

INSIGHTS ON PATIENT PERCEPTION TOWARDS GENERIC VS BRANDED DRUGS

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ABSTRACT

Background: Generic and branded are the two different versions of a same drug formulation. Although both are equivalent in all ways, there exists a confusion and misinformation about generic medications. According to WHO statistics, almost more than half of the world's population deprives of health coverage. Also, people are at the edge of poverty due to their medical bills and spent most of their household budget on the medications. Several pharmaceutical companies, drug makers, advertisements, even medical professionals have influenced to draw a picture of misbelief among patients that branded ones are superior. Even during generic substitution (GS), there arises a doubt regarding the generic drug effectiveness. Various factors draw patient

attention to branded drugs. Major myth that patients behold is 'branded drugs are superior than generic ones', 'generics are of low quality as they are cheaper'. **Methods:** Literature review was conducted among various articles previously published related to generic and branded drugs and patient's knowledge regarding the two versions of drug. **Observation:** Majority of the population held a negative impact on generic drugs. Although more than half of the patient population poses a good view about generic drugs, the number decreases when it comes to its use. Education, income, advice from health care professionals, advertisements have a major influence on improving generic drug use. Amidst all, government took various initiatives to improve generic use and to reduce financial burden.

KEYWORDS: Generic, Branded drugs, Generic Substitution, Superior.

INTRODUCTION

Generic Drugs are copies of brand name drugs having exactly the same dosage, use, effects, side effects, ROA, risks as the original drugs.^[1] As defined by WHO, generic drugs mean a pharmaceutical product that is usually intended to be interchangeable with an innovator company and is marketed after the expiry date of the patent.^[2] Generic works in the same way and taken same amount of time as branded ones. As patent nears expiration, manufacturers can apply to the FDA for permission to make and sell generic versions FDA approves generic drugs only if it meets same bioequivalences, strength, purity and quality as branded counterpart.^[3] There is a myth that generics are ineffective as they are cheaper and take longer to work.

Generic medicines do not have to spend on research and development of a new drug; they joint copy the patent formulae which is the reason why generics are cheaper. Patients perception regarding the use of generics would change of packing, colour, size, shape, etc. are altered. Even though a large proportion of population had a good perception towards generic drugs but there is disagreement when it comes to the use of generics.^[4] This can be due to lack of proper education on generic drugs. Other factors also affect the perception of people towards generic substitution, safety, efficiency, cost, advice from family members, physicians and pharmacists, impact of advertisement, economic status, educational status etc.

Healthcare costs in India have eventually added up more people below poverty line.^[4] It is estimated that if more prescribers go for generic substitution drug expenditure could drop significantly. The Medical Council of India notified practice of prescribing generic names mandatory. But a very few are aware of this or asks physical pharmacists to provide generic drugs. Many of the patients utilize branded drugs for chronic disease and generics as OTCs. Even though generic drugs use has been increasing globally, still there exists fallacy on generic drugs. This review was conducted to examine various patient perception towards generic and branded drugs. Also, to assess factors that affect their view regarding the two versions of the same drugs.

METHODOLOGY

A literature study was carried out to identify patient perception related to generic and branded drugs. Various articles were reviewed which measured consumer views towards different versions of drug. Various factors that influenced use of generic drugs were assessed. More than 5 factors were assessed in this literature review. Patient misbeliefs regarding generics

were ruled out. Cost concern and cost associated generics use, use of generics and branded in treatment of various illness; impact of various other factors was analysed by review of different articles related to the topic.

RESULT

Various factors that have impact on patient perception and buying behaviour of generic vs branded drugs are as follows:

PATIENT HEARING/KNOWLEDGE ABOUT GENERIC VS BRANDED DRUGS

Assessing articles to examine whether patients have heard or have the knowledge concerning generic and branded drugs, the outcome was a no on the whole. An article by Stuart and Gupta contained information that 74% have no knowledge on generic drugs.^[5] 72 % of the study population have heard about generic medications and 65% have understanding about generic v/s branded drugs.^[6] Another study has shown that among the study population 23% have no knowledge regarding generic and branded drugs. On the other hand, about 29%, which is a minor population reported to have well knowledge about generic and branded drugs. From the above study a total of 77% were educated on the difference between the two versions.^[7]

All above studies provide a rough figure, but an important information that sum up the fact that general population /patients are less aware about the two version of same drug. Yet another study conducted at Rajasthan showed that 92% of patients heard about generic drug with a range of 76% have knowledge on their difference.^[4]

IMPACT OF AGE ON BUYING GENERIC VS BRANDED DRUGS

Study published on 2017 regarding patient's perception towards generic and branded medications contained that 44% of study population of age 55 and above depend on branded drugs. While 52% generic drug consumers comprised of age group 25-40, which shows that younger population depend more on generic medicines.^[8] It also concluded that older people tend to stick more on to branded medications while younger group comprise the major part of generic drug buyers. Population study survey conducted on public opinion on generic substitution deduced that older age group refuse to generic substitution.

IMPACT OF GENDER ON BUYING GENERIC VS BRANDED DRUGS

Females tend to buy any drug that is effective regardless of branded or generic while male consumers would opt for branded drugs. Outcome of another study is that 60% of branded drug buyers were female with generic drug buyers having highest male proportion (57%).^[8] Women buy generic drugs more when compared to men as they believe that it is superior than branded ones.^[9]

IMPACT OF EDUCATIONAL LEVEL ON BUYING OF GENERIC VS BRANDED DRUGS

All studies show that educational level is directly linked with perception of generic drugs. Less educated patients be on safe side by avoiding trials on new medication i.e., they rely mostly on prescribed drugs. More educated persons tend to try changing trends in medication mainly generics if they perceive that there is equal effectiveness in health outcome.^[8,10] Low education level among patient patients would narrow their mind towards generic drug prescription. Highest degree of education would improve patient's knowledge and attitude towards generic substitution. They also tend to switch to generics as they have no misconceptions on generic drugs.^[11] Less educated personal has more negative impact. But another study contradicts this finding, less educated patients have a good picture about generics and consider it to be superior.^[7] Even well-educated patients too pose misbeliefs.

IMPACT OF COST ON BUYING GENERIC VS BRANDED DRUGS

Generic drugs are the substituent for branded drugs with same efficacy, yet they are less expensive. There is a general misconception that cheaper products are of inferior quality. Almost all studies have pointed out that patients believe generics to be inferior as they are cheap. Patients develop suspicions regarding its safety, efficacy, quality and therapeutic outcome 27% of study population concerned with cost in case of generic and branded drugs^[8] and >50% of consumers buy generic medication due to low cost.^[7] Another study showed that a minority study population (14%) considered generics were not cheap.^[4] 91.8% has opinion that generics are less expensive and attract lower sections of society to some extent. Same in case of study published by Dunne where half of the population is price concerned and 94%^[11] poses a righteous view on cost of generics. On contrary, in developed countries cost do not attract weaker sections of society^[10] but in developing countries major patient population is cost sensitive.

IMPACT OF INCOME ON BUYING GENERIC VS BRANDED DRUGS

Drug purchase is correlated with income. Weaker sections of society, to a lesser extent depend on generic drugs as branded ones are costly. Buying behaviour is not only linked with income but also other factors like their knowledge about both versions. A study showed that patients with lower income tend to have less knowledge about different versions of same drug.^[11] One reason they depend on generic drugs is due to low cost but on other hand they rely on branded drugs even when it is expensive is because of the myth that generic drugs are substandard.^[10] Another study published by Aslam and Mittal included assessment regarding income impact. Here, 42% with income 40,000-60,000 relies on generic versions. That is sections with higher income not always buys branded drugs, as they found to be more educated which alter their perspective and myths towards generic drugs.

Another review also showed that patients with lower income have more negative impression on generic medicines.^[10] Increased level of education can sometimes have positive impact on selection of generic versions but on other hand a myth that generic drugs are ineffective still retain patients from choosing the best yet cheaper drug version.

IMPACT OF EFFICACY BELIEFS ON BUYING GENERIC VS BRANDED DRUGS

Several studies show that even though patients possess a positive attitude towards generic drugs, the ratio declines when it comes into usage rate of it.^[5,6,9,10] This can be due to the myth that generics are less effective as they are cheaper. Another study by William.H. Shrank published on 2009 have greater figure (>70%) opted that generic drugs are of better quality. But these figures turn around 37.6% in case of assessing the use of the same and around 50% of study population believe that branded drugs are more effective^[4,5] and 81% believed in contrasting way.^[5] Analysing other journals conclude different outcome. 83% believed that both versions are equally effective and poses similar health outcome.^[7] Efficacy belief of patients on generic drugs declined (32%) on another study.^[8]

IMPACT OF QUALITY BELIEFS ON BUYING GENERIC VS BRANDED DRUGS

FDA approves generic drugs only if it possesses same active ingredient, bioequivalence, identical strength, quality, safety and efficacy. But those with less knowledge about generic drugs believe that generics are substandard when compared to branded ones. And the most common credence is that cheaper goods are of inferior quality.^[11] On reviewing various articles, the quality belief on generic and branded drugs found to have mixed outcome. On one study, 65% believe that both generic and branded versions pose equal quality.^[4] While

other two studies show negative impact of patients on the quality of generic medicines.^[6,8] 61% misbelieves that generics are of substandard quality as per article published by Shailesh Tripathi and same in case of assessment by Colgan^[12], where majority of population believe that generics are of lower quality. This misbelief reduces generic drug use as patients don't tend to risk their health outcome.

IMPACT OF SAFETY BELIEFS ON BUYING GENERIC VS BRANDED DRUGS

Patients show less interest in generic substitution, can be due to safety misconceptions associated with the two versions. Study by Kohli and Buller interpreted that 91% concurred with the fact that both versions are equally safe. 42% believes that branded medications are less harmful and have the ability to cure disease quickly.^[8] The varied responses are due to lack of information and knowledge on branded and generic drugs. A higher ratio of respondents sticks to the option that generic drugs are less safe^[12] and 10% believes that generic drugs causes side effects more than that of branded drugs.^[9] Most of them don't know the fact that generic drugs are approved only if it poses the same safety, efficacy, quality as that of branded ones. As generics are cheaper, most patients develop a doubt regarding its safety and efficacy.^[11]

IMPACT OF ADVICE FROM FAMILY MEMBERS AND HEALTH CARE PROVIDERS

Patients tend to try out a new medicine when advised by family members and mainly by health care providers. Health care providers include pharmacists and physicians.

a) Family members

Advice from family members had no influence on consumers buying behaviour. A small proportion i.e., 37 out of 160 respondents reported to buy generics as advised by family members.^[7] Impact of advice from family members influenced 36.9% to buy generic versions as per study conducted by Jenga, Sarita. Another study also revealed the similar outcome that buying pattern of patients are influenced by advice from family members to a lesser extent.^[11]

b) Pharmacists

These group has greater influence on changing the minds of consumers buying pattern. As pharmacists are closely related with patient secondary to physicians, they play a role in providing right information to them. 34% of the study population stated that they procured generic drug information from pharmacist.^[13] All patients are not influenced by advice from

pharmacists as they tend to stick onto the prescribed branded drugs by the physician. Most people made a generic substitution on advice from pharmacist.^[7] Some patients reported that they feel free to talk to physicians (66%) than with pharmacist (61%).^[9] In certain cases, patients buying pattern depend on pharmacist's advice.

Pharmacist might substitute branded ones with available generic drugs cannot provide a positive outcome^[8] in all cases as existing myths regarding generics cannot be ruled out only with the advice from pharmacist alone. Patient perception on generic acceptance is not altered if told by pharmacist, responded by 35% of study population and lesser population change their mind from buying branded to generic if so directed by pharmacist.^[4] Study published by William.H. Shrank, concluded that 33.5% of people asked for generic substitution with pharmacist and 24.2% pharmacist communicated to patients about generic substitution more than with physician (19.6%).

This implies, pharmacist's communication with patient would help in improving patient's knowledge, perception and usage pattern of generic drugs and help to overcome their misconception to a greater extent.^[10]

c) Physician

Generic drug usage found to be improved when physicians directs patients to do so.^[7] Patients with less knowledge stick on to prescribed branded drugs, physicians play a crucial role in educating them. 84% trusts doctors for generic substitution.^[5] It is the sole responsibility of the physician to enquire patients about their cost related issues, affordability and prescribe drug versions based on their cost concern.^[8] Decision on buying generic or branded drugs by women are influenced by doctor's advice. A large patient population, 88%, prefer generics if recommended by health care providers.^[4] Study published by Dunne interpreted that physicians prescribe generic drugs only after discussion with patients. Studies in New Zealand, Australia, South Africa etc point out the fact that educational status is linked with their notion regarding generics and so patient education by physicians has greater impact.^[11]

14.6% physicians communicated with patients about generic medications and 33.2% patients asked for generic substitution with physicians.^[9] Patients responded to be unpleasant about the physician's prescription pattern without discussing with them.^[6] Patients need to be asked about their choice on drug version, cost concern and affordability. Major population tend to

move towards generic substitution if advised by physicians.^[10] So better communication is what patients expect and is the key factor that helps to get rid of misconceptions related to generic versions of drug.

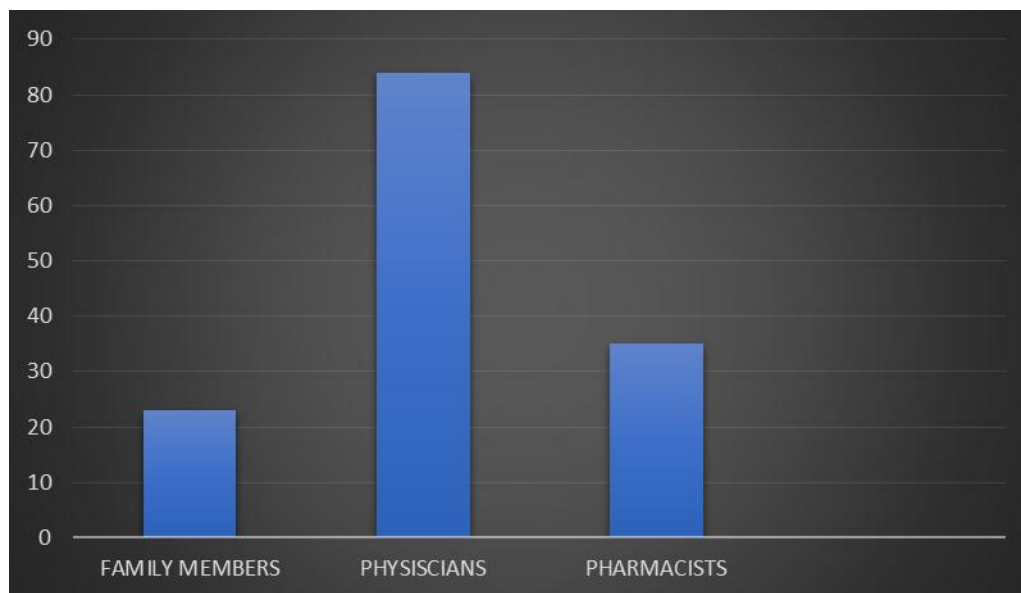


Fig 1: Impact of advice from family members, physicians, pharmacists on buying pattern and use of generic vs branded drugs.

IMPACT OF ADVERTISEMENT AND GOVT. RULES ON BUYING GENERIC VS BRANDED DRUGS

Buying patterns of a person is influenced by advertisements and also rules implemented by Govt. on prescription of generic drugs. 24% responded in a study that Govt. should promote generic medicines.^[6] Even if there are Govt rules, many are unaware of it. Following advice from family members and health care providers, advertisements and social media cult the way to improve information on different versions of drug. Advertisements on branded drugs is far more than that compared to ads with generic drug influence.^[7] Govt should promote generic drug information through various platforms that would catch consumer attention. Many are still unaware of the availability of generic substitution to existing branded drug which is far cheaper than the latter one.

Another way to get consumer attention is through pharmacy outlets where generic drug advertisement and information should be made available to overcome the existing myths. Around 50% respondents preferred that Govt should take initiative to improve generic drug use^[9] and 24% responded promotion by government is needed.^[6] Less knowledge about generics among general population result in increased financial burden and

misinterpretations. Almost all respondents needed Govt to advertise more in generic versions. The advertisement platform is taking over by various companies of branded drugs which need to be tamed. Govt have opened 'Jan-Oushadi' stores in India to help people to utilise generic drugs with the same safety and efficacy as branded drugs.^[6]

USE OF GENERIC AND BRANDED DUGS IN TREATING ACUTE AND CHRONIC ILLNESS

Assessing the usage pattern of generic and branded drugs in treatment of acute and chronic illness, various studies reported that patients depend on branded drugs for the cure of chronic illness. As patient approach physicians for the treatment of chronic illness such as HTN, DLP, asthma etc, they prescribe branded drugs, which the patient stick on to after that. 62% of the study population uses branded drugs for chronic diseases. Patients depend on generic drugs as a remedy for minor illnesses^[11] as they have trust issues with the long-term safety and efficacy of generics and more than that patients adhere to a specific brand/company which the physician prescribes.

Majority has a misbelief that generics are less effective and so don't trust when it comes to the choice of generic or branded one for treating chronic diseases.^[5] In a study by William.H. Shrank shows that generic drugs are opted for both chronic and acute illness recovery. While analysing preference of generics and branded drugs in case of OTC medications, the outcome supports the selection of generic as OTC drugs. There is more financial burden on patients in case of chronic illness treatment as it needs lifetime medication use. Burden increases further when patients especially in lower sections of society advised to use branded drugs.

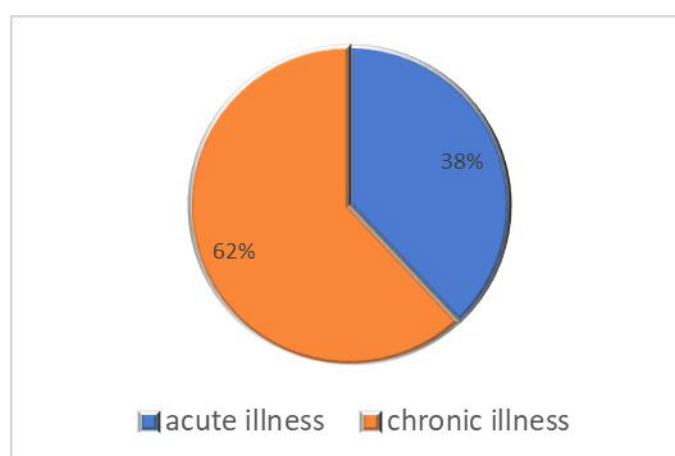


Fig 2: Patient use of branded drugs for treating various illnesses.

Fig 3: Various factors that influence patient perception on generic and branded drugs.

FACTORS	GENERIC DRUGS	BRANDED DRUGS
AGE	YOUNGER ADULTS	>65 YEARS
GENDER	FEMALES	MALES
EDUCATION	HIGHER EDUCATED	LOW EDUCATED
EFFICACY BELIEFS	INFERIOR	SUPERIOR
SAFETY BELIEFS	INFERIOR	SUPERIOR
QUALITY BELIEFS	INFERIOR	SUPERIOR
INCOME	HIGH INCOME	LOW INCOME
ILLNESS TREATMENT	ACUTE ILLNESS	CHRONIC ILLNESS
ADVERTISEMENTS	LESS	MORE

DISCUSSION

This review has shown that even when patients have a good perception towards generic drugs, they are afraid/being pulled back from the use of generic version of drugs. Here, the fallacy that cheaper ones are inferior plays a major role. Patients don't want to take risk regarding these health outcomes. When it comes to education, which is directly associated with knowledge about generics, less educated patients have negative views towards generic drugs. More than half of the population in developing countries are cost sensitive. But they don't get attracted by low cost. All these myths are a result of lack of proper knowledge about both versions. Age and gender have a role to play on the rate of generic drug use, where younger age group and females depend on generic versions. Patients accept a generic substitution, if so when advised by physician and pharmacist. But the results show that physicians or pharmacists most of the time doesn't ask about patient's affordability or choice of drug prescription, which was a complaint raised by patients in various studies. Majority are unaware of the fact that generics are bioequivalent in regards of safety, efficacy, quality etc, with a low cost. Changing this misbelief would help to improve generic drug use and thereby reducing economic burden on patients as they depend on branded drugs for the chronic illness which would add on to their expenditure and finance burden.

CONCLUSION

Lack of information leads to misbeliefs related to generic drugs. To improve perception and use of generic drugs, proper information should be provided to the patients to enhance their knowledge. Although there are Jan Oushadi stores that sell generic drugs, very less amount of people makes use of this facility. There are existing Govt rules regarding mandatory prescription of generic drugs, most of the patients are unaware of this and do not ask physician or pharmacist for generic substitution.

Even when the pharmacist opts for generic substitution, patients accept it only if advised by physicians. In most cases patients under treatment of chronic illnesses stick on to branded drugs prescribed by their physicians. Any change in name, size or colour would arise a hesitancy among them. So, physicians as a health care provider has a sole responsibility to change the mindset of patients towards generic version of drugs. Physician should prescribe the generic version of the same drug if available.

Another element is advertisement. Government should advertise more about generic drugs information and rules related to generic drug prescription and thus to create awareness among public and help to get rid of their myths. Social media platforms can also be utilised to improve the outcome. From this literature review it can be concluded that patient perception can be altered to a greater extent by the efforts of health care providers, media and government.

CONFLICT OF INTEREST

The authors declared no conflict of interest with respect to the authorship, research or publication of the article.

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