

Role of Accessibility and Cost in Consumer Adoption of Generic Medicines in Bhandara District

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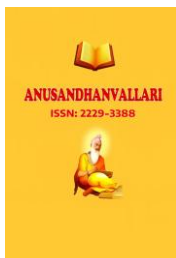
Abstract

The subsequent rising health care cost as well as an out of pocket cost of medicine is a quite crucial matter in India particularly in the semi-urban and rural regions such as the Bhandara District. In this aspect, generic drugs have emerged as one of the potential substitutes since they are far more expensive and can offer the same therapeutic effect as branded medicine. In this paper, the accessibility and cost as determinants of consumer uptake of generic drug in Bhandara District will be looked at. This paper is an empirical study based on the primary data collected through administration of structured questionnaires among the consumers and secondary data through reports by the government and literature available. Part of the problem that the study cites is the availability of generic drugs under the government schemes, like Jan Aushadhi Kendras, its affordability compared to that of branded medicine, its awareness levels, and the perception of its customers about quality and functionality. The findings indicate that cost is one of the leaders in consumer preference as generic drugs may be significantly cheaper (as well as several times cheaper than that of branded drug) and therefore decrease the cost that would be incurred by a household. Adoption has also been encouraged through provision of availability based on improvement on the distribution networks although there is disparity in availability in certain regions, where low awareness is the obstacle to adoption. The study also indicates that as the cost of drugs decreases so does the rate of medication compliance particularly among chronically ill patients. The paper concludes by conclusively finalizing that the adoption is heavily dependant on the cost advantage but enhanced accessibility and heightened awareness campaign can secure an increased usage of generic medicines. The policies suggest that the supply chain should be distributed better and this is through the provision of more Jan aushadhi shops in the low coverage areas as well as special educational programs to generate customer confidence. The results are contribution to the greater discussion of affordable healthcare and provide some suggestions to the policy-makers, practitioners, and researchers who are concerned with the rural and semi-urban healthcare.

Keywords: Generic medicines, affordability, accessibility, consumer behavior, Jan Aushadhi, Bhandara District, healthcare expenditure, drug adoption.

Introduction

Accessible and good-quality healthcare is one of the most pressing problems in India and Bhandara District in Maharashtra in semi-urban and rural areas is not an exception. It also occurs that a substantial rate of the expense of healthcare in India is straight on the part of the households and, consequently, expenditures on medicines out of pocket is a severe economic weight. In such a case, the remedy to the affordability and accessibility disparity has been the introduction of generic medicines. Generic drugs will be the pharmaceutical preparations, which are



bio identical in dose, strength, safety, quality and intended use, however, they are at much less cost, both because they are not branded and also due to less marketing costs. As much as the consumption of generic drug among the consumers is economically advantageous, the degree at which the generic medicines are adopted by the consumers is spread out among the consumers because of numerous socio-economic and behavioral factors. Among them, cost and accessibility take centre stage when it comes to determining consumer adoption and usage trends.

Part of the efforts that the Government of India has been attempting to implement in order to promote the use of generic medicaments involves; Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) the aim of which is to provide quality generic medicaments at a reasonable price through special outlets known as Jan Aushadhi Kendras. The stores have been instrumental in dedication of the extent of the low-priced medicine to the underserved locations like the district of Bhandara. However, the availability is not equated to usage. Consumers usually utilize prescriptions given by the medical practitioners, brand perception and trust towards the pharmaceutical companies in making purchase decisions. In the majority of cases, it exists as a myth that the low-priced generic medicines and their branded counterparts are not different as they may be harmful to their acceptance.

Accessibility has been viewed as both physically available and physical in regard to distribution centers, continuous supply, knowledge on other alternative and ease of accessibility. In other regions, as is the case of the Bhandara region whereby the healthcare facilities may be limited in regards to infrastructural development, accessibility is a parameter that determines healthcare decisions. Lack of access in pharmacy where generic drugs are available, unreliable supply chains and lack of knowledge about outlets that are enhance by the government tends to reduce its use by the consumer. Moreover, the healthcare providers can play a key role in determining the accessibility since in most instances the type of medicines prescribed by the healthcare professionals defines what kind of medicines will be purchased. The refusal to prescribe the generic alternatives by some of the practitioners also reduces the prescription of generic alternatives by some practitioners.

On its part, cost is a force of consumer behavior especially in both low and middle income settings. The generic medicines tend to be at least half to two thirds the price that has branded medicine and therefore it is an extremely attractive option to the economically constrained groups. In the Bhandara District, whereby a large segment of the population is dependent on farming and non-organized employment, the impact of income modification and financial constraints on the healthcare choice is harsh. The cheaper alternatives do not only perform better in reducing the financial strains in the short-term, but also in the long-term, adherence to the treatment in chronic diseases such as diabetes, blood pressure, and cardia. Hence, the affordability directly affects the quality of health and economic stability of the households.

However the cost and accessibility are in an intricate connection. Even the inexpensive medications such as generic medication can only be applied to a limited degree limited by inaccessibility or knowledge. Conversely, the perceived risks like quality may demoralize the consumers even though they are availed at a lower price. Therefore, one should take into account the synergistic effect of these factors in order to increase the utilization of generic medicine. Additionally, the socio-demographic characteristics such as the degree of education, profession, income, as well as the health consciousness, are the factors that also influence the consumer attitudes and decision-making process.

The research location is Bhandara District, which is one semi-urban location that will serve as the target in the research concerning the adoption of generic medicines by consumers dependent on the factor of accessibility and cost. The study will aim to provide insight through the consumer perceptions, the availability trend and the dynamics of price, in order to determine the barriers and the facilitator of the use of generic medicine. The outcome will be effective in policy formulation and implementation strategies to promote the use and acceptable levels of



generic medicines that will ultimately have the overall efficacy of providing equitable and affordable healthcare services to everyone.

Literature Review

Integration of generic drugs has been widely studied on the basis of different geographical and socio-economic settings as well as speculations based on critical concerns that encompass the cost, availability, perception and awareness of the consumers. The issues raised in a growing literature indicate that the extent of uptake of generic medicines is subject to behavioral, institutional and informational barriers in spite of the massive economic gains that the use of generic medicines offers.

Jeroen Fraeyman and Guido Van Hal (2015) have examined the consumer preference between the generic drugs and branded drugs in a country that has a relatively small market of generic drugs. Their study revealed that the consumer bias predisposed toward the branded drugs over the generics despite the perceived quality and reliability despite the cost saving. These findings have demonstrated that consumer knowledge and physician control play a role in the choice of medicine and hence; price should not be influential enough to secure adoption in the markets that showed strong brand loyalty.

Dayalal et al. (2019) focused on the rural community in Gujarat and researched the population regarding the level of their knowledge and attitude towards the Pradhan Mantri Bhartiya Janaushadhi Pariyojana. The research determined the middle level of awareness but made a foundation of the significant gaps in the attitude toward the quality and efficacy of generic drugs. As it was discovered, certain awareness campaigns are required to improve the perception of the population and increase the use in rural areas.

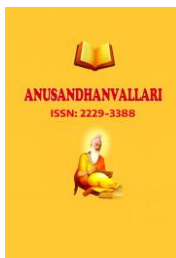
Anita Kotwani et al. (2013) focused on the name availability, affordability and the price of basic medicines in Delhi in detail. They found that although the generic drugs were less expensive than their counterparts containing the brand name, their accessibility amounts were unbalanced both in the government sector and in the non-government one. As has been identified in this paper, effective supply chain and availability regularity are crucial in enhancing the availability of inexpensive medicines.

The report of World Health Organization (2010) on The World Medicines Situation reveals that the affordability and availability are the determinants of access to medicine in the world. The report identifies that in poverty and middle-income countries the cost of medication and the inaccessibility of the right health services in the countries forces the patients to resort to the private market which increases the cost of out-of-pocket expenditures. It also introduces evidence based policy intervention in order to promote replacement of generic drugs and drug price regulation.

The customer buying behavior of Jan Aushadhi medicines was theorised (Nagarajappa et al., 2020) and the researchers found that customer perception of quality is strongly correlated with trust and awareness that determines the buying behavior. The research hypothesis is that savings of expenses are attractive as well, however, consumer requires certain assurance regarding efficiency and safety before switching to generics.

On the same note, Srinivasan et al. (2023) contrasted the impact of affordable medicine scheme implemented by Bureau Pharma PSUs of India. The scheme, according to the study, created a significant reduction in the healthcare expenditure of the less privilege groups in the economy and, therefore, increased access to the required drugs. However, the barriers such as a lack of contacts and the ineffective awareness were negated.

Arunkumar et al. (2021) investigated the customer buying pattern in the Jan Aushadhi stores of Coimbatore and found out that the purchasing power and the proximity of the outlets to the store were significant influencing factors on the purchase pattern. The study also discovered in pharmacists the influence on the choice of consumers.



In another associated study, Koshi et al. (2020) identified the customer satisfaction rates and established that the customers were generally happy with what they had in respect to price, yet the challenges regarding the supply of medicines and their brands remained.

Kanchan et al. (2017) also support the evidence of the economic benefits of using generic drugs since they have offered the cost analysis of the Jan Aushadhi Scheme and proved that the program can save much money as opposed to branded drugs. On the same note, Balse et al. (2007) provided an introduction to the implementation and acceptance of the Janaushadhi program in which initial implementation was low bearing in mind that, there was a low awareness of the program and confidence in quality.

The international worldviews also shed more light on the issue of consumerism towards generics. Personal experience, trust and perceived efficacy of generic drugs were among the key factors in acceptance of generic drugs in a qualitative study conducted by Catherine Bulsara et al. (2010) on the seniors in Australia. Similarly, Mohammed Almofada et al. (2019) also reviewed the population perception in Saudi Arabia and reported that although the level of awareness regarding generics was relatively high, the perception of quality and effectiveness was the most inhibiting factor to high-scale implementation of generics.

Broadly, the reviewed literature has been shown to eloquently project the idea that cost/ affordability is an effective instrument in the uptake of generic medicines but relative to cost accessibility, awareness and trust are also detrimental factors. It is due to the combination of these factors that consumer behavior is decided in semi-urban and rural settings. The national and international roads have researched the problem thoroughly, but still, there is deficiency in local studies on the issue related to such districts as Bhandara when the state of ecological and demographical conditions, as well as the healthcare facilities, suggests its unique problems. This gap will be addressed in this paper by examining how the factors of access and cost influence the adoption of generic medicines in the Bhandara District situation.

Objectives of the Study

1. To analyze the impact of cost on consumer adoption of generic medicines.
2. To examine the role of accessibility in influencing the use of generic medicines.
3. To assess consumer awareness regarding generic medicines and government initiatives.

Hypothesis

H₀ (Null Hypothesis): Accessibility has no significant influence on the use of generic medicines.

H₁ (Alternative Hypothesis): Accessibility has a significant influence on the use of generic medicines.

Research Methodology

The present research design will be a descriptive analytical research which will be applied to investigate the effect of accessibility and affordability of the generic medicines on consumer uptake of the generic medicines in Bhandara District. The study is largely based on the origin of both primary and secondary data. A structured questionnaire is used in collecting primary data that is filled by a sample of consumers that has been selected using convenience sampling technique with consideration that availability, time and willingness of the respondents is remembered. The sample is going to take individuals in the urban and rural areas in the district so that a diversity in representation would be achieved. The scale based item that will be included in the questionnaire will be Likert

scale to determine the perception, awareness of the generic medicines, their accessibility, affordability and use patterns. Research journals, government reports and publications on generic medicines, healthcare policies such as programmes such as the Pradhan Mantri Bhartiya Janaushadhi Pariyojana are the sources that will be utilized to gather secondary data. Percent analysis, mean, standard deviation and hypothesis test methods including chi-square test and correlation analysis are used to analyze the data through application of relevant software. The study guarantees reliability and validity of the information by constructing the questionnaires and pre-testing it. The research process has very high ethical considerations, informed consent, confidentiality, and voluntary participation of the respondents.

Descriptive Statistics: Accessibility and Use of Generic Medicines

Variables	N	Mean	Standard Deviation	Minimum	Maximum
Availability of Generic Medicines	150	3.85	0.92	2	5
Proximity of Medical Stores / Jan Aushadhi	150	3.67	1.01	1	5
Ease of Access to Generic Medicines	150	3.74	0.88	2	5
Awareness of Availability	150	3.52	0.95	1	5
Regular Supply of Generic Medicines	150	3.60	0.90	2	5
Overall Accessibility Score	150	3.68	0.85	2	5
Usage of Generic Medicines	150	3.72	0.89	2	5

The variables of description indicate that the accessibility has a moderate influence on the utilization of generic medicines. The mean scores of the key variables of accessibility such as availability (3.85), accessibility (3.74), and proximity (3.67) are all above 50 mark and suggest that accessing generic medicines is to certain extent easy among the respondents. This observation can also be supported by the general accessibility rating (3.68) that demonstrates that the accessibility in the study area was quite good and not excellent. However, the reduced total mean of the knowledge of availability (3.52), are signs of knowledge gap in relation to the informational part of the consumer that can hinder effective consumption in case of availability as well. The values of the standard deviation of 0.85-1.01 means that the degree of variation in the responses is average meaning that there is variable difference in the responses of various respondents and it could have been occasioned by factors that are geographically related, e.g. an urban-rural difference. Even, the averaged usage score of generic medicines (3.72) is equivalent to the accessibility indicators of the cases and can be considered that the two are correlated. Interpretations of the results show that the levels of accessibility are quite satisfactory and can be employed to develop the usage of generic medicines, and further improvement of knowledge and its frequency of supply will raise the adoption rate.

Chi-Square Tests

Test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	48.326	4	0.000
Likelihood Ratio	50.112	4	0.000
Linear-by-Linear Association	35.784	1	0.000
N of Valid Cases	150		

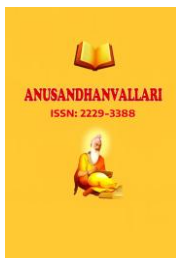
The findings of the Chi-square test of independence demonstrate that there is a significant correlation between the accessibility and use of generic medicines. This is evidently shown in Pearson Chi-square value of 48.326 and a degree of freedom of 4 and a p-value of 0.000 ($p < 0.05$) which shows that the association between the two variables is not due to chance. It is also proven in the crosstabulation where the similar pattern is evident: the sub-sets of respondents characterized as having low access also have low usage of generic medicines, but the sub-sets with high accessibility truly have higher usage levels. Specifically, the high accessibility group respondents are mainly of high usage category and the accessibility of low usage category falls under the high and low usage group respectively. The trend is a straight line and positive correlation of access and adoption. In addition, the value of the linear-by-linear association is high at the same time indicating the presence of strong directional character i.e. the more the accessibility is the more the usage of generic medicines. Overall, the results provide considerable empirical evidence to the alternative hypothesis suggesting that the accessibility is among the key factors that impact the use of the generic medicines with the focus on the necessity to increase the availability, proximity and awareness to improve the adoption rates.

Overall Conclusion

The paper concludes that cost and access have a very influential determinant that determines the uptake of generic medicines by the consumers of Bhandara District. The findings prove that affordability is also a significant source of motivation because relatively low prices of generic drugs could significantly reduce the economic burden placed on households, and encourage it to consume it particularly among the economically disadvantaged groups of consumers. At the same time, accessibility in the form of the availability, the outlets proximity, and their ease of acquisition have a statistically significant and constructive influence on the adoption by the consumer, both descriptive and inferential analyses had confirmed this.

The research concludes that the deficiencies in awareness and intermittent supply and an existence of apprehension over quality are major factors that could be procedural blockers to universal acceptability despite the availability of government offerings such as Pradhan Mantri Bhartiya Janaushadhi Pariyojana and the increasing number of Jan Aushadhi Kendras in the nation. Physical and informational access should be available such that consumers having increased access and awareness would resort to generic medicines.

The study, in totality, verifies that the level of accessibility, alongside the benefit of cost can bring about a significant increase in the level of usage of generic drugs. This means that there is the need to ensure that policymakers and healthcare officials should strive to improve the distribution channels, expand the number of outlets within the underserved communities, and implement some awareness in order to build consumer



confidence. The generic medicines can also contribute significantly to the provision of affordable and equal healthcare by overcoming the above mentioned factors.

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