

Comparative Study of Generic and Branded Drugs in Indian Market

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ABSTRACT: *The Indian pharmaceutical industry often referred to as the "pharmacy of the world," is a complex landscape shaped by a wide range of branded and generic drug formulations. This study aims to conduct a comparative analysis of generic and branded drugs in the Indian market, focusing on their pricing, quality, accessibility, and public perception. Generic drugs, being bioequivalent to branded counterparts, offer a cost-effective alternative, yet they often face skepticism regarding efficacy and safety due to limited consumer awareness and marketing disparities. Branded drugs, on the other hand, dominate prescriptions, driven largely by aggressive promotion and physician preferences.*

The study explores the regulatory framework governing drug approvals and quality assurance in India, particularly the role of the Central Drugs Standard Control Organization (CDSCO) and the impact of the Jan Aushadhi scheme in promoting generic drugs. Market data and consumer behavior are analyzed through surveys and secondary sources to understand pricing trends and brand loyalty. The findings reveal significant price variations between branded and generic drugs, despite similar therapeutic outcomes, indicating a need for more robust public education and policy interventions.

The research underscores the importance of strengthening regulatory mechanisms, improving the quality perception of generics, and ensuring physician accountability to encourage rational drug prescriptions. This comparative study provides insights into how the Indian pharmaceutical sector can balance affordability and quality, ultimately contributing to better healthcare access across socio-economic segments. Future research may focus on patient outcomes and long-term health impacts to further validate the role of generics in mainstream healthcare.

I. INTRODUCTION

Generic Drugs:

According to FDA "a drug product that is comparable to branded product in dosage form, strength, route of administration, quality and performance, characteristics and intended uses. It is a copy of branded drug whose patent has expired which has no longer exclusivity right to produce and distribute medicines. When the patent protection for Branded drug expires the generic drug can be offered for sale if FDA agrees. Generic drug manufacture must prove to the FDA about bio-equivalent and bio-availability for approval to make and sell generic drugs and must meet the FDA's rigorous standards concerning the Identity, strength, quality, purity and potency. Generic medicine is generally marketed under the proprietary name. Timely and effective use of medicines can ensure effective treatment of many illnesses and avoid (or) delay the need for costly hospital treatment for patients. Generic drugs are a cost-effective way to treat common illness. Affordable and timely treatment is important to control disease and their complications. Significantly, generic medicines can effectively manage many of today's illnesses and their uses provide the opportunities to substantially reduce cost in health care budget of patients.

Branded Drugs:

Are drugs that have a trade name and are protected by a patent? Can be produced and sold by the company holding the patent. It is the original product that has been developed by pharmaceutical company. It has the right to manufacture and distribution for some time (Patent). A brand name drug is a small molecule that is discovered, developed and marketed by pharmaceutical company. Once a new drug is discovered, the company files for a patent to protect against other companies making copies and selling the drugs. At this point the drug has two names to make it stand out in the marketplace. A brand name is the name given by the innovator and manufacturer of the drug with which it is recognized by the public. Branded medicines are first of their kind, they are invented. The invention of the drug is rather long, expensive and exhaustive dealing with discovery, research,

testing, development, production and marketing. For a pharmaceutical company to market and sell its product must meet requirement and gain approval from the FDA by submitting a New Drug Application. This documentation data is to establish the drug's efficiency, quality and clinical safety.

1.1 Similarity Between Generic and Branded Drugs

- i. Generic medicines go through the same quality control testing.
- ii. They must contain same active ingredients.
- iii. They must have the same dosage form (example 20mg, 40mg).
- iv. They have the same quality and performance.
- v. They must have the same route of administration.
- vi. Generic drugs are safe as branded drugs.
- vii. They have same bio-availability, which is the same rate and extent of absorption.

Accordingly, insuring availability of quality medicines at affordable price to all has been a key objective of the government.

S/N	BRAND NAME	COMPOSITION	M.R.P	RATE
1	FERISIG-XT TAB	Ferrous Ascorbate and Folic Acid tab	97.90	29.90
2	AZIKOP TAB	Azithromycin tablet IP	67.00	49.90
3	FLUCA-150	Fluconazole tablet IP	12.40	7.70
4	ITRAKOP-100	Itraconazole capsule 100mg	185.00	65.90
5	ACELAY-SP	Aceclofenac, Paracetamol Serratiopeptidase tablet	82.00	22.50
6	VOMIPRES S TAB	Ondansetron orally Disintegrating table IP	58.57	6.95
7	ZERODOL	Aceclofenac tablet IP	49.00	10.50
8	PARASAR-650	Paracetamol tablet 650 IP	20.40	12.50
9	NORFLOXIN-400	Norfloxacin and Lactic Acid Bacillus tablets	75.00	17.50
10	MONTZER-LC	Montelukast Sodium and Levocetirizine Hydrochloride tablet.	159.50	20.50
11	ZIREET TAB	Caffeine, Cetirizine, Paracetamol and Phenylephrine.	17.68	3.90
12	THEONAC	Aceclofenac, Paracetamol and Serratiopeptidase tablet	110.00	15.00

1.2 Questions That Have Been Asked by the Students to the Medical Professional

i WHY DO GENERIC DRUGS ARE DIFFERENT IN COLORS AND FLAVOURS?

Trade laws forbid generic drugs to look exactly like the brand name drug, but must all have the same active ingredients for the same medicinal effects These differences often comes from non- active ingredients used such as the dyes, fillers and preservatives which help to determine the size, shape and colour.

ii HOW TO KNOW YOU ARE GETTING THE RIGHT DRUG AT THE PHARMACY?

If your prescription is for a brand name but your doctor permits generic substitution, the drug label will indicate the active ingredient. So, despite differences between brand name and generic drugs, active ingredient is the same, effective. However, talking to your doctor before filling your drug list will guarantee you are getting the right drug. You are not to assume a drug is the same just by looking, it takes an understanding of active ingredient composition to decide.

iii GENERIC DRUGS ARE CHEAPER THAN BRAND NAME DRUGS, WILL THIS NOT OFFER THE QUALITY OF THE DRUGS?

If you are concerned that the generic drugs are cheaper and may affect the quality! Food and drug administration (FDA) works to the generic drugs as safe and effective as brand name drugs. Imagine the world without enough and affordable essential drugs. It is why generic drugs are allowed to make more drugs available and affordable to people who need. Generic drugs are cheaper since the costs of production do not include the cost of development and marketing for the brand name drugs

Questions That Have Been Asked By the Students to the Medical Difference between Generic and Branded

A. Differ in inactive ingredients.

In brand drugs and generic drugs relationship, the difference is the inactive ingredient contained in the drug.

This is why is important to look through the ingredient list on the drug label to see if there is any ingredient not good for you.

B. Differ in cost

Generic drugs are cheaper the Brand drugs.

The cash price and insurance co-pay is typically lower. The cost can be lesser between 20 to 30 percent.

It is meant to be because generic drugs companies do not bear the same investment cost as the brand name company.

C. Different manufacturers.

Different manufacturers produce generic drugs. You will receive your type of drug depending on which manufacturer, your drug store and use.

Difference between Generic and Branded

S/N	DIFFERENCES	BRAND DRUG	GENERIC DRUG
1	Definition	It is the original product that has been developed by pharmaceutical company.	A drug product that is comparable to branded product in dosage form, strength, rout of administration, quality and performance, characteristics and Intended uses.
2	Cost	High cost of development and manufacturing	It is low in, only manufacturing cost there is no development cost.
3	Time required to enter market	It takes long time before entering the market	It takes short time before entering the market.
4	Patent right	It is manufactured protected by FDA patent right.	It only manufactured after the patent right of the brand drug is over.
5	Examples	Glucophage (anti-diabetic) Lopressor (anti-hypertension)	Metformin Metoprolol

II. EXPERIMENTAL WORK

Methods of Data Collection Brand Drugs

ZEEKAST- L TABLET

Price: Rs.104 per 10 tablets

Descriptions: Tablet is the combination of two medicines Montelukast and Levo-cetirizine

Therapy: Anti-allergic Side effects

- Headache
- Stomach pain
- Dry mouth
- Tiredness
- Fever

Generic Medicines

Montelukast and Levocetirizine hydrochloride tab (10mg/5mg)

Price: Rs.20 per 10 tabs Descriptions:

Tablet is the combination of two medicines Montelukast and Levocetirizine

Therapy: Anti-allergic Side effects

- Headache
- Stomach pain
- Dry mouth
- Tiredness

BRAND DRUGS

AZIFIL-250

Price: Rs.70.69 per 6 tabs Descriptions: Azithromycin 250 mg Therapy: Anti-bacterial

Side effects

- Headache
- Abdominal pain
- Vomiting
- Diarrhea
- Nausea

Generic Medicines

Azithromycin 250 mg Price: Rs.45 per 10 tabs Therapy: Anti-bacterial Side effects

- Headache
- Abdominal pain
- Vomiting
- Diarrhea
- Nausea

Branded Medicine

ASENAK-SP

Price: Rs.125 per 10 tabs Descriptions: Aceclofenac 100 mg +

Paracetamol 325 mg + Serratiopeptidase 150 mg. Therapy: Anti-Inflammatory

Side effects

- Allergic skin reaction
- Mouth sores
- Bloody and Cloudy urine
- Fatigue

Generic Medicines

Aceclofenac+Paracetamol + Serratiopeptidase Tablet (100 mg/325 mg/15 mg.) Price: Rs.19 per 10 tabs

Therapy: Anti-Inflammatory

Side effects

- Allergic skin reaction
- Mouth sores
- Bloody and Cloudy urine
- Fatigue

Branded Medicine

TEMIX-500

Price: Rs.11.07 per 10 tabs Descriptions: Paracetamol 500 mg Therapy: Anti-pyretic

Side effect

- Skin reaction
- Ringing or Buzzing in the ears
- Vaginal thrush

Generic Medicine

Paracetamol 500 mg Price: FREE Therapy: Anti-pyretic Side effects

- Skin reaction
- Ringing or Buzzing in the ears
- Vaginal thrush

Branded Medicine

FUNGITOP-IT

Price: RS 450 per 10 tabs Descriptions: Itraconazole 200 mg

Therapy: Fungal Infection of the mouth Side effects

- Stomach Pain
- Nausea
- Headache

Generic Medicine

Itraconazole 200 mg Price: Rs 35/4Caps

Therapy: Fungal Infection of the mouth Side effects

- Stomach Pain
- Nausea
- Headache

Branded Medicine

MEGAMOX - CV DUO

Descriptions: Amoxyllin & potassium clavulinate oral suspension IP

(400mg + 57mg) Price: Rs 59.47 Therapy: Antibiotic Side effects:

- Allergic skin reaction
- Fever
- Diarrhea
- Skin yellowing

Generic Medicines

Amoxyllin & potassium clavulinate oral suspension IP (400mg + 57mg) Price: Rs 59.47 Therapy: Antibiotic Side effects:

- Allergic skin reaction
- Fever
- Diarrhea
- Skin yellowing

Branded Medicine

EMESET

Descriptions: Ondansetron

Oral solution suspension 30ml IP Price: Rs 35.51

Therapy: Antiemetic Side effects:

- Headache
- Constipation

Generic Medicines

Ondansetron

Oral solution suspension 30ml IP Price: Rs 10.8

Therapy: Antiemetic Side effects:

- Headache
- Constipation

Branded Medicine

LOX 2%

Descriptions: lignocaine hydrochloride injection IP

Price: Rs 31

Therapy: Local Anesthetic Side effects:

- Injection site reaction
- Dizziness
- Slow heart rate

Generic Medicines

Lignocaine hydrochloride injection IP Price: Rs 19.6

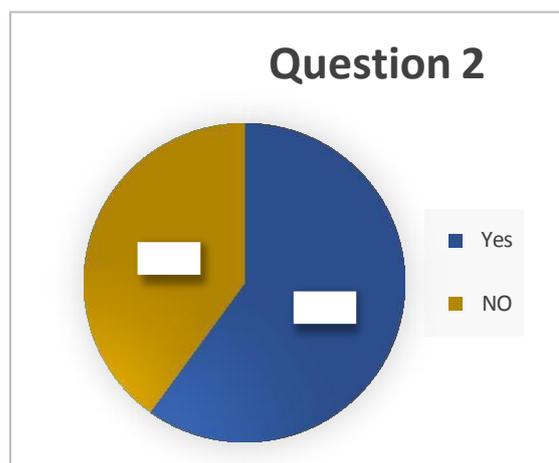
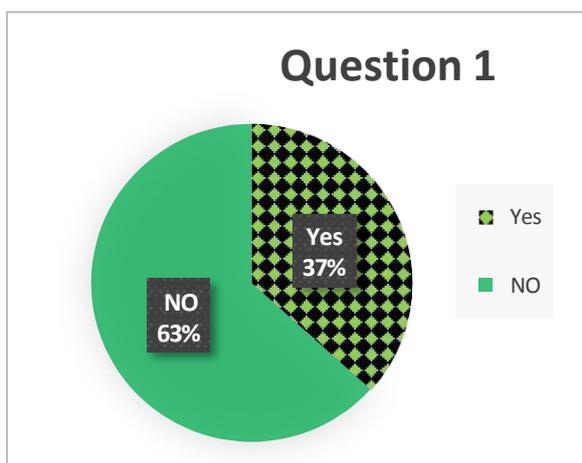
Therapy: Local Anesthetic Side effects:

- Injection site reaction
- Dizziness
- Slow heart rate

II. RESULTS AND DISCUSSION

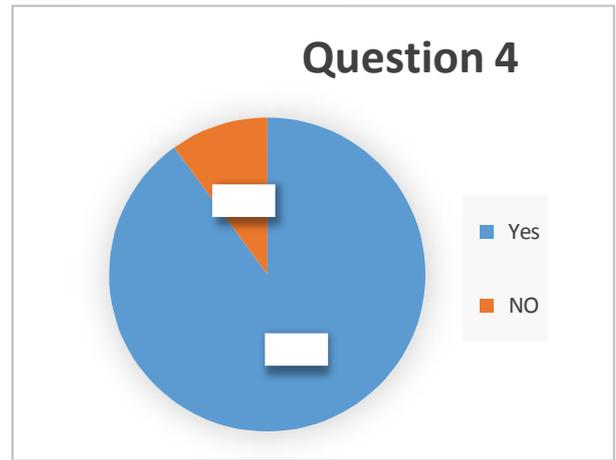
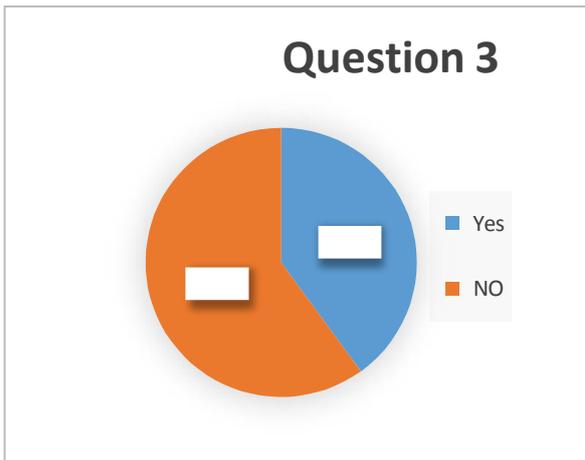
Are you using Generic drugs right now?

Are you using Brand drugs right now?

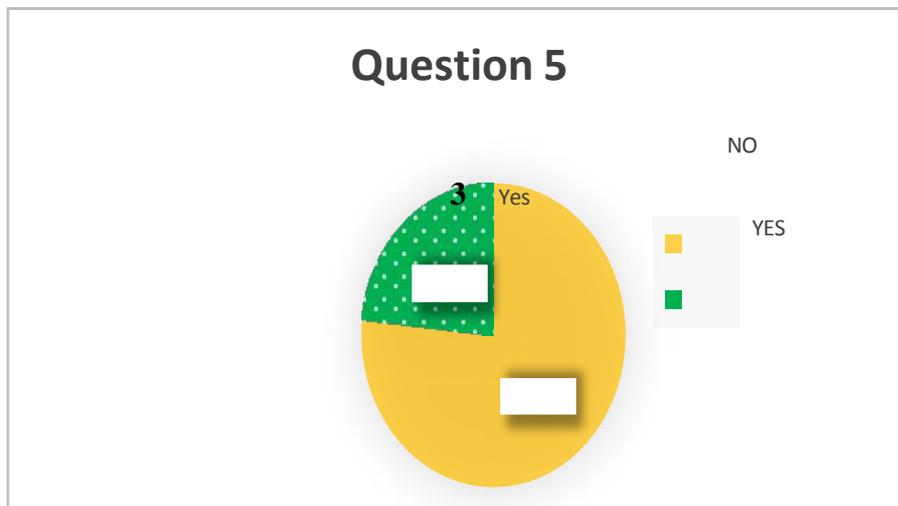


Do you know any medical shop where Generic medicines are available?

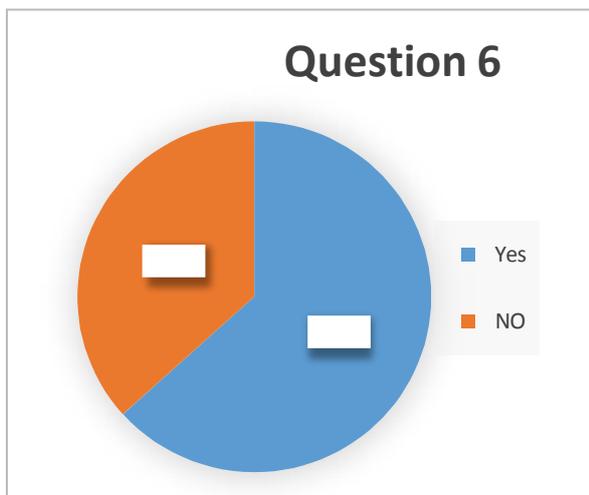
Do you know any medical shop where Brand medicines are available?



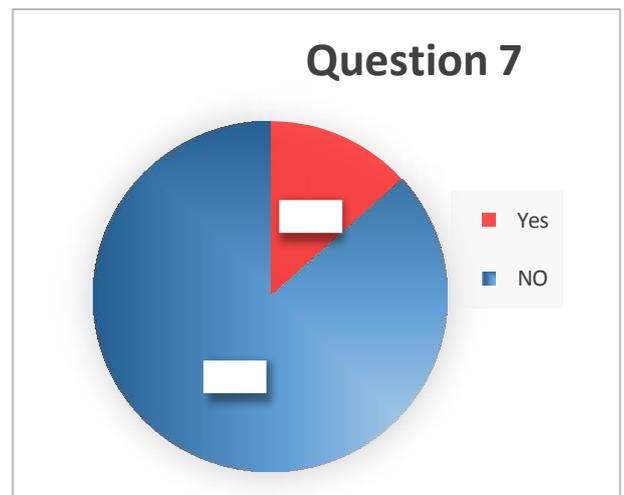
Is there any quality difference between generic and branded medicine?



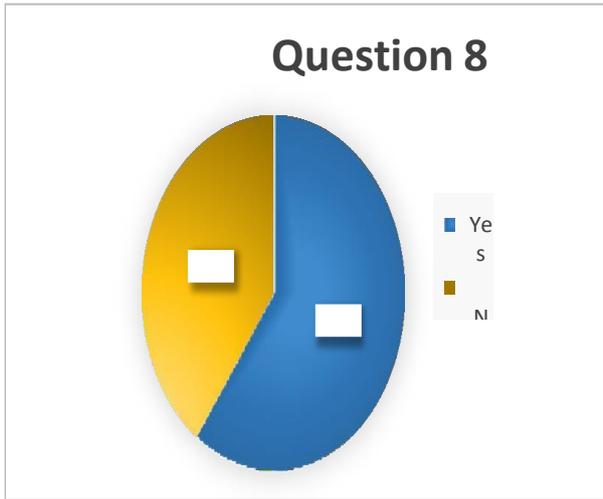
Is there any availability issue of generic medicines?
Is there any availability issue of Branded medicines?



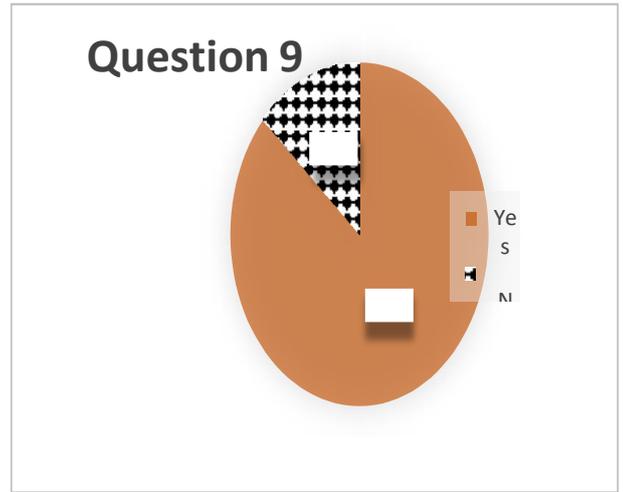
Do generic drugs have same effects as branded medicines?



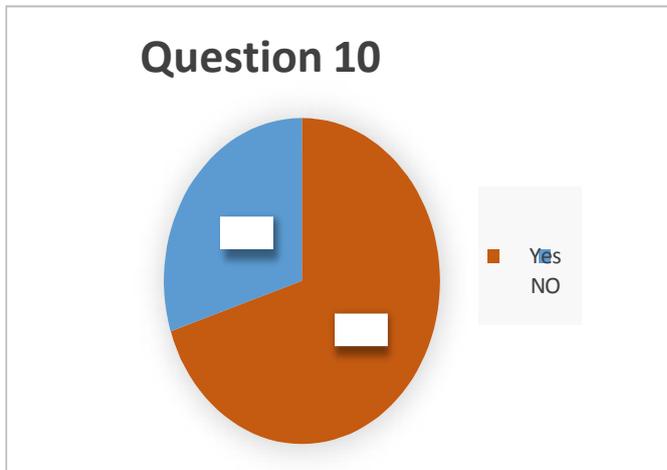
Generic medicines are safe as branded medicines?



Is the generic are effective as branded?



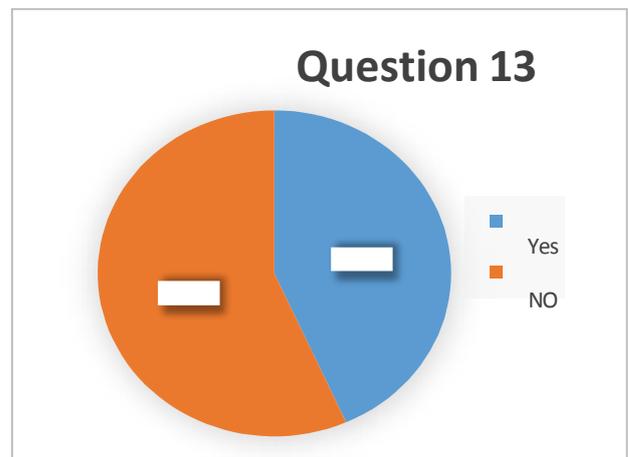
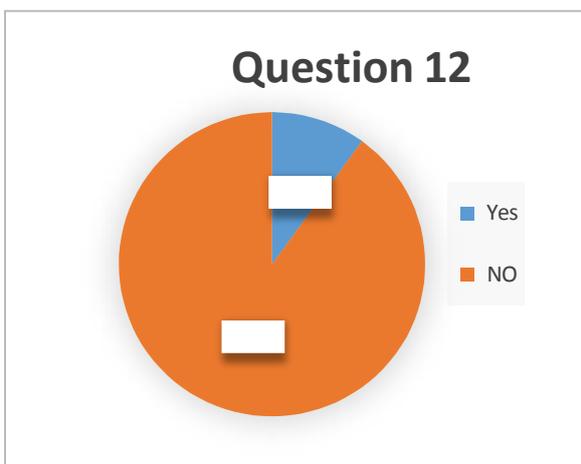
Are generic drugs less expensive?



Are branded drugs less expensive?



If the cost of generic is low then are they inferior in quality?



CONCLUSION

On the basis of the above presentation we conclude that when people hear the argument from both side there is comfort associated for taking a brand name drugs because of quality safety and effectiveness. According to pharmacist most of the patients strictly follow prescription which mostly contain branded drugs. People are more doubtful about difference in quality and effectiveness. In India commission of sale brand name drugs is much higher in supply chain management. Even if generic drugs are going to be available free of cost at government hospital the war of price between branded and generic medicine may not stop. As we see the result from our questionnaire and interview we have conducted the differences of branded and generic medicines to the society is too high due to their lack of knowledge on them, we as a pharmacy professional and the government we are required to give more knowledge on differences and their similarity of their safety and effectiveness. As people think generic medicine is low quality and not effective as branded medicine, it is very essential to teach people regarding generic medicines and uses of it. At last, the main aim of this project is too aware the people regarding generic medicines and its benefits and also to get nation with economically beneficiary health.

Firstly, we have explain about the generic and branded medicines, then we analysed the differences and reasons for price variation and various price differences of drugs as shown in the tabular column. The main aim of this project is to teach people regarding why the price is different and to provoke the people to use it and get economically beneficiary health.

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