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A SURVEY ON USE OF GENERIC AND BRANDED DRUGS AMONG SELECTED AREAS OF KALABURAGI CITY

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ABSTRACT

The medical cost burden is increasing day by day in India. Government has introduced generic medicine centres throughout India under Pradhan Mantri Bhartiya Jan Aushadhi Pariyojana (PMBJP) scheme for the availability of medicines to people at a cheaper cost. This study was conducted to check the knowledge of pharmacist, students from science and non-science background regarding generic and branded medicines and their willingness to opt generic medications. The results showed all of them have minimum knowledge regarding generic medications and they are willing to opt them only on doctor's advice and prescription.

KEYWORDS

Generic medicine, Pradhan Mantri Bhartiya Jan Aushadhi Pariyojana and Branded medicines.

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INTRODUCTION

A generic drug is bioequivalent to the branded drugs in the dosage form, strength, safety, route of administration, performance characteristics, quality and intended use[1]. The European medicines Agency {EMA} defines a generic drug as a product, which has the same qualitative and quantitative composition of the active substance and pharmaceutical dosage form as that of the reference medicinal product and whose bioequivalence to the reference product has been verified by appropriate bioavailability studies[2]. Many pharmaceutical companies decide not to file patents in all the countries which allows generic pharmaceutical product, to emerge in those countries despite the product being under patent in other countries[3].

Cheaper drugs lower quality is misconception generic drugs are cheaper because they do not have to repeat animal and clinical (human) studies that are required for branded medicines to demonstrate for safety and effectiveness. The direct reduction research costs lead to lower prices although generic medicines have the same therapeutic effect as their branded counterparts[4,5]. When multiple generic companies compete in the market for a single approved product, prices will decrease by 85% to that of the branded product. According to the AAM report, the U.S. health care system has saved $2 trillion in the last decade by using generic medications, $293 billion was saved in 2018 alone[6].

Myths about generic medicines

Doctors are biased towards branded drugs leading to the prescription of a large number of branded drugs than generics. In a study conducted by Singal and Nanda (2010), in the Haryana state of India concluded both the public as well as the private medical facilities, there were more than 40% of doctors who never prescribed the generic drugs[7]. There are several similar surveys were reported, which proved reluctance towards generic prescription and the misconception about the safety and efficacy of the generic drugs[8,9].

Pharmacist reluctance to stock generics because of less profit.

Legal lacunae: which refers to no mean to identify a branded generic/ generic as opposed to branded medicines.

No advertisement by the government regarding the safety and efficacy of generics[10].

Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP)

Pradhan Mantri Bhartiya Janaushadhi Pariyojana' is a campaign launched by the Department of Pharmaceuticals in association with Central Pharma Public Sector Undertakings, to provide qualitative and safe drugs at affordable prices to the general public through dedicated centres called Pradhan Mantri Bhartiya Janaushadhi Kendra. According to PMBJP Generic drugs are marketed under a non-proprietary or approved name rather than a proprietary or brand name. Generic drugs are equally potent and effective and inexpensive compared to their branded counterparts.

The Bureau of Pharma Public Sector Undertakings of India (BPPI) has been implemented under the Department of Pharmaceuticals, Govt. of India, with the co-ordination of all the Central Public Sector Undertakings (CPSUs) for acquiring procurement, supply and marketing of generic drugs through the Pradhan Mantri Bhartiya Jan Aushadhi Pariyojana which will be dispensed by the centres set up under the scheme. In November 2008 first Jan Aushadhi store was opened at the public sector civil hospital in Amritsar, Punjab and the second store was opened in February 2009 at Shastri Bhawan, New Delhi. Eighteen more such stores have established in September 2009 in the states of Punjab, Haryana and Rajasthan[11].

In June 2012 Karnataka government has teamed up with State Cooperative Consumer Federation to establish 20 Janatha Bazar generic drug stores throughout the state to make affordable to the poor patients in the state[12].

Out of 164 Jan Aushadhi Stores 87 are presently functional as provided by the official website of Jan Aushadhi. The government has promised that each of the 660 districts in India will have at least one Jan Aushadhi store. Despite of Government effort in opening these stores and making generic drugs available to the public, few reports show that sales are minimal at these centres[13,14].

From all the above factors and reports there is urgent necessity to create awareness among the general public regarding usage, effectiveness and misconceptions about generic medicines, therefore we are conducting a survey about generic medicines and branded medicines among the selected population and areas of Kalaburagi City.

OBJECTIVES

The survey was carried out about generic medicines and branded medicines among the selected population and areas of Kalaburagi City. Assessment of the pharmacists, science and non-science students perceptions and knowledge about the generic medicines. Assessment of the Socio-

demographic details of people selected for study and educate them about the generic medicines through Power Point Presentation was done.

METHODOLOGY

The study was conducted in Kalaburagi city for a period of six months, Karnataka after obtaining Ethical clearance. Data was collected directly by visiting pharmacies and Degree colleges and universities which were randomly chosen in the study. The required information was received thereby.

The study was carried out by considering the following inclusion and exclusion criteria after taking consent from the people involved in the study in a suitably designed informed consent form in their regional/understandable language.

Inclusion Criteria

People willing to participate, of either sex between the age group of 16 to 60 years. Students from non-science and science background, pharmacists, hospital pharmacists, community pharmacists were involved in the study.

Exclusion Criteria

Person who is not interested to participate in the study. All other Health Care professionals except pharmacist.

Study Procedure

A Survey was carried out on selected population and areas of Kalaburagi city over a period of six months to evaluate the opinions and use of generic drugs in three different types of professions. The instrument or tool used for the study purpose is specially designed pretested and validated questionnaires (three types of professions viz, pharmacist, Science and non-science background population). Based on the inclusion and exclusion criteria, the people are enrolled in the study.

The questionnaire forms consisted of two sections, the first section consist of questions required to test the beliefs and knowledge about the generic drugs. The second section consists of socio-demographic data about the persons involved in the study. A total of 517 students and 255 pharmacists were included in the study. A PowerPoint presentation was given for 517 students in selected colleges of different professional degrees in kalaburagi city regarding use of Generic medicines and feedback from the students was collected.

RESULTS AND DISCUSSION

Discussion

Pharmacist

In the present study total of 255 pharmacists were enrolled in which 205 were Community pharmacists whereas the remaining 50 pharmacists were hospital pharmacists from different parts of Kalaburagi City. Out of 255 pharmacists, 227 were males and 28 were females mainly belonging to the age group of 18-25 years i.e, 97(38%). Most of them had an experience of 1-5 years i.e, 125(49%). Only 34% of them sold generic medicines while the other pharmacists sold only branded medicines which shows that pharmacists favour branded drugs over generics. 79.2% of pharmacists didn't have any issue related to the availability of generic medicines in the Indian pharmaceutical market but most of them were reluctant i.e, 63% to promote the sale of generic medicines. Majority of them (61.6%) knew companies which manufactured generics and 40% of them bought generics for their personal use. They said they received only 6.7% of generic prescriptions from doctors. More than half of them felt branded drugs have a simpler regimen (53%), having a variety of strength (60.8%) and packaging is better (70.6%) making them a better choice over generics. When branded drugs were not available 32.1% said they would convince the patients that generic drugs have the same pharmacological effect. In our study Pharmacists are biased towards selling branded drugs due to higher profits and people psychology though they agree generics are cheap and have similar effect whereas another study conducted by Lavanya D *et al*, concluded that the 80% of pharmacists favouring in dispensing generic products and 90% of them thought its cheaper[14].

Science background

The total of 260 Science Background students was enrolled in the study, among which 98 were males and 162 were females, most of them belonged to

age group 16-20 years i.e, 197 students. Out of 260 students, 239 students are pursuing B.sc followed by 14 students pursuing M.sc and 7 students pursuing integrated B.sc+M.sc courses, 72% of students are fully aware of generic medicine and its related government initiative called Pradhan Mantri Bhartiya Janaushadhi Pariyojana. Majority of them i.e, 97% feel that the price range between the branded and generics medicines is very high and unreasonable. 60% of students answered that their health care professionals never advised them on using or switching to generic medicines and 28% of students answered that their healthcare professionals advised them to use or switch to generic medicines. Nearly one-third of the population i.e, 33 % of students answered that the prices are high because of their better effectiveness when compared to generic medicines. Only 43% of students know very well that the FDA regulates and controls the manufacturing of the generic medicines as well as branded medicines and believes that FDA guidelines for generics as well as branded medicines are same. Almost 25% of students think that the FDA guidelines for generic medicines and branded medicines are not the same. Whereas 32% of students are unaware of the FDA or FDA guidelines for generic medicines.

Thus, it reflects that the science background population is well aware of generics and branded drugs. They are also ready to switch over to the generic medications only if their doctors prescribe such drugs. Similar results were seen in the study conducted by Neha Mathur *et al*, where people from science background have knowledge about generics and ready to switch to generics on doctor's advice[15].

Non-science Background

A total of 257 non-science background students enrolled in the study, among them 49% were males and 51% were females, majority of them i.e, 195 students belonged to the age group of 16-20 years, pursuing B.A, B.Com, BBM, BCA and M.A courses.

Out of 257 students enrolled, a majority of students i.e, 70% have the knowledge about the generic medicines and 52% of students expressed that generic medicines are as safe as that of branded medicines. Only 59% of students believe that the drugs prescribed by their doctors are expensive. A very small population of 38% feel, in case of non-availability of prescribed branded medicines, their doctors might allow them to use alternative generic medicines instead of the branded prescribed medicine. Study shows non-science background solely depend on doctor's prescription for purchasing of medicines.

Another similar study conducted by Kishor Ahire *et al*[16], concluded that maximum consumers want an economic alternative for branded medicines irrespective of that educational background.

A greater amount of consumer doesn't have knowledge about generics, maximum physicians do not prefer prescription of generic medicines and most pharmacists have less business through generic medicines.

Table No.1: Demographic details

S.No	Character	Pharmacist	Percentage
		Community Pharmacist	80.4%
		Hospital Pharmacist	19.6%
1	Gender	Male	89%
		Female	11%
2	Age	18 - 25	38%
		26 - 33	37.7%
		34 - 41	16.5%
		Above 41	7.9%
3	Experience	1 - 5 Years	49%
		6 - 10 Years	31.4%
		11 -15 Years	10.2%
		Above 15 Years	9.4%
		Above 15 Years	9.4%
Character		**Science Background**	**Percentage**
4	Gender	Male	37.6%
		Female	62.3%
5	Age	16 - 20	75.7%
		21 - 25	23.4%
		26 - 30	-
		Above 30	0.7%
6	Courses	B.SC	91.9%
		M.SC	5.3%
		ING. B.SC + M.SC	2.6%
Character		**Non- Science Background**	**Percentage**
7	Gender	Male	49%
		Female	51%
8	Age	16 - 20	75.9%
		21 - 25	22.6%
		26 - 30	0.4%
		Above 30	1.2%
9	Courses	B.A	6.2%
		B.COM	67.3%
		BBM	21%
		BCA	3.8%
		M.A	1.5 %

Table No.2: Details of scores given by pharmacists to Questionnaires (n = 255)

S.No	Questions	Yes	No	Don't Know
Q.1	Are generic medicines available in your pharmacy?	86(33.7%)	168(65.9)	1(0.4 %)
Q.2	Are there any issues related to the availability of Generic medicines?	17(6.7%)	202(79.2)	36(14.1%)
Q.3	Do you promote the sale of generic medicines?	89(34.9%)	161(63.1)	5(2%)
Q.4	Which pharmaceutical company do you know that makes generic medicines?	157(61.6)	38(14.9%)	60(23.5%)
Q.5	Do you personally buy generic medicines instead of branded drugs?	103(40.4)	148(58%)	4 (1.6%)
Q.6	What is the percentage of generic medicines being prescribed by your doctor?	17(6.7%)	80(31.4%)	158 (62%)
Q.7	Do you feel branded drugs have a simpler regimen than generic drugs?	135(53%)	89(34.9%)	31(12.1%)
Q.8	Do you feel branded drugs are in a variety of strength which makes them a better choice than generic drugs?	155(60.8)	74(29%)	26(10.2%)
Q.9	Do you feel the packaging of branded drugs is always better than generic drugs?	180(70.6)	60(23.5%)	15(5.9%)
Q.10	If branded drugs are not available do you try to convince the patients that generic drugs have the same effect?	82(32.1%)	143(56.1)	30(11.8%)

Table No.3: Details of scores given by science students to Questionnaires (n = 260)

S.No	Questions	Yes	No	Don't Know
Q.1	Do you think the government of India have passed any law about generic medicine or Jan Aushadhi?	188(72.3%)	15(5.7%)	57(21.9%)
Q.2	Do you feel a price difference between branded and generic medicines?	252(96.9%)	4(1.5%)	4(1.5%)
Q.3	Had any Healthcare professional advised you to switch from branded to generic medicine?	72(27.6%)	156(60%)	32(12.3%)
Q.4	What do you think behind the high cost of branded drugs?	87(33.4%)	42(16.1%)	131(50.3%)
Q.5	Do you think FDA guidelines followed by generic medicines are as same as that of branded medicines?	112(43%)	64(24.6%)	84(32.3%)

Table No.4: Details of scores given by non-science students to Questionnaires (n = 257)

S.No	Questions	Yes	No	Don't Know
Q.1	Do you know about the generic medicines?	182(70.8%)	46(17.8%)	29(11.2%)
Q.2	Do you feel generic drugs are safe as that of branded drugs?	133(51.7%)	82(31.9%)	42(16.3%)
Q.3	For taking medicine, do you prefer advertisement or healthcare professionals?	135(52.5%)	59(22.9%)	63(24.5%)
Q.4	From where did you get the information about generic drugs?	152(59.1%)	44(17.1%)	61(23.7%)
Q.5	Do you think the drugs prescribed by your doctor are expensive?	151(58.7%)	50(19.4%)	56(21.7%)
Q.6	If the prescribed medicine is not available, Does your physician allows you to take the alternate of the prescribed medicine?	98(38.1%)	88(34.2%)	71(27.6%)

CONCLUSION

Generics are bioequivalent medications to that of branded medications in pharmacological effect, safety and efficiency. Generic drugs cost much lower than that of branded drugs. In our study people from the pharmacy, science and non-science background feel branded drugs are costly but they are ready to replace it with generics only on doctor's advice.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

REFERENCES

1. Shah U S. Regulatory strategies and lessons in the development of biosimilars, *Pharma Scie Encyclopedia, Wiley,* 2010.
2. Pre-Authorisation evaluation of medicines for human use London, Doc. Ref. CPMP/EWP/ QWP/1401/98 Rev. 1, Committee for medicinal products for human use (CHMP), Draft, Guideline on the investigation of bioequivalence, *Eur Med Ag, Lon,* 2008, 1-29.
3. Ra. Al-Cristancho, Ta. Andia, Ta. Barbosa, Jo. H. Watanabe. Definition and classification of generic drugs across the world, *Appl Health Econ Health Policy,* 13(1), 2015, 5-11.
4. Generic Drug Facts Retrieved, *US FDA,* 2018.
5. Generic competition and drug prices: New evidence linking greater generic competition and lower generic drug Prices, *Retrieved, US FDA, 2019 (Generic Drug and Biosimilars Access and Savings in the US Report, Association for accessible Medicines (AMA),* 2019, 1-36.
6. Singal G L, Nanda A. Evaluating general practitioners perceptions and practice on generic and branded medicines: A pilot study from the state of Haryana (India), *The Pharma Review,* 8(44), 2010,140-144.
7. Kumari Ranjeeta, Idrish M Z, Buhsan V, Khan A, Aggarwal M, Singh S K. Assessment of prescription pattern at public health facilities of Lucknow, *Indian Journal of Pharmacology,* 40(6), 2008, 243-247.
8. Gupta K. Sandeep, Nayak P. Roopa, Vidyarthi K. Surendra. A study on the knowledge, attitude, and the practice of generic medicines among the doctors in a tertiary care teaching hospital in South India, *National Journal of Physiology, Pharmacy and Pharmacology,* 5(1), 2015, 39-44.

9. Babar Z, Awaisu A. Evaluating community pharmacist's prescriptions and practices on generic medicines: A pilot study from Peninsular Malaysia, *Journal of Generic Medicines,* 5(4), 2008, 315-330.
10. Bhupendersingh, Arunnanda, Vikaasbudhwar. An update on initiatives taken by Indian government to promote generic medicines, *IJPRBS,* 4(5), 2015, 26-38.
11. Vijay Nandita. Karnataka to set up Janatha Bazar generic drug stores to make available affordable drugs to poor patients, *Pharmabiz,* 2012.
12. Rajay Deep. Jan Aushadhi store not in pink of health, *Tribune News Service,* 2015.
13. Seth A. Generic drugs not on doc's prescription, *Ludhiana Tribune,* 2015.
14. Lavanya D, Dhivya K, Deekshitha P, Pravallika S, Kesini M. Attitude towards generic formulations usage: Narrowing the gap between pharmacist and physicians, *International Journal of Pharmacy and Pharmaceutical Sciences,* 11(1), 2019, 117.
15. Neha Mathur, Vishal Goud. Generic vs. branded drugs-a market survey, *IJPPR, Human,* 11(1), 2017, 177-187.
16. Ahire, Kishor *et al.* A survey based study in current scenario of generic and branded medicines, *Int J Pharm Pharm Sci,* 5(3), 2013, 705-711.
17. Kotwani Anita. Will generic drug stores improve access to essential medicines for the poor in India? *Journal of Public Health Policy,* 31, 2010, 178-184.

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