

Loyalty: A Comparative Study of Generic Pharma and Branded Medical Stores in India

Pallavi singh, Ipsita Dhar, Roshan Sonawane
Department of Management, IIEBM, Pune

Abstract - This research paper examines the complex interplay between affordability and brand loyalty in India's pharmaceutical retail sector. India, often termed the "pharmacy of the world," presents a unique marketplace where consumers navigate choices between high-cost branded medications and more affordable generic alternatives. Using secondary data from government reports, international organizations, academic research, and industry analyses, this study investigates the factors influencing consumer decisions, the economic implications of brand loyalty in healthcare, and the effectiveness of government initiatives promoting generic medicines. The findings reveal that while branded medicines dominate approximately 70-80% of India's retail pharmaceutical market, government initiatives and increasing awareness are gradually shifting consumer preferences. The study concludes that the future of India's pharmaceutical retail lies in bridging the gap between affordability and quality perception, with significant implications for public health policy.

Keywords: Generic Pharmaceuticals, Brand Loyalty, Healthcare Affordability, Consumer Behaviour

I. INTRODUCTION

1.1 Background

The Indian pharmaceutical industry stands as one of the world's largest and most rapidly growing sectors. According to the Indian Brand Equity Foundation (IBEF, 2023), the pharmaceutical sector was valued at approximately USD 50 billion in 2022 and is projected to reach USD 130 billion by 2030. India supplies over 50% of the global demand for various vaccines and 40% of generic drugs consumed in the United States, earning it the moniker "pharmacy of the world" (IBEF, 2023). Despite this impressive production capacity, a significant portion of the Indian population still struggles with healthcare affordability. According to the World Health Organization (WHO, 2022), out-of-pocket expenditure in India constitutes approximately 62% of total health spending, one of the highest in the world. This creates a paradoxical situation where life-saving medications remain

inaccessible to many, despite India's position as a major pharmaceutical producer. Within India's pharmaceutical retail landscape, consumers face a critical choice: purchasing expensive branded medications from established medical stores or opting for more affordable generic alternatives. According to data from the National Pharmaceutical Pricing Authority (NPPA, 2022), branded medicines in India can cost 5-10 times more than their generic counterparts, creating substantial economic burden on households.

The retail pharmaceutical market in India is characterized by a unique structure where both branded and generic medicines are readily available through a vast network of over 8.5 lakh medical stores (Pharmacy Today, 2022). However, market share data reveals that branded formulations dominate the market, with generic medicines accounting for only about 20- 30% of retail sales (McKinsey & Company, 2021).

1.2 Research Problem

The tension between affordable healthcare and brand loyalty presents a multifaceted challenge for India's healthcare system. On one hand, branded pharmaceutical companies invest substantially in research, marketing, and brand building, creating products that command premium prices based on perceived quality and reliability. The Indian pharmaceutical market witnesses annual marketing expenditures exceeding ₹25,000 crore (Pharmabiz, 2022).

On the other hand, generic medications—chemically identical to their branded counterparts—offer the same therapeutic benefits at a fraction of the cost. According to the Ministry of Health and Family Welfare (MoHFW, 2022), generic medicines can be 30-80% cheaper than branded equivalents, potentially democratizing access to essential medicines for millions of Indians.

1.3 Research Objectives

1. To analyse the factors influencing consumer preference for branded versus generic pharmaceuticals in India using existing research and data
2. To examine the relationship between brand loyalty and healthcare spending patterns based on published studies
3. To evaluate the impact of government initiatives promoting generic medicines
4. To assess the economic burden on households due to brand preferences in pharmaceutical purchases
5. To recommend strategies for balancing affordability with quality assurance in pharmaceutical retail

1.4 Significance of the Study

This study holds significant implications for multiple stakeholders. For policymakers, understanding consumer behaviour patterns can inform more effective public health initiatives. According to NITI Aayog (2022), increasing generic medicine adoption could save Indian households over ₹40,000 crore annually. For pharmaceutical companies, insights into brand loyalty dynamics can shape marketing strategies. For consumers, this research illuminates the factors affecting their healthcare decisions and the economic consequences of their choices.

1.5 Data Sources and Methodology

This study employs a systematic review of secondary data sources, including:

- Government of India reports (MoHFW, NPPA, NITI Aayog)
- International organization reports (WHO, World Bank)
- Industry association reports (IPA, OPPI, IBEF)
- Academic research papers published in peer-reviewed journals
- Market research reports (McKinsey, CRISIL, Deloitte)
- National health surveys (NFHS, NSS)

II. LITERATURE REVIEW

2.1 Conceptual Framework

2.1.1 Generic Pharmaceuticals

Generic drugs are pharmaceutical products that contain the same active ingredients as brand-name drugs and are identical in dosage form, strength,

route of administration, and therapeutic use. According to the United States Food and Drug Administration (FDA, 2023), generic drugs must demonstrate bioequivalence to their branded counterparts, meaning they are absorbed into the bloodstream at the same rate and extent.

In India, generic drugs are regulated by the Drugs and Cosmetics Act, 1940, and Rules thereunder, which require that generic equivalents meet the same quality, strength, and purity standards as branded medications (CDSCO, 2023). The Drugs and Technical Committee Act, 2023, further strengthened quality control mechanisms for pharmaceutical products.

According to the Indian Pharmacopoeia Commission (IPC, 2023), over 2,000 generic drugs are currently marketed in India, covering virtually all therapeutic categories. Despite this availability, market penetration remains limited.

2.1.2 Brand Loyalty in Healthcare

Brand loyalty in the pharmaceutical context extends beyond simple product preference. It encompasses trust in specific manufacturers, reliance on healthcare provider recommendations, and perceived quality differences. In India, where healthcare literacy varies significantly and doctor-pharmacist relationships heavily influence purchasing decisions, brand loyalty assumes unique characteristics.

Research by Kotler and Keller (2021) defines brand loyalty as the degree to which a consumer repeatedly purchases the same brand, coupled with a positive attitude toward that brand. In the pharmaceutical sector, this loyalty is reinforced by multiple factors including consistent therapeutic outcomes, doctor recommendations, and fear of switching to unknown products.

2.1.3 Healthcare Affordability

Healthcare affordability refers to the ability of individuals or households to purchase necessary medical services and medications without experiencing financial hardship. According to the National Health Policy 2017, India has one of the highest out-of-pocket healthcare expenditures globally, with medicines accounting for approximately 70% of out-of-pocket spending (MoHFW, 2017).

The World Bank (2022) estimates that annually, approximately 55 million Indians are pushed into

poverty due to healthcare expenses, with pharmaceutical costs being a major contributor. This underscores the critical importance of affordable medicines in the Indian context.

2.2 Theoretical Perspectives

2.2.1 Theory of Planned Behaviour

Ajzen's Theory of Planned Behaviour provides a useful framework for understanding consumer decision-making in pharmaceutical purchases. According to this theory, behavioural intentions are influenced by attitudes toward the behaviour, subjective norms, and perceived behavioural control (Ajzen, 1991).

Research by Bhatt and Mehta (2020) applied this framework to pharmaceutical purchasing in India and found that all three components significantly influence generic medicine adoption. The study published in the Journal of Health Management found that:

- Positive attitudes toward cost savings increased generic adoption by 2.3 times
- Social pressure from doctors and pharmacists significantly influenced choices
- Consumer confidence in generic quality acted as a moderating factor

2.2.2 Quality Perception Theory

The quality perception theory suggests that consumers often equate price with quality, particularly in situations where they lack technical knowledge to assess product quality directly. This phenomenon, known as the "price-quality heuristic," explains why many consumers prefer branded medications despite the availability of cheaper generic alternatives.

A study by Sudha and Ganesan (2019) in the International Journal of Pharmaceutical Sciences found that 67% of Indian consumers believed expensive medicines were more effective, demonstrating the prevalence of this heuristic in pharmaceutical purchasing.

2.2.3 Information Asymmetry Theory

In healthcare markets, information asymmetry exists between sellers (pharmaceutical companies, pharmacists) and buyers (consumers). According to this economic theory, consumers lack the technical knowledge to evaluate medicine quality, leading them to rely on proxies like brand name and price (Stiglitz, 2000).

A report by the Centre for Technology and Policy (CTAP, 2021) highlighted that this information asymmetry is particularly pronounced in India, where health literacy remains low at approximately 35% according to NFHS-5 (2019-2021).

2.3 Review of Empirical Studies

2.3.1 International Context

Studies conducted in developed countries provide valuable insights into generic drug adoption patterns:

United States: Research by Kesselheim et al. (2016) in the New England Journal of Medicine found that generic substitution rates exceeded 80% in the US, driven by insurance policies and physician recommendations. However, persistent brand loyalty for certain therapeutic categories (particularly cardiovascular and CNS drugs) was observed.

European Union: A study by Simoens and De Coster (2006) analyzed generic uptake across EU countries and found significant variations, with substitution rates ranging from 20% (Italy) to 80% (Denmark). The key determinants were pharmacist incentives and regulatory frameworks.

Developing Countries: Research in Bangladesh (Hossain et al., 2019) and Sri Lanka (Perera et al., 2017) found that generic adoption was hindered by quality concerns and limited healthcare provider support.

2.3.2 Indian Context

Research specific to India reveals a complex picture: The National Institute of Public Finance and Policy (NIPFP, 2020) conducted a comprehensive study on pharmaceutical pricing and found that branded drugs command approximately 70-80% of the retail pharmaceutical market in India, despite generic equivalents being available at significantly lower prices. The

study estimated that Indian consumers spend an extra ₹45,000 crore annually on branded medicines over generics.

The Indian Journal of Pharmacology published a study by Mandal et al. (2019) analyzing factors affecting generic medicine adoption in West Bengal. The findings indicated that only 31% of patients used generic medicines, primarily due to lack of awareness and doctor recommendations.

A pan-India survey by LocalCircles (2022) found that 68% of Indians were unaware of the difference between generic and branded medicines,

highlighting the significant awareness gap.

2.3.3 Government Initiatives

The Jan Aushadhi Scheme, launched by the Government of India in 2008, aims to promote generic medicines through dedicated outlets. According to the Department of Pharmaceuticals (2022):

- Over 9,000 Jan Aushadhi stores are now operational across India
- The scheme offers over 1,900 generic medicines and 285 surgical items
- Total sales through Jan Aushadhi stores exceeded ₹1,000 crore in FY 2022-23

However, market penetration remains limited, with

Jan Aushadhi stores accounting for less than 2% of total retail pharmaceutical sales (Pharmabiz, 2023).

III. METHODOLOGY

3.1 Research Design

This study employs a systematic review and synthesis of existing secondary data sources. The research design follows a descriptive analytical approach, integrating quantitative data from multiple authoritative sources to draw meaningful conclusions.

3.2 Data Sources

The study utilizes data from the following categories of secondary sources:

3.2.1 Government Sources

Source	Data Type	Relevance
Ministry of Health and Family Welfare (MoHFW)	Policy documents, program reports	Jan Aushadhi Scheme implementation
National Pharmaceutical Pricing Authority (NPPA)	Price data, market statistics	Medicine pricing analysis
National Institute of Public Finance and Policy (NIPFP)	Research studies	Economic analysis of pharmaceutical sector
NITI Aayog	Policy recommendations	Healthcare reform proposals
Central Drugs Standard Control Organization (CDSCO)	Regulatory data	Quality and approval statistics
National Sample Survey Office (NSSO)	Household consumption expenditure	Healthcare spending patterns

3.2.2 International Organizations

Source	Data Type	Relevance
World Health Organization (WHO)	Global health statistics	Healthcare expenditure benchmarks
World Bank	Development indicators	Health system performance
UNICEF	Child health indicators	Access to medicines

3.2.3 Industry and Academic Sources

Source	Data Type	Relevance
Indian Brand Equity Foundation (IBEF)	Industry reports	Pharmaceutical market size
Indian Pharmaceutical Alliance (IPA)	Industry statistics	Market share data
McKinsey & Company	Consulting reports	Industry trends
CRISIL	Market research	Consumer behaviour analysis
Peer-reviewed journals	Academic research	Theoretical frameworks

3.3 Data Analysis Approach

The analysis follows a multi-step approach:

1. Data Compilation: Gathering relevant statistics and findings from multiple sources
2. Cross-Validation: Comparing data across

sources to ensure consistency

3. Thematic Analysis: Organizing findings into coherent themes
4. Synthesis: Drawing integrated conclusions from diverse data sources

3.4 Analytical Framework

The study analyses the research problem across five dimensions:

1. Market Structure: Size and segmentation of branded vs. generic markets
2. Consumer Behaviour: Factors influencing purchasing decisions
3. Policy Impact: Effectiveness of government initiatives
4. Economic burden: Cost implications for households

Metric	Value	Source
Market Size (2022)	USD 50 billion	IBEF, 2023
Projected Market Size (2030)	USD 130 billion	IBEF, 2023
Growth Rate (CAGR)	10-12%	CRISIL, 2022
Number of Pharmaceutical Companies	3,000+	MoHFW, 2022
Number of Medical Stores	8.5 lakh	Pharmacy Today, 2022

4.1.2 Branded vs. Generic Market Share

Data from multiple sources consistently indicates the dominance of branded medicines in India's retail market:

Category	Market Share	Estimated Value
Branded Formulations	70-80%	₹1.4-1.6 lakh crore
Generic Medicines	15-20%	₹30,000-40,000 crore
Patent-protected Medicines	5-10%	₹10,000-20,000 crore

The branded medicines segment is further categorized as:

- Branded Generics: 55-60% of market (generic molecules sold under brand names)
- Proprietary Brands: 15-20% of market (innovator brands under patent)
- India-specific Brands: 5-10% of market (brands popular only in India)

Anti-infectives	18%
Gastro-intestinal	14%
Pain/Analgesics	12%
Cardiovascular	11%
Respiratory	10%
Anti-diabetics	9%
Dermatological	8%
Others	18%

4.1.3 Therapeutic Category Distribution

According to AIOCD (All India Organization of Chemists and Druggists) data (2022), the distribution of pharmaceutical sales across therapeutic categories:

Therapeutic Category	Market Share
----------------------	--------------

Drug Category	Branded (₹)	Generic (₹)	Price Difference
Diabetes (Metformin 500mg)	150-200	25-40	4-6x
BP (Amlodipine 5mg)	120-180	20-35	4-5x
Drug Category	Branded (₹)	Generic (₹)	Price Difference
Pain (Ibuprofen 400mg)	80-120	15-25	4-5x
Antibiotic (Azithromycin 500mg)	180-250	30-50	5-6x
Cholesterol (Atorvastatin 10mg)	200-300	25-45	5-7x

4.2.2 Price Control Mechanisms

The Government of India has implemented various

5. Future Trajectories: Emerging trends and predictions

IV. FINDINGS AND RESULTS

4.1 Market Structure and Size

4.1.1 Indian Pharmaceutical Market Overview

According to IBEF (2023) and industry reports, the Indian pharmaceutical market presents the following characteristics:

4.2 Pricing Analysis

4.2.1 Price Disparity Between Branded and Generic Medicines

Data from NPPA (2022) reveals significant price differences between branded and generic medicines:

price control mechanisms:

1. Drug Price Control Order (DPCO): Regulates

- prices of essential medicines
2. National List of Essential Medicines (NLEM): Includes 384 medicines under price control
 3. Jan Aushadhi Pricing: Caps prices at 50-90% below branded equivalents
- According to NPPA (2022), under DPCO, 384 formulations have ceiling prices fixed, affecting approximately 18% of the total pharmaceutical market.
- 4.3 Consumer Behaviour Analysis
 - 4.3.1 Factors Influencing Medicine Purchases
- Based on multiple consumer surveys and research studies:

Factor	Influence Level	Source
Doctor's Prescription/Recommendation	Very High (71-85%)	LocalCircles (2022), Nielsen (2021)
Price	High (62-70%)	NIPFP (2020)
Brand Reputation	Moderate-High (55-65%)	McKinsey Consumer Survey (2021)
Pharmacist's Advice	Moderate (45-55%)	IPA (2022)

4.4 Government Initiatives and Their Impact

4.4.1 Jan Aashaadha Scheme Performance

The Pradhan Mantri Bhartiya Janaushadhi Par yojana (PMBJP) represents the flagship government initiative for promoting generic medicines. According to the Department of Pharmaceuticals (2023):

Metric	2014	2018	2023	Growth
Number of Stores	99	3,600	9,300	93x
Medicines Available	200	1,200	1,900	8.5x
Annual Sales (₹ crore)	10	150	1,200	120x
Savings to Public (₹ crore)	50	600	4,000	80x

Despite this growth, the scheme's market penetration remains limited. Jan Aushadhi stores account for less than 2% of total retail pharmaceutical sales, compared to the target of 20% market share by 2025 (DoP, 2022).

4.4.2 State-Level Generic Medicine Initiatives

Several states have implemented complementary programs:

State	Initiative	Coverage
Tamil Nadu	Tamil Nadu Medical Services Corporation	100% government hospitals
Kerala	Jan Aushadhi Plus	150+ stores
Rajasthan	Free Medicine Scheme	All government health facilities
Andhra Pradesh	Aarogyasri Health Scheme	Below poverty line families

Source: State Health Department Reports, 2022

4.4.3 Prescribing Pattern Reforms

The Medical Council of India (MCI), now National Medical Commission (NMC), has issued guidelines promoting generic prescribing. According to NMC (2022):

- 65% of doctors now prescribe by generic names (up from 35% in 2015)
- Medical curriculum now includes modules on

generic medicine awareness

- Continuing Medical Education (CME) programs emphasize cost-effective prescribing

4.5 Economic Burden Analysis

4.5.1 Household Expenditure on Medicines

According to NSSO (75th Round, 2017-18) and updated estimates:

Income Quintile	Monthly Medicine Expenditure (₹)	% of Total Expenditure
Poorest 20%	180	8.5%
Second Quintile	280	6.2%
Income Quintile	Monthly Medicine Expenditure (₹)	% of Total Expenditure
Middle Quintile	420	4.8%
Fourth Quintile	650	3.5%
Richest 20%	1,200	2.1%

The data reveals a regressive pattern where the poorest households spend a disproportionately higher share of their income on medicines.

4.5.2 Additional Cost of Brand Preference

Research by NIPFP (2020) estimated the additional cost burden:

Category	Annual Extra Spending on Branded vs Generic (₹)
Urban Middle Class	8,500-12,000
Urban Upper Class	15,000-25,000
Rural Households	3,500-6,000
Senior Citizens	12,000-18,000

The aggregate additional expenditure on branded medicines across Indian households is estimated at ₹45,000-60,000 crore annually (NIPFP, 2020).

health expenditure

- 3-5% of households experience catastrophic health expenditure (defined as >10% of total consumption)
- Generic medicine adoption could prevent an estimated 20 million from falling into poverty

4.5.3 Catastrophic Health Expenditure

According to WHO (2022) and World Bank data:

- 55 million Indians are pushed into poverty annually due to healthcare costs
- Medicines account for 70% of out-of-pocket

4.6 Quality and Regulatory Framework

4.6.1 Quality Assurance Mechanisms

The regulatory framework for pharmaceutical quality in India includes:

Mechanism	Description	Coverage
CDSCO Approval	Pre-market approval for all drugs	100% of marketed drugs
State Licensing	Manufacturing and sale licenses	All manufacturers
Schedule M (GMP)	Good Manufacturing Practice requirements	All manufacturers
Central Testing Labs	Quality testing infrastructure	74 labs nationwide
Pharmacovigilance	Adverse event monitoring	150+ PV centers

According to CDSCO (2022), the percentage of drug samples found substandard has declined from 4.5% (2015) to 2.8% (2022), indicating improving quality standards.

4.6.2 Public Perception of Generic Quality

Despite regulatory improvements, consumer perception lags:

Perception	Percentage of Respondents
Generic medicines are of inferior quality	58-67%
Generic medicines are as effective as branded	25-32%
Trust government-certified generic medicines	35-42%
Willing to switch to generics after doctor recommendation	68-75%

V. DISCUSSION

5.1 Synthesis of Findings

The secondary data analysis reveals several critical insights into the dynamics of branded versus generic pharmaceutical consumption in India:

5.1.1 Market Dominance of Branded Medicines

The consistent finding across multiple sources that branded medicines command 70-80% of the retail market, despite generic equivalents being available at significantly lower prices, underscores the strength of brand loyalty in India's pharmaceutical sector. This dominance persists even though branded generics (generic molecules sold under brand names) constitute the majority of this market share, suggesting that branding itself carries significant value for consumers.

5.1.2 The Doctor's Pivotal Role

The overwhelming influence of doctor recommendations, cited by 71-85% of consumers as the primary factor in medicine purchases, highlights the critical role of healthcare providers in shaping consumer behaviour. This finding is consistent across multiple surveys and has significant implications for policy interventions targeting generic medicine adoption.

5.1.3 The Affordability Gap

The economic analysis reveals that Indian households spend an estimated ₹45,000-60,000 crore annually extra on branded medicines compared to generic equivalents. This represents a substantial economic burden, particularly for lower-income households who spend a disproportionately higher share of their income on medicines. The regressive nature of pharmaceutical spending exacerbates health inequities.

5.1.4 Awareness Deficit

The widespread lack of awareness about generic medicines, with 68% of Indians unaware of the difference between generic and branded medicines, represents a significant barrier to generic adoption. This knowledge gap allows misconceptions about

quality to persist and prevents consumers from making informed choices.

5.1.5 Policy Impact and Gaps

While government initiatives like the Jan Aushadhi Scheme have shown impressive growth in absolute terms, their market penetration remains limited at less than 2% of retail sales. This suggests that supply-side interventions alone are insufficient and that demand-side factors, including consumer awareness and healthcare provider behaviour, require equal attention.

5.2 Theoretical Implications

The findings support and extend several theoretical frameworks:

5.2.1 Theory of Planned Behaviour

The data confirms that consumer pharmaceutical purchasing decisions are influenced by the three components of the Theory of Planned Behaviour:

- Attitudes: Consumer beliefs about generic medicine quality and effectiveness
- Subjective Norms: Influence of doctors, pharmacists, and social networks
- Perceived Behavioural Control: Consumer confidence in making informed choices

The finding that 68-75% of consumers would switch to generics after doctor recommendation strongly supports the role of subjective norms in driving behavioural change.

5.2.2 Information Asymmetry Theory

The persistence of brand loyalty despite price differentials supports the information asymmetry theory. Consumers lack the technical knowledge to evaluate medicine quality directly and rely on proxies like brand name, price, and healthcare provider recommendations. This asymmetry is particularly pronounced in India, where health literacy remains low.

5.2.3 Price-Quality Heuristic

The correlation between income and brand preference supports the price-quality heuristic, where consumers equate higher prices with superior quality. However, this relationship is moderated by

awareness and healthcare provider influence.

5.3 Comparative Analysis with International Experience

Country	Generic Substitution Rate	Key Drivers
United States	88%	Insurance policies, generic substitution laws
Germany	82%	Reference pricing, pharmacist incentives
United Kingdom	75%	NHS generic prescribing policy
Canada	70%	Provincial drug formularies
India	20-30%	Doctor recommendations, awareness
Bangladesh	25%	Limited regulatory framework

The relatively low generic adoption rate in India, despite the country being a major generic producer, highlights the gap between production capacity and domestic consumption patterns.

5.3.2 Success Factors from Other Countries

Analysis of successful generic adoption models reveals common factors:

1. **Mandatory Generic Substitution:** In the US and many European countries, pharmacists are required to substitute generic unless explicitly prohibited by prescriber
2. **Financial Incentives:** Lower copayments for generic medicines create economic incentives
3. **Physician Education:** Continuing medical education programs emphasize cost-effective prescribing
4. **Public Awareness:** Consumer education campaigns about generic medicine quality
5. **Regulatory Quality Assurance:** Robust quality control mechanisms build public confidence

5.4 Implications for Stakeholders

5.4.1 Policymakers

The analysis suggests several policy priorities:

1. **Strengthening Generic Prescribing:** Mandatory generic prescribing by doctors, with limited exceptions for specific clinical situations
2. **Expanding Jan Aushadhi Network:** Increasing accessibility through more store locations and wider product range
3. **Public Awareness Campaigns:** National-level education campaigns about generic medicine quality and equivalence
4. **Quality Assurance:** Strengthening regulatory oversight and transparent reporting of quality metrics
5. **Healthcare Provider Incentives:** Creating

5.3.1 Generic Substitution Rates

International comparison reveals significant variation in generic adoption:

financial incentives for generic prescribing and dispensing

According to NITI Aayog (2022), implementing these measures could increase generic market share to 40-50% within five years, generating annual savings of ₹20,000-30,000 crore for Indian households.

5.4.2 Pharmaceutical Industry

The findings have implications for both branded and generic pharmaceutical companies:

For Branded Companies:

- Price sensitivity is increasing, particularly among middle-income consumers
- Quality perceptions can be addressed through transparency and consumer education
- The generic segment presents growth opportunities even for established companies
- Doctor relationships remain critical but require ethical engagement

For Generic Companies:

- Investment in brand building is essential to compete with branded generics
- Quality certification and bioequivalence data can build physician confidence
- Distribution network expansion is crucial for market penetration
- Consumer awareness campaigns can drive demand

5.4.3 Healthcare Providers

Doctors and pharmacists have a crucial role in shaping consumer behavior:

1. **Prescribing Practices:** Generic prescribing should become the default, with specific brands

- only when clinically justified
- 2. Patient Communication: Clear communication about generic medicine equivalence can address patient concerns
- 3. Pharmacist Training: Training programs should emphasize generic medicine knowledge and communication skills
- 4. Continuing Education: CME programs should include modules on cost-effective prescribing

5.4.4 Consumers

The analysis suggests that consumers can benefit from:

- 1. Education: Learning about generic medicine quality and equivalence
- 2. Doctor Communication: Asking doctors about generic alternatives
- 3. Pharmacist Consultation: Seeking pharmacist advice on generic options
- 4. Cost Awareness: Comparing prices between branded and generic medicines

VI. LIMITATION

6.1 Methodological Limitations

This study, based entirely on secondary data analysis, has several inherent limitations that must be acknowledged:

6.1.1 Data Availability and Quality

- 1. Inconsistent Definitions: Different sources use varying definitions for "generic" and "branded" medicines, particularly regarding branded generics, making cross-source comparisons challenging
- 2. Data Timeliness: Some government reports and surveys are several years old, and the rapidly evolving pharmaceutical market may have changed significantly since data collection
- 3. Data Gaps: Limited availability of granular data on specific therapeutic categories, regional variations, and demographic subgroups
- 4. Self-Reported Data: Consumer surveys rely on self-reported behavior, which may be subject to recall bias and social desirability bias

6.1.2 Analytical Limitations

- 1. Causal Inference: Secondary data analysis limits the ability to establish causal relationships; correlations identified may not reflect true causal effects

- 2. Confounding Variables: Many studies do not adequately control for confounding variables that may influence both brand preference and other outcomes
- 3. Aggregation Bias: National-level aggregates may mask significant regional, socioeconomic, and demographic variations
- 4. Temporal Limitations: Cross-sectional data from different time periods may not capture dynamic changes in consumer behavior

6.2 Scope Limitations

6.2.1 Geographic Coverage

- 1. Regional Representation: Most data sources focus on urban areas and major cities, with limited representation of rural and remote areas where healthcare access challenges are most pronounced
- 2. State-Level Variations: While some state-specific initiatives are documented, comprehensive comparative analysis across all Indian states is limited by data availability
- 3. North-East and Special Category States: These regions are significantly underrepresented in available data sources

6.2.2 Population Coverage

- 1. Vulnerable Populations: Limited data on specific vulnerable populations including tribal communities, persons with disabilities, and elderly populations
- 2. Gender Analysis: While some gender-disaggregated data exists, in-depth analysis of gender-specific pharmaceutical purchasing behaviour is limited
- 3. Socioeconomic Gradations: Most data categorizes populations into broad income groups, limiting analysis of within-group variations

6.3 Conceptual Limitations

6.3.1 Defining Brand Loyalty

- 1. Operationalization Challenges: Brand loyalty is a complex construct that is difficult to measure through secondary data alone
- 2. Behavioural vs. Attitudinal Loyalty: Available data primarily captures behavioural aspects (purchasing patterns) rather than attitudinal dimensions of brand loyalty

3. Brand Switching: Limited data on the circumstances and drivers of brand switching behaviour

6.3.2 Quality Perception Measurement

1. Subjective Nature: Quality perception is inherently subjective and varies across individuals, making standardized measurement challenging
2. Changing Perceptions: Quality perceptions may change rapidly in response to events (e.g., quality scandals, awareness campaigns), and secondary data may not capture these dynamics
3. Multiple Quality Dimensions: Quality has multiple dimensions (efficacy, safety, appearance, etc.) that are not always distinguished in available surveys

6.4 Generalizability Limitations

1. Context Specificity: Findings from specific regions or population groups may not be generalizable to other contexts
2. Temporal Generalizability: Rapidly changing market conditions, policy environments, and consumer preferences may limit the applicability of findings over time
3. Policy Applicability: Policy recommendations based on historical data may require adaptation to current and future contexts

VII. CONCLUSION

7.1 Summary of Key Findings

This comprehensive analysis of secondary data on generic pharmaceuticals and branded medical stores in India reveals a complex landscape characterized by significant market dominance of branded medicines, persistent brand loyalty among consumers, and growing but insufficient government intervention to promote generic alternatives.

The key findings of this study can be summarized as follows:

Market Dynamics: Branded medicines continue to dominate India's retail pharmaceutical market, commanding 70-80% market share despite generic equivalents being available at significantly lower prices. The branded generics segment, in particular, represents a unique Indian phenomenon where generic molecules are marketed under brand names, blurring the traditional distinction between branded

and generic products.

Consumer Behaviour: Doctor recommendations remain the single most influential factor in pharmaceutical purchasing decisions, with 71-85% of consumers citing this as their primary consideration. Price sensitivity is high, particularly among lower-income groups, but is often overridden by quality concerns and trust in established brands. Awareness about generic medicines remains low, with approximately 68% of Indian consumers unaware of the difference between generic and branded medications.

Economic Implications: Indian households spend an estimated ₹45,000- 60,000 crore annually extra on branded medicines compared to generic equivalents. This represents a substantial economic burden that disproportionately affects lower-income households, who spend a higher percentage of their income on medicines. The regressive nature of pharmaceutical spending exacerbates existing health inequities.

Policy Impact: Government initiatives, particularly the Jan Aushadhi Scheme, have shown impressive growth in absolute terms, with over 9,300 stores now operational and annual sales exceeding ₹1,000 crore. However, market penetration remains limited at less than 2% of retail sales, indicating that supply-side interventions alone are insufficient to drive widespread generic adoption.

Quality Perceptions: Despite regulatory improvements and declining rates of substandard drug samples (from 4.5% in 2015 to 2.8% in 2022), consumer perception of generic medicine quality remains sceptical, with 58-67% believing generic medicines to be of inferior quality. This perception gap represents a significant barrier to generic adoption.

7.2 Theoretical Contributions

This study contributes to the existing literature in several ways:

First, it extends the application of the Theory of Planned Behaviour to the specific context of pharmaceutical purchasing in a developing country setting, demonstrating the relevance of attitudes, subjective norms, and perceived behavioural control in explaining consumer choices between branded and generic medicines.

Second, it provides empirical support for the information asymmetry theory in healthcare markets, highlighting how consumer lack of technical knowledge leads to reliance on proxies

like brand name and price.

Third, it documents the unique characteristics of the Indian pharmaceutical market, including the dominance of branded generics and the critical role of doctor recommendations, which distinguish it from both developed country markets and other developing country contexts.

REFERENCES

- [1] Jzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- [2] Babar, Z. U. D., & Awaisu, A. (2008). Evaluating Community Pharmacists' Perceptions and Practices on Generic Medicines in Qatar: A Pilot Study. *Journal of Pharmaceutical Policy and Practice*, 1(1), 2.
- [3] Bhatt, A., & Mehta, P. (2020). Factors Influencing Generic Medicine Adoption in India: An Application of Theory of Planned Behavior. *Journal of Health Management*, 22(3), 345-360.
- [4] Chisholm, M. A., & DiPiro, J. T. (2002). Generic Drug Substitution: Issues and Controversies. *American Journal of Health-System Pharmacy*, 59(16), 1529-1532.
- [5] Dunne, S., & Shannon, B. (2015). A Review of the Differences and Similarities Between Generic Drugs and Their Counterparts. *International Journal of Clinical Pharmacy*, 37(5), 738-745.
- [6] Haas, J. S., Phillips, K. A., Gerstenberger, E. P., & Seger, A. C. (2005). Potential Savings from Substituting Generic Drugs for Brand-Name Drugs: Medical Expenditure Panel Survey, 1997-2000. *Annals of Internal Medicine*, 142(11), 891-897.
- [7] Hossain, M. M., Khan, M. H., & Rahman, M. (2019). Generic Medicine Utilization in Bangladesh: A Cross-Sectional Study. *Bangladesh Journal of Pharmacology*, 14(2), 67-74.
- [8] Iosifescu, A., Halm, E. A., McGinn, T., Siu, A. L., & Federman, A. D. (2008). Beliefs About Generic Drugs Among Elderly Adults in Hospital and Primary Care Settings. *Archives of Internal Medicine*, 168(6), 664-670.
- [9] Kesselheim, A. S., Misono, A. S., Lee, J. L., Stedman, M. R., Brookhart, M. A., Choudhry, N. K., & Shrank, W. H. (2008). Clinical Equivalence of Generic and Brand-Name Drugs Used in Cardiovascular Disease: A Systematic Review and Meta-analysis. *JAMA*, 300(21), 2514-2526.
- [10] Kesselheim, A. S., Stedman, M. R., Bubrick, E. J., Gagne, J. J., Misono, A. S., Lee, J. L., & Shrank, W. H. (2010). Seizure Outcomes Following the Use of Generic Versus Brand-Name Antiepileptic Drugs: A Systematic Review and Meta-Analysis. *Drugs*, 70(5), 605-621.
- [11] Kesselheim, A. S., Bykov, K., Avorn, J., Tong, A., Doherty, M., & Choudhry, N. K. (2014). Burden of Changes in Pill Appearance for Patients Receiving Generic Cardiovascular Medications After Myocardial Infarction: A Survey of 1,016 Patients. *JAMA Internal Medicine*, 174(2), 291-292.
- [12] Kesselheim, A. S., Gagne, J. J., Eddings, W., Franklin, J. M., Campbell, E. G., & Shrank, W. H. (2016). Prevalence and Predictors of Generic Drug Skepticism Among Physicians: Results of a National Survey. *JAMA Internal Medicine*, 176(6), 845-847.
- [13] Kotler, P., & Keller, K. L. (2021). *Marketing Management* (16th ed.). Pearson Education. Noida: Pearson.
- [14] Mandal, S., Mandal, S., & Pal, J. (2019). Factors Affecting Generic Medicine Adoption in West Bengal, India: A Cross-Sectional Study. *Indian Journal of Pharmacology*, 51(3), 156-163.
- [15] Mishra, D., & Nair, S. R. (2018). Generic Drugs in India: Quality, Availability, and Affordability. *International Journal of Pharmaceutical Sciences and Research*, 9(8), 3201-3208.
- [16] Perera, K., Wickremasinghe, D., New, S., & Perera, U. (2017). Generic Medicine Utilization in Sri Lanka: A Cross-Sectional Study. *BMC Health Services Research*, 17(1), 1-8.
- [17] Raut, S., & Diwan, V. (2021). Jan Aushadhi Scheme: A Game Changer in Indian Pharmaceutical Sector. *Journal of Pharmacy Practice and Research*, 51(2), 145-152.
- [18] Shrank, W. H., Hoang, T., Ettner, S. L., Glassman, P. A., Belnap, L., Stein, M. B., & Asch, S. M. (2006). The Implications of Choice: Prescribing Generic or Preferred Pharmaceuticals Improves Medication Adherence for Chronic Conditions. *Archives*

- of Internal Medicine*, 166(3), 332-337.
- [19] Shrank, W. H., Liberman, J. N., Fischer, M. A., Girdish, C., Brennan, T. A., & Choudhry, N. K. (2011). Physician Perceptions of Generic Drugs. *Annals of Pharmacotherapy*, 45(1), 31-38.
 - [20] Simoens, S., & De Coster, S. (2006). Sustaining Generic Medicines Markets in Europe. *Journal of Generic Medicines*, 3(4), 257-268.
 - [21] Stiglitz, J. E. (2000). The Contributions of the Economics of Information to Twentieth Century Economics. *The Quarterly Journal of Economics*, 115(4), 1441-1478.
 - [22] Sudha, M., & Ganesan, M. (2019). Consumer Perception of Generic Versus Branded Medicines in India. *International Journal of Pharmaceutical Sciences*, 11(2), 45-52.
 - [23] ClinicalTrials.gov. (2023). *Generic Drug Studies in India*. U.S. National Library of Medicine. Retrieved from <https://clinicaltrials.gov>
 - [24] Drug Controller General of India (DCGI). (2023). *List of Approved Generic Drugs*. Central Drugs Standard Control Organization. Retrieved from <https://cdsco.gov.in>
 - [25] Global Burden of Disease Study. (2022). *India: Pharmaceutical Access and Utilization*. Institute for Health Metrics and Evaluation. Retrieved from <https://ghdx.healthdata.org>
 - [26] IQVIA. (2022). *Global Medicine Spending and Usage Trends: Outlook to 2026*. IQVIA Institute. Retrieved from <https://iqviainstitute.org>
 - [27] Statista. (2023). *Pharmaceutical Market in India: Statistics and Facts*. Retrieved from <https://www.statista.com>
 - [28] Desai, R. (2020). *Consumer Behavior in Pharmaceutical Purchasing: A Study of Branded vs Generic Medicines in Maharashtra*. Unpublished doctoral dissertation. Mumbai: University of Mumbai.
 - [29] Patel, K. (2019). *Economic Analysis of Brand Loyalty in Indian Pharmaceutical Market*. Unpublished doctoral dissertation. Ahmedabad: Gujarat University.
 - [30] Sharma, A. (2021). *Impact of Jan Aushadhi Scheme on Generic Medicine Adoption in Rajasthan*. Unpublished master's thesis. Jaipur: University of Rajasthan.