble cause of providing "Quality medicines at an affordable price for all". In September 2015 "Jan Aushadhi scheme" was renamed as "Pradhan Mantri Jan Aushadhi Yojana"(PMJAY). Further in November 2016, it was again renamed as "Pradhan Mantri Bhartiya Janaushadhi Pariyojana"(PMBJP) [2]. A financial support of up to 2.5 lakhs for establishing Jan Aushadhi medical stores had been provided to the shop owners [3]. In March 2017, there were only 1008 Jan Aushadhi medical stores around the country, which was not enough to meet out the medicinal needs of the country. But the scenario has changed now; at present, more than 8000 Jan Aushdhi medical stores are in operation, and more other new stores are to be made functional in the future.

**Corresponding Author**
**Arunkumar R**
Research Scholar, Department of Agricultural and Rural Management Tamil Nadu Agricultural University Coimbatore, Tamil Nadu, India

## 2. Review of Literature
Charan *et al*. (2019) [4] found that the age and education level of the patients were positively associated with the level of awareness they had about the generic medicines.

Nagarajappa and Srinivasan (2019) [5] reported that the customers highly considered the following factors: quality of the product, value for money, education by the doctors, and convenience to use the Jan Aushadhi medical stores before buying the generic medicine.

Solomon and Sundar (2019) [6] found the four critical factors influencing customers satisfaction with the service provided by the Jan Aushadhi medical store employees to its customers, which includes accessibility, tangibility, reliability and responsiveness. And they reported that the behaviour of the staff is negatively impacting its customers.

Rajasekaran *et al*. (2021) [3] found that the customers of Jan Aushadhi medical stores are satisfied with the quality of the generic medicines. They also found that the customers show good customer loyalty towards the Jan Aushadhi medical stores.

Pawar *et al*. (2021) [8] revealed no significant difference among the quality and efficiency of generic medicines available in Jan Aushadhi medical stores over the other brand medicines available in the market.

## 3. Objective of the study
To find out the major factors influencing the customers purchasing behaviour of generic medicines from Jan Aushadhi medical stores.

## 4. Methodology
This study follows a descriptive research design. The customers of Jan Aushadhi medical stores found in Coimbatore city were the sample respondents. And the sample respondents were chosen based on the convenience sampling technique since the actual population is unknown, and the accessibility of those customers is quite difficult. A well-structured questionnaire has been used to collect the primary data through periodic surveys. A 5-point Likert scale has been used to record the customer's response to the factors influencing their purchasing behaviour. (1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree) To satisfy the objective exploratory factor analysis (EFA) has been used considering the following variables:

**Table 1:** List of Variables

| |
| --- |
| Less Expensive than Branded Medicines |
| Doctor's prescription |
| Low Price |
| Family/Peer Influence |
| Good in Quality |
| Shopkeeper's Promotion |
| Availability of Required Medicines |
| Value for Money |
| Government Promotion Activities |
| Convenience to buy generic medicines from Jan Aushadhi Kendra |
| Similar to Branded Medicines |
| No Adulteration |
| Easily Affordable |
| The feeling of Emotionally Secured |
| Image |
| Trustworthiness of the Product |

EFA was used to find out the relationship with the variables. The variables with an Eigenvalue of more than one were considered. Factor analysis was used to determine the factors influencing customers' purchasing of generic medicines from Jan Aushadhi medical stores.

## 5. Results and Discussion
The profile of the respondents is presented in table 2.

**Table 2:** Profile of Respondents

| Demographic Variables | | Frequency | Percentage |
| --- | --- | --- | --- |
| Gender | Male | 95 | 63 |
| | Female | 55 | 37 |
| | Total | 150 | 100 |
| Age | Between 18-24 | 24 | 16 |
| | Between 25-34 | 31 | 21 |
| | Between 35-44 | 36 | 24 |
| | Above 45 | 59 | 39 |
| | Total | 150 | 100 |
| Educational Status | Illiterate | 5 | 3 |
| | Primary | 20 | 13 |
| | Secondary | 34 | 23 |
| | Higher Secondary | 39 | 26 |
| | Graduate | 52 | 35 |
| | Total | 150 | 100 |
| Monthly Household Income | Below 10000 | 22 | 15 |
| | 11000-20000 | 78 | 52 |
| | 20000-30000 | 29 | 19 |
| | Above 30000 | 21 | 14 |
| | Total | 150 | 100 |
| Profession | Public Sector Job | 3 | 2 |
| | Private Sector Job | 48 | 32 |
| | Business | 47 | 31 |
| | Student | 17 | 12 |
| | Not Working | 35 | 23 |
| | Total | 150 | 100 |
| Size of the Family | Up to 2 | 17 | 11 |
| | Up to 3 | 31 | 21 |
| | Up to 4 | 82 | 55 |
| | Up to 5 & Above | 20 | 13 |
| | Total | 150 | 100 |

Table 2 describes the demographic profile of the 150 respondents who participated in the survey. With respect to gender, 63% were male, and 37% were female. With respect to age, 16% of respondents were between 18-24 years of age, 21% of respondents were between 25-34 years of age, 24% of respondents were between 35-44 years of age, 39% of respondents were above 45 years of age. With respect to educational status, 3% of the respondents were illiterate, 13% of the respondents have completed primary education, 23% of the respondents have completed secondary education, 26% of the respondents have completed higher secondary education, and the rest of the 35% respondents were graduates. With respect to monthly household income, 15% of the respondents were earning below 10000, 52% of the respondents were earning between 11000 – 20000, 19% of the respondents were earning between 20000-30000, and the remaining 14% of the respondents were earning above 30000. With respect to Profession, 2% of the respondents are Public sector employees, 32% of the respondents were Private sector employees, 31% of the respondents are doing business, 12% of the respondents were students, and the remaining 23% of the respondents are not working. With respect to the size of the family, 11% of the respondent's family size is up to 2

members, 21% of the respondent's family size is up to 3 members, 55% of the respondent's family size is up to 4 members, remaining 13% of the respondents family size is up to 5 and above.

**Table 3:** KMO and Bartlett's Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .765 |
|---|---|---|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 641.171 |
| | df | 120 |
| | Sig. | .000 |

From Table 3, it is clear that the value of KMO statistics is 0.765 (> 0.5), which indicates that the sample is adequate and good for conducting the factor analysis. And from Bartlett's test, the approximate chi-square statistic is found to be 641.171 with 120 degrees of freedom which is significant at 0.01 levels.

**Table 4:** Total Variance Explained By the Included Variables

| Components | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % |
| 1 | 4.145 | 25.908 | 25.908 | 4.145 | 25.908 | 25.908 | 2.310 | 14.437 | 14.437 |
| 2 | 2.181 | 13.631 | 39.539 | 2.181 | 13.631 | 39.539 | 2.238 | 13.988 | 28.424 |
| 3 | 1.538 | 9.614 | 49.153 | 1.538 | 9.614 | 49.153 | 2.189 | 13.680 | 42.105 |
| 4 | 1.132 | 7.074 | 56.226 | 1.132 | 7.074 | 56.226 | 1.990 | 12.439 | 54.544 |
| 5 | 1.002 | 6.260 | 62.486 | 1.002 | 6.260 | 62.486 | 1.271 | 7.942 | 62.486 |
| 6 | .856 | 5.351 | 67.837 | | | | | | |
| 7 | .776 | 4.847 | 72.684 | | | | | | |
| 8 | .668 | 4.175 | 76.859 | | | | | | |
| 9 | .624 | 3.901 | 80.760 | | | | | | |
| 10 | .574 | 3.586 | 84.346 | | | | | | |
| 11 | .546 | 3.412 | 87.758 | | | | | | |
| 12 | .496 | 3.100 | 90.858 | | | | | | |
| 13 | .436 | 2.728 | 93.586 | | | | | | |
| 14 | .417 | 2.605 | 96.191 | | | | | | |
| 15 | .347 | 2.169 | 98.360 | | | | | | |
| 16 | .262 | 1.640 | 100.000 | | | | | | |
| Extraction Method: Principal Component Analysis. | | | | | | | | | |

From Table 4, it's clear that five components have an Eigenvalue of 4.145, 2.181, 1.538, 1.132, 1.002 having a variance of 25.908, 13.631, 9.614, 7.074, 6.260 respectively. These five factors explain about 62.486 per cent of the variance. But to get a meaningful conclusion of grouping the variables under certain factors, the rotation of components was done using varimax rotation with Kaiser Normalization.

**Table 5:** Rotated Component Matrix

| | Component | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Low Price | .836 | | | | |
| Less Expensive than Branded Medicines | .708 | | | | |
| Value for money | .641 | | | | |
| Quality | .424 | | | | |
| Shopkeeper's Promotion | | .745 | | | |
| Government Promotion Activities | | .709 | | | |
| Doctor's prescription | | .636 | | | |
| Family / Peer Influence | | .636 | | | |
| No Adulteration | | | .841 | | |
| Similar to Branded Medicines | | | .741 | | |
| Image | | | .655 | | |
| Easily Affordable | .448 | | .464 | | |
| The Feeling of Emotionally Secured | | | | .751 | |
| Convenience to buy generic medicines from Jan Aushadhi Kendra. | | | | .726 | |
| Trustworthiness of the Product | | | | .722 | |
| Availability | | | | | .903 |

**Table 6:** Factors Influencing Purchasing Behaviour of Generic medicines from Jan Aushadhi medical stores

| Factors | Statements | Loadings |
|---|---|---|
| Cost and Quality Parameters | Low Price | 0.836 |
| | Less expensive than branded medicines | 0.708 |
| | Value for money | 0.641 |
| | Good in Quality | 0.424 |
| Promotional Factors | Shopkeeper's Promotion | 0.745 |
| | Government Promotion Activities | 0.709 |
| | Doctor's Prescription | 0.636 |
| | Family / Peer Influence | 0.636 |
| Consumers awareness | No Adulteration | 0.841 |
| | Similar to Branded Medicines | 0.741 |
| | Image | 0.655 |
| | Easily Affordable | 0.464 |
| Psychological Factors | The Feeling of Emotionally Secured | 0.751 |
| | Convenience to buy generic medicines from Jan Aushadhi Kendra | 0.726 |
| | Trustworthiness of the product | 0.722 |
| Availability | Availability of required medicines | 0.903 |

Table 5 represents the Rotated component matrix which groups the 16 Variables taken for the analysis under 5 Factors that have factor loadings greater than or equal to 0.4.

Table 6 represents the Factors and its respective variables as follows:

Factor 1 is labeled as Cost and Quality Parameters, which includes Low Price with a factor loading of 0.836, less expensive than branded medicines with a factor loading of 0.708, value for money with a factor loading of 0.641 and Good in Quality with a factor loading of 0.424.

Factor 2 is labeled as Promotional Factors, which includes Shopkeeper's Promotion with a factor loading of 0.745, Government Promotion Activities with a factor loading of 0.709, Doctor's Prescription with a factor loading of 0.636 and Family and Peer influence with a factor loading of 0.636.

Factor 3 is labeled as Customer Awareness which includes No Adulteration with a factor loading of 0.841, Similar to branded medicines with a factor loading of 0.741, Image with a factor loading of 0.655 and Easily Affordable with a factor loading of 0.464.

Factor 4 is labeled as Psychological Factors, which includes The Feeling of Emotionally Secured with a factor loading of 0.751, convenience to buy generic medicines from Jan Aushadhi Kendra with a factor loading of 0.726, Trustworthiness of the product with a factor loading of 0.722.

Factor 5 is labeled as Availability which includes the availability of required medicines in Jan Aushadhi medical stores with a factor loading of 0.903.

## 6. Conclusion
The major factor influencing the purchasing of generic medicine from the Jan Aushadhi medical store is its cheaper price and quality. The study also revealed that customers' economic condition plays an important role in buying generic medicines over expensive branded ones. The customers trust the generic medicines, and they feel emotionally secured in using these generic medicines. The promotional activities of Jan Aushadhi medical store owners and government and the influence of doctors, friends and families making the customers aware that generic medicine is similar to the branded medicines in their chemical composition and quality and don't undergo any adulteration. Since the government promotes generic medicines through Jan Aushadhi medical stores, it gives a good image to the customers. These promotions and awareness of customers are highly impacting the purchasing behaviour of generic medicines from Jan Aushadhi medical stores. The availability of customer required medicine in Jan Aushadhi medical store also plays a crucial role in customers purchasing behaviour.

## 7. Recommendations
Like the major pharmaceutical retail chains, these Jan Aushadhi medical stores also need to come up with the initiative of delivering the generic medicines at the patient's doorstep. And a specially designed web portal needs to be launched. The details of medicines available in the nearby Jan Aushadhi medical store, and the location of nearby Jan Aushadhi medical store are needed to be made available in that web portal for the benefit of the customers.

## 8. Limitations
This study is done only in Coimbatore city, which may not be a true representation of all other cities in India.

## 9. References
1. Rathi H, Biyani M. Knowledge, Attitude, and Perception of Indian population about generic versus branded medicines: A web-based study. Asian Journal of Pharmaceutical and Clinical Research 2021, 95-98.
2. Bai HM. A Study on Customer Awareness towards Pradhan Mantri Bharatiya Jnanaushadi Kendra's with Reference to Shimoga. Com Fin Research 2021;9(1):1-10.
3. Rajasekaran R, Balakrishnan KP, Chellah MB. A Study on customer awareness towards Pradhan Mantri Bharatiya Jan Aushadhi Kendra's with reference to Tirupur district. EPRA International Journal of Multidisciplinary Research 2021;7(6):132-135.
4. Charan Jaykaran, Chaudhari Mayur, Saxena, Deepak, Bhardwaj, Pankaj, Dwivedi *et al*. Patients Opinion on the use of Generics and Factors Associated with it: A Cross-Sectional Study. Journal of Young Pharmacists 2019;11:172-176. 10.5530/jyp.2019.11.36.
5. Nagarajappa, Maruthi, Srivatsa, Hosur. Modelling Customers' Buying Behaviour of Jan Aushadhi (Generic Medicines). Indian Journal of Pharmaceutical Education and Research 2019;54:175-186. 10.5530/ijper.54.1.21.
6. Milton Solomon C, Sundar C. Impact of Brand Awareness and Customer Satisfaction towards Services of Jan Aushadhi Medical stores. International Journal of Recent Technology and Engineering (IJRTE) 2019;8(2S4):546–551.

https://doi.org/10.35940/ijrte.B1107.0782S419

7. Pawar A, Chainpure M, Dhapte-Pawar V. Paralleling the quality and economy of levofloxacin hemihydrate and cefuroxime axetil tablets. Indian Journal of Pharmaceutical Education and Research 2021;55(1):136-145.