

RESEARCH ARTICLE

Assessment of perception and attitude of postgraduates and clinicians toward generic versus branded medicines at a teaching medical institute

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Received: November 03, 2017; Accepted: November 23, 2017

ABSTRACT


Background: Generic prescribing is still a contentious issue among prescribers, and the issues of bioequivalence, quality, and safety remain problem areas. Generic substitution of brand medicines is an accepted practice in many parts of the world, and this is often done for economic reasons. **Aims and Objective:** The aim and objective of this study was to assess the attitude of clinicians and postgraduate students regarding generic drugs and branded drugs. **Materials and Methods:** The present study was a questionnaire-based, cross-sectional study conducted among clinicians and postgraduate students at NRIMC and SMC, Vijayawada. Assurance of confidentiality (informed consent) was also taken from the participants. After approval and clearance from the Institutional Ethics Committee, 75 participants were included into the study by the investigator. After explaining about the nature and purpose of the study, the study participants were interviewed using structured questionnaire to assess the awareness about the generic drugs and to determine the attitude and practice toward generic drugs. The appropriate instructions about filling questionnaire were given. Analysis was performed and the data were expressed in *n* (%). **Results:** In the present study, 87.7% of the clinicians and postgraduates were aware of generic drugs. Most doctors believed that generics are therapeutically (59.6%) and safety wise (71.9%) equivalent to branded drugs, 89.5% are of the opinion that generics are cheaper than branded ones. Nearly 59.6% of them were aware of Jan Aushadhi pharmacy. **Conclusion:** A very good percentage of doctors were aware of generic medicines, their attitude toward safety, efficacy, and cost-effectiveness of generic medicines was good and majority of them said that they prescribe generic drugs. However, there was a meaningful proportion who expressed their concern about the quality and efficacy of generic drugs. These beliefs could hinder larger generic drug use and increase health-care expenses of patients with chronic illness. Proper awareness in physicians about the generic prescription practice may improve the patient compliance by reducing the economic burden to the patients.

KEY WORDS: Attitude; Practice; Jan Aushadhi; Generic Drugs; Brand Drugs

INTRODUCTION

The U.S. Food and Drug Administration (FDA) defines a generic drug as “a drug product that is comparable to a brand/

reference listed drug product in dosage form, strength, route of administration, quality and performance characteristics, and intended use.” The generic drug may differ from the original in non-essential characteristics such as color, taste, and packaging. Although they may be not associated with a particular company, generic drugs are usually subject to government regulations in the countries where they are dispensed. They are labeled with the name of the manufacturer and a generic non-proprietary name such as the United States-adopted name or international non-proprietary name (INN) of the drug. A generic drug must contain the same active ingredients as the original brand-name formulation.^[1]

Access this article online	
Website: www.njppp.com	Quick Response code
DOI: 10.5455/njppp.2018.8.1144523112017	

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Many people become concerned because generic drugs are often substantially cheaper than the brand-name versions. They wonder if the quality and effectiveness have been compromised to make the less expensive products. The FDA requires that generic drugs should be as safe and effective as brand-name drugs. Hence, there is no truth in the myths that generic drugs are manufactured in poorer quality facilities or are inferior in quality to brand-name drugs. The FDA applies the same standards for all drug manufacturing facilities, and many companies manufacture both brand-name and generic drugs. In fact, the FDA estimates that 50% of generic drug production is by brand-name companies.^[2]

Globally, health-care costs have been increasing rapidly and governments have adopted cost containment measures in an attempt to ensure efficient utilization of scarce resources. One of the important mechanisms to reduce health-care costs is to promote the use of cheaper generic medicines instead of more expensive branded equivalents.^[3]

In Indian scenario, generic substitution is not universally practiced and this may result from various factors including non-availability of generic formulations, distrust of generic medicines by practitioners often due to perceived inferior quality, and counterfeiting of drugs.^[4] To overcome the problem inflicting immense economic impact on poor population, the Indian government had launched the Jan Aushadhi campaign in April 2008 by opening government-controlled centers in various states to provide quality generic medicines at lower prices to their counterpart branded ones to make them easily affordable to a common man.^[5]

The doctor's prescription has a significant influence on the usage of generic medicines, particularly in developing countries where patients or relatives leave no stone unturned to buy precisely what is prescribed.^[6] Physicians may favor branded medicines on various accounts. Many doctors may believe that generic medicines are not as effective and safe as their brand-name counterparts. Moreover, generic medicines in the past have been denounced for being below standard mainly due to poor adherence with good manufacturing practice guidelines.^[7] Many doctors may not be familiar with the rigorous regulations imposed by the regulatory body for proving bioequivalence before a generic medicine is granted approval.^[8] Therefore, understanding doctor's perceptions and an understanding about generic medicines may help in recognizing possible barriers to greater generic medicine usage.^[9]

In this regard, the present study was undertaken to generate data on awareness about generic drugs among postgraduate students and clinicians and to propose methods of improving generic prescription.

MATERIALS AND METHODS

The present study was a questionnaire-based, cross-sectional study conducted among clinicians and postgraduate students at NRIMC and SMC, Vijayawada. Assurance of confidentiality (informed consent) was also taken from the participants. After approval and clearance from the Institutional Ethics Committee, 75 participants were included in the study by the investigator. After explaining about the nature and purpose of the study, the study participants were interviewed using structured questionnaire to assess the awareness about the generic drugs and to determine the attitude and practice toward generic drugs. The appropriate instructions about filling questionnaire were given. The questionnaire consisted of 18 questions pertaining to awareness of participants toward generic medicine, eight questions eliciting participants' attitude toward generic medicine.

Statistical Analysis

The data were analyzed using Microsoft Excel 2016 and the analyzed data were expressed in percentages (n [%]).

RESULTS

A total of 75 questionnaires were distributed among the health-care professionals and only 57 responded (response rate: 76%).

Out of the total 57 participants, majority of the respondents were males (70.1%), and most of them belonged to the age group of 31 and 40 years (40.3%) [Table 1].

Demographic Profile

About 87.7% of clinicians and postgraduates were aware of generic drugs. Moreover, 59.6% of doctors felt that the generic drugs are as effective as brand drugs. Majority of doctors (75.3%) were of the view that generic drugs were as safe as

Table 1: Demographic details of participants ($n=57$)

Factor	Frequency
Gender	
Male	40 (70.1)
Female	17 (29.9)
Age (in years)	
20–30	15 (26.3)
31–40	23 (40.3)
41–50	15 (26.3)
>50	4 (7.01)
Qualification	
Clinicians	25 (43.8)
Postgraduates	32 (56.2)

the innovator drugs. Nearly 89.5% are of the opinion that generics are cheaper than branded ones, 59.6% of them were aware of Jan Aushadhi pharmacy, 47.3% responded that they practice generic prescription, and 80.7% of doctors believed that it is necessary to implement INN prescription system. About 77.2% of doctors knew that generic prescribing will lessen the pharmaco-economic burden of country and 80.7% support generic substitution for brand drugs in most cases [Table 2].

Around 91.2% of doctors think that the usefulness of generic drugs for the treatment of common diseases should be emphasized during their basic undergraduate teaching; more information should be provided through media, newspaper advertising, and publicity. A majority of doctors (71.9%) emphasized that the government should come up with

more strict laws for implementation of generic prescription and should come up with more number of Jan Aushadhi pharmacies in hospitals (77.1%). About 80.7% of doctors believe that government should give tax benefit to generic manufacturers to promote more easier generic prescribing and usage [Table 3].

DISCUSSION

According to the present analysis, a good percentage of doctors had knowledge about generic medicines and they had good attitude about the efficacy, safety, and quality of generic medicines; majority of them said that they prescribe generic drugs. The current study has demonstrated that most of the prescribers were aware of the term Jan Aushadhi scheme, its availability and that it referred to the generic medicines.

In the present study, 87.7% of clinicians and postgraduates were aware of generic drugs. Moreover, 59.6% of doctors felt that the generic drugs are as effective as brand drugs. Majority of doctors (75.3%) were of the view that generic drugs were as safe as the innovator drugs. Nearly 89.5% are of the opinion that generics are cheaper than branded ones. About 59.6% of them were aware of Jan Aushadhi pharmacy. Our findings coincide with the study done by Gupta *et al.*, 2015,^[10] who observed that only 45.2% of the doctors were aware of Jan Aushadhi and 75.3% agreed that generics are safe and effective as brand medicines. Almost 83.6% of physicians said that there should be a generic medicine store in every hospital. Our findings are also concurrent with the study conducted by Sadiq *et al.*,^[11] who found that 66.66% of the prescribers had the knowledge that the Jan Aushadhi

Table 2: Awareness of participants toward generic drugs (n=57)

Questions	Yes	No
Are you aware of generic drugs?	50 (87.7)	7 (12.3)
Do u think that generic drugs are therapeutically equivalent to branded drugs?	34 (59.6)	23 (40.4)
Are generic drugs equivalent in safety compared to branded drugs?	41 (71.9)	16 (28.1)
Are you aware of the fact that generics cost less than branded ones?	51 (89.5)	6 (10.5)
Are you aware of the Jan Aushadhi (Sanjeevini pharmacy) outlets?	34 (59.6)	23 (40.4)
Is your prescription influenced by patient's income status?	44 (77.2)	13 (22.8)
Is your prescription influenced by patient's insurance coverage?	27 (47.3)	30 (52.7)
Does the drug cost influence your prescription?	40 (70.1)	17 (29.9)
Is your prescription influenced by incentives given by branded companies?	9 (15.8)	48 (84.2)
Do your patients insist on prescribing a brand drug?	24 (42.1)	33 (57.9)
Do your patients insist on prescribing a generic drug?	13 (22.8)	44 (22.8)
Do your patients complain of drug cost?	44 (77.2)	13 (22.8)
How often do u prescribe a generic drug?	27 (47.3)	30 (52.7)
Do you feel it is necessary for INN prescription system?	46 (80.7)	11 (19.3)
Do you think that prescribing generics will decrease pharmaco-economic burden of country?	44 (77.2)	13 (22.8)
Do you support generic substitution for brand drugs in most cases?	46 (80.7)	11 (19.3)
Do you feel ethically generic drugs' prescription is to be followed?	42 (73.7)	15 (26.3)
Do you think generics are available for all the drugs?	18 (31.6)	39 (68.4)

INN: International non-proprietary name

Table 3: Attitude of participants toward generic drugs (n=57)

Questions	Yes	No
Do you think undergraduate education should emphasize on generic drugs?	52 (91.2)	5 (8.8)
Do you suggest media advertising and publicity on generic drugs?	49 (85.9)	8 (14.1)
Do you think Jan Aushadhi (Sanjeevini) outlets should increase in number?	44 (77.1)	13 (22.9)
Do you think generic drugs' prescription should be practiced by the interns?	46 (80.7)	11 (19.3)
Do you think practicing physicians should educate on generic drugs by means of CME?	52 (91.2)	5 (8.8)
Do you think government should release more funds for increasing the number of Jan Aushadhi outlets?	52 (91.2)	5 (8.8)
Do you think that prescribing a drug by generic name should be made mandatory?	41 (71.9)	16 (28.1)
Do you think government should give tax waivers for the generic manufacturers?	46 (80.7)	11 (19.3)

CME: Continuing medical education

generic medicines are equally efficacious than brand medicines.

Das *et al.*, 2017,^[12] in their research observed that 90% of patients believed that generic medicines are as effective as brand medicines and only 10% of patients said that side effects are more with generic medicines and considered them to be much cheaper than brand medicines, which are concurrence to our study. In the current study, 89.5% are of the opinion that generics are cheaper than branded ones. This is similar to a study wherein 81.98% believe that generics are cheaper than brand ones.

In our study, 91.2% of doctors think that the usefulness of generic drugs for the treatment of common diseases should be emphasized during their basic undergraduate teaching; more information should be provided through media, newspaper advertising, and publicity.^[13] A majority of doctors (71.9%) emphasized that the government should come up with more strict laws for implementation of generic prescription and should come up with more number of Jan Aushadhi pharmacies in hospitals (77.1%). Nearly 80.7% of doctors believe that government should give tax benefit to generic manufacturers to promote more easier generic prescribing and usage. Our results are similar to the findings of Sadiq *et al.*,^[11] where all doctors agreed to the fact that Jan Aushadhi medical store should be available in every hospital and awareness regarding its use must be encouraged while 91.66% agreed that government should come up with stringent laws for its use.

CONCLUSION

A very good percentage of doctors were aware of generic medicines; their attitude toward safety, efficacy, and cost-effectiveness of generic medicines was good and majority of them said that they prescribe generic drugs. However, there was a meaningful proportion who expressed their concern about the quality and efficacy of generic drugs. These beliefs could hinder larger generic drug use and increase health-care expenses of patients with chronic illness. Though majority of the participants are aware about the generic drug prescribing, they prefer more of branded drugs due to the insufficient information and knowledge about generic drugs. Proper awareness in physicians about the generic prescription practice may improve the patient compliance by reducing the economic burden to the patients.

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How to cite this article: Desai S, Dass AP, Kaniganti S. Assessment of perception and attitude of postgraduates and clinicians toward generic versus branded medicines at a teaching medical institute. *Natl J Physiol Pharm Pharmacol* 2018;8(4):540-543.

Source of Support: Nil, **Conflict of Interest:** None declared.