IMPACT OF FAKE BRANDING IN PHARMACEUTICALS ON RURAL CONSUMER BEHAVIOUR – A CASE STUDY

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Abstract
Indian pharmaceutical Industry have witnessed tremendous growth in the past two decades as the present position of exports have recorded Rs. 42154 crores. The country has shown its impression by occupying 3rd largest in terms of volume and 14th largest in terms of value. The 2nd largest nation has always showed the dependency on the pharmaceutical companies but due to rising competition, the developing and small scale pharma companies have taken the fake branding as the source of survival in the rural market. As 70% of the Indians live in villages, for many companies which are producing counterfeits, the rural India remained as attractive destination. The fake brands have not only deceived in terms of quality and usage but also the rural people were deceived in the price value they have paid for it. In view of this problem, the present research paper focuses on the impact of fake pharmaceutical brands in rural market with special focus on three select districts of Telangana region. The study is based on field investigation. Further the research provides the factors influencing for the marketing of fake brands in pharmaceuticals and the remedies to be taken for effective control of fake brands in pharmaceuticals.

Key Words: Branded Drugs, Counterfeits, Generic Drugs, IDMA, IPA, PCI

1) Introduction

Consumer is the most influencing personality for determining the success or failure of products and services whose purchasing is often influenced strongly by internal and external factors and often provide room for the companies to effectively influence and motivate them to purchase. The branding is one of the valuable components of marketing of the products & services which involve reinforcing a good reputation, encourage loyalty, assure quality, convey a perception of greater worth, allowing a product or service to be priced higher and grant the buyer a sense of affirmation and entry into an imaginary community of shared values. Rural consumers in India account for more than 70% of total population who have been influenced easily by the marketers because of low literacy level, occupation, geographic location and lack of better exposure to media.

2) Conceptual Overview of Fake Branding

Fake brands are part of a pervasive material and it is regarded as an inherently second rate and potentially shady activity in practice.The transactional properties of fake brands are based on material properties, log and label included, and interpersonal relationships between manufacturers, buyers, and consumers. Fake branding is the process where by the companies encompasses the success of existing successful brand names to their products and services in order to grow and sustain in the market. Fake branding involves introducing the product which is not genuine with an aim to achieve sales by going with the reputation of the existing brands. The unregistered fake brands are spoiling the market share of the registered original brands in the market and especially the urban and rural differentiation is giving the life to many fake branded products in the Indian market. The fake products in the market are available and can be divided into distinct categories, viz., (a) look-alikes b). Spell-alikes and c). Duplicates. Brand piracy is another existing problem which is putting huge challenges to the existing brands.
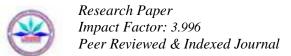
3) Objectives of the Study

The main objective of the study is to investigate the impact of the fake brands in pharmaceuticals on the consumers of select rural villages. The objective is segmented to the following heads.
1. To study the overview of Indian pharma industry with special reference to fake brands in pharmaceuticals.
2. To analyze the impact of fake pharmaceuticals on the rural consumers of select villages.
3. To examine the perceptions of rural consumers on fake pharmaceutical products in select rural villages.
And finally, the study will provide the findings and suggestions on the basis of field observations.

4) Methodology of the Study

The study is based on both primary and secondary data sources. The primary data is collected from the field observations of select rural villages of North Telangana region of Andhra Pradesh State (i.e., Regonda in Warangal District, Pagideru village in Khammam District and Ellanthakunta in Karimnagar District). The secondary data is collected from the select research

papers, books, journals, news paper reviews and internet sources. For the purpose of collecting the primary data from the sample respondents, convenience sampling is applied in order to determine the target rural consumers.

5) Overview of Indian Phramceutical Industry with Special Reference to Fake Branded Pharmaceutical Products
The Indian pharmaceutical industry traces its roots to the 1903 with the formation of Bengal Chemical and Pharmaceutical Works in Calcutta by Prof. C.Roy.Alembic Chemicas has created founder stone as the first Indian Pharma manufacturing company primarily engaged in production of tinctures and alcohol at Baroda in the year 1907. The early part of 20th century remained unsuccessful for Indian pharma Industry and post independence have given the life for the industry which has resulted in exports to foreign countries. The earlier Patents Act,1911(regarded as Indian Patents and Designs Act, 1911) under the rule of Britishers has recognized the product and process patents. Due to the monopoly status enjoyed by the MNCs, the drug prices remained high during this period. But later, the Government's introduction of new patent act in 1972 act enabled Indian firms to use the "reverse engineering process" to manufacture drugs without paying royalty to the original patent holder. The act, along with the Drug Price Control Order, provided little incentive to the MNCs to introduce new pharmaceutical products in India. During this period, the production of bulk drugs, generic and branded goods has also increased. Low cost and high-volume production has helped the Indian pharmaceutical industry in opening in the export channels to many developed and developing countries. Economic liberalization in 90s enabled the industry to become what it is today. The year 1995 recorded another milestone for the Indian pharmaceutical industry. One of the agreements under the World Trade Organization (WTO) was complying with the provisions of the Trade Related Intellectual Property Rights (TRIPS). The TRIPS agreement reintroduced product patent in India. Further, during this period, tariff and non-tariff measures have come down.

The Pharmaceutical industry in India at present is the world's third-largest in terms of volume and stands 14th in terms of value. Sale of all types of medicines in the country is expected to reach around US$19.22 billion by 2012. Pharmaceutical Council of India(PCI) is actively engaged in providing pharma education and research for the young Indian pharmacy learners. Further, the Indian Drug Manufacturers Association(IDMA) and Indian Pharmaceutical Association(IPA) are strengthening the industry with innovative and effective strategies.

The pharma industry contains the production of Branded and Generic drugs which are considered as its two eyes. The generic drugs (which are named based on the composition) exports from India crossed over 200 countries but the usage of Branded drugs(a specific name used for identity & marketing by big pharma companies) is more than the generic drugs and the sale of generic pharma products is less than 40% in India. This has given rise for the fake pharma producers to tap the market through its counterfeits. According to the report of Times of India, the fake brands are accounting to the counterfeiters cost of Rs.2500 crore a year in Indian consumer products industry. The report also concluded that government is losing the revenue of 900 crore every year in revenues, mainly by way of unpaid taxes and duties. According to the World Health Organization (WHO) report, 20% of the medicines sold in India are fake ones. And according to the report of Director General of Health Services in Health Ministry, India, there are more than 10,000 drug manufacturers and more than six lakh outlets that sell fake drugs. The statistics are clearly showing the rising of fake pharmaceutical products in rural and urban market. In view of these objectives, the present paper will provide an observational based study on studying the impact of fake pharmaceutical products on rural consumers.

6) Impact of Fake Pharmaceutical Products on Rural Consumers – Field Based Observations & Survey Results
From the field survey on select rural villages of three districts of Telangana region, the following fake branded pharmaceutical products were found.

Table No.6.1: List of Original and its corresponding fake branded pharmaceutical products found in field survey

S.No.	Name of the Original Brand	Name of the fake brand available in the rural markets of select rural villages in Telangana Region
1.	Zandu Balm (Original brand belongs to Zandu Pharmaceutical Company)	Zanda Balm (Fake manufacturer with unknown address and identity)
2.	Fair & Lovely Fairness Cream (Original brand belongs to Hindustan Unilever Limited Company)	Faire & Lovely , Fair & Lonely (Unrecognized fake brand with un noticeable address)
3.	Vicks (original brand belongs to P&G company)	Vikks (fake brand with the same quantity and package found in the rural villages).

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4.	Colgate Tooth Paste (original brand belongs to Colgate & Palmolive company limited)	Colkate Tooth Paste(fake brand with similar identify)
5.	Chloroquine Phosphate Tablets (Ipca Manufacturers)	Chloroquine Phospate tablets (Ifca manufacturers)
6.	Desogestreal and Ethinyl Estradiol Tablets (Novelon)	Desogestreal and Ethinyl Estradiol Tablets (Femilon)
7.	Dichlofenol (Agron pharma)	Agron remedies pvt. Ltd.
8.	Cetirizine (Cipla and other major pharma companies)	Agron remedies pvt. Ltd.
9.	Berozeldon	Un approved and unlicenced drug sold in PHCs in Telangana region in Agron remedies pvt. Ltd.
10.	Joint-S	Completely manufactured and sold by Visiting Orthopedician (Declared as unapproved formula based and unlicensed drug sold in Warangal District by Drug Inspectors)
11.	Zincovit (Apex labs)	Zinkovit (fake and unregistered tablets available from Hindusthan Nutraceuticals, Hyderabad

Source: Field Survey

Most of the fake branded pharmaceutical products found in the three select villages of Telangana region are from medicinal background. The above mentioned pharmaceutical branded products have huge reputation in the market but due to non-availability in remote areas of rural regions, the fake brands found dominating.

Table No. 1: Rural consumers' ability on recognition of fake branded pharmaceutical products

S.No.	Educational qualification of the consumers	Rural consumers response on fake pharmaceutical products		
		Able to recognize the fake brands	Not able to recognize the fake brands	Total
1.	Illiterate	02 (11.7%)	15 (88.2%)	**17**
2.	Upto Class VII	08 (18.1%)	36 (81.9%)	**44**
3.	S.S.C.	08 (25%)	24 (75%)	**32**
4.	Undergraduates	12 (60%)	8 (40%)	**20**
5.	Post Graduates	4 (57%)	3 (43%)	**07**
	Total	34 (28.4%)	86(71.6%)	**120**

Source: Field survey

The survey results revealed that 71% of the rural consumers are not able to recognize the fake brands. Further, majority of the select rural consumers are having the back ground of VIIth standard and S.S.C. which is also another influencing factor for inability to identify the fake branded pharmaceutical products.

The Chi-square test is applied to analyze the association between educational qualification of the rural consumers and their awareness regarding recognition of fake pharmaceutical branded products. The test results were given below.

Table No.2: Chi-square test results

H0: There is no significant association between educational qualification of the rural consumers and their awareness on recognition of fake pharmaceutical branded products.
H1: There is a significant association between educational qualification of the rural consumers and their awareness on recognition of fake pharmaceutical branded products.
Chi-square table value at 4 degrees of freedom and 5% level of significance = 9.49
Chi-square caliculated value from the given data = 17.4446
Result: *Accept H1, i.e., there is a significant association between educational qualification of the rural consumers and their awareness on recognition of fake pharmaceutical branded products.*

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6.4) Reasons for the growth of fake brands
Very few countries have specific regulatory mechanism to counter attack the counterfeits in FMCG and pharmaceutical drugs. Especially in India, lack of efficiency in regulatory environment has led to an opportunity for fake brands to exploit the lack of protection from many products. Ineffective drugs in rural villages are causing inconvenience to the patient in many cases. The field survey results have clearly shown that the rural consumers are facing many problems right from side effects, the fake pharmaceutical products has exposed to the life of the consumers through its harmful impacts like getting itches, skin diseases, extreme sweat and thirst, change of skin colour, Osteoporosis, Anuria and Dysphagia etc. Apart from that the widespread use of substandard antibiotic drugs could lead to a potentially explosive increase in the prevalence of drug-resistant bacteria. The toxic nature of pharmaceuticals is causing immediate and harmful effects in those exposed to them.

Field survey results about the reasons for preferring fake branded pharmaceutical products in rural villages is given below.

Table No.3: Opinion on preferring the fake branded pharmaceutical products

Area of rural consumers	Rural consumers opinion on preferring the fake branded pharmaceutical products				Total
	Lack of knowledge	**Non-availability of original brands**	**Recommendations from RMPs and PHCs**	**Affordable price**	
Regonda (Warangal District)	13 (32.5%)	8 (20%)	10 (25%)	09 (22.5%)	**40**
Ellanthakunta (Karimnagar District)	10 (25%)	19 (47.5%)	06 (15%)	05 (12.5%)	**40**
Pagideru (Khammam District)	18 (45%)	12 (30%)	08 (20%)	02 (5%)	**40**
Total	**41 (34.1%)**	**39 (32.5%)**	**24 (20%)**	**16 (13.3%)**	**120**

Source: Field survey

The above statistics have clearly revealed that lack of knowledge showed major factor for preferring the fake branded products. Further, non-availability of original brands also showed major concern for the rural consumers for preferring the fake branded pharmaceuticals.

Two-way ANOVA is applied in order to analyze the significant difference in the opinion of the rural consumers and the significant difference in the opinion of rural consumers with reference to preferring of fake branded pharmaceutical products of three select villages.

Table No. 4: ANOVA Test results

ANOVA of Two-way classification						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Rows	10.66667	1	10.66667	**1.04918**	0.413412	**18.51282**
Columns	152.3333	2	76.16667	**7.491803**	0.117761	**19**
Error	20.33333	2	10.16667			
Total	183.3333	5				
Decision: H1 (Alternative Hypothesis is accepted both for the Rows & columns)						

The test results have clearly shown that Alternative Hypothesis is accepted for both cases. Hence, there is a significant difference in the opinion of the rural consumers and also there is a significant difference in the opinion of the rural consumers with reference to preferring of fake branded pharmaceutical products.

The survey results with reference to rural consumers' awareness levels on different factors about pharmaceutical drugs have given below.

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Table No. 5: Rural consumer's awareness on different factors about pharma products

Factors considered	Fully aware of the factor		Aware to some extent		Completely unaware		Total	
	f	%	f	%	f	%	f	%
Ability to identify original and fake pharma brand	08	9.6%	43	51.6%	69	82.8%	**120**	**100%**
Knowledge about spelling of the pharma drug	03	3.6%	36	43.2%	81	97.2%	**120**	**100%**
Quality grades	11	13.2%	42	50.4%	67	80.4%	**120**	**100%**
Components/ingredients	08	9.6%	36	43.2%	76	91.2%	**120**	**100%**
Knowledge about Manufacturing Date(MFD) & Expiry Dates(EXP.)	32	38.4%	57	68.4%	31	37.2%	**120**	**100%**
Awareness on Caution	21	25.2%	63	75.6%	36	43.2%	**120**	**100%**
Awareness about dosage	23	27.6%	69	82.8%	28	33.6%	**120**	**100%**
Awareness about the manufacturers	11	13.2%	45	54.0%	64	76.8%	**120**	**100%**
Awareness about Consumer Protection Act, 1986 and the consumer rights against unethical practices	19	22.8%	56	67.2%	45	54.0%	**120**	**100%**

Source: Field survey

The above survey statistics are clearly showing that majority of the rural consumers are completely unaware about recognizing original and fake pharma brand, spelling of the pharma drug, quality grades, components and manufacturers. And with reference to the awareness about dosage and caution more than 70% opined that they are some what aware about them. And full awared consumers found very less percentage except 38% of them opined that they are aware about MFD & EXP of the drugs manufactured.

7) Perception Of Rural Consumers Towards Fake Pharmaceutical Products
Table No. 6: Observations on rural consumers' perception towards action against fake pharmaceutical products

Income range of rural consumers (per month in rupees(Rs.)	Rural consumers perception towards action against fake pharmaceutical products in rural villages				
	Returned the products	Asked for compensation	Reported to Police & sued case	Did not take any action	Total
Less than Rs. 2500	07 (32%)	04 (26.6%)	02 (26.6%)	12 (18.2%)	**25**
Rs. 2500-5000	05 (20%)	01 (6.6%)	02 (26.6%)	52 (78.9%)	**60**
Rs.5001 – 7500	05 (20%)	04 (26.6%)	01 (13.3%)	10 (15.1%)	**20**
Rs. 7500 and above	6 (24%)	02 (13.3%)	01 (13.3%)	06 (9.1%)	**15**
Total	**23**	**11**	**06**	**80**	**120**

Source: Field survey

The data clearly showed that the variations among the rural consumers in terms of their income level. The survey results clearly shown that majority of the rural consumers, i.e., 50% of them are from the income range of Rs. 2500-5000 rupees. From the perceptions of rural consumers on action against fake pharmaceutical products, it was clear that majority of them are opined that 'that they did not take any action'. This statistics are clearly showing the ignorance and dependencies on the existing available pharmaceutical brands which are fake in nature are dominating the decisions of rural consumers of three select villages.

The Chi-square test is applied to analyze the association between Income range of the rural consumers and their perception towards action against fake pharmaceutical products in rural villages. The test results were given below.

Table No.7: Chi-square test results

H0: There is no significant association between Income range of the rural consumers and their perception towards action against fake pharmaceutical products in rural villages
H1: There is a significant association between Income range of the rural consumers and their perception towards action against fake pharmaceutical products in rural villages
Chi-square table value at 9 degrees of freedom and 5% level of significance = 16.9
Chi-square caliculated value from the given data at 4 degrees of freedom and 5 % level of significance = 24.4500
Result: ***Accept H1, i.e., there is a significant association between educational qualification of the rural consumers and their awareness on recognition of fake pharmaceutical branded products.***

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Rural consumers' perception on measures to overcome from fake branded pharmaceutical products

Table No. 8: Rural consumers perception on measures to overcome from fake branded pharmaceutical products

Area of rural consumers	Perceptions of rural consumers on best measure to overcome from the influence of fake branding in Pharmaceutical in rural villages				Total
	Awareness campaigns by the pharma companies & doctors	Increasing rural awareness by policymakers & village committees	Increasing regulation over fake brands	Periodic inspection by medical inspectors	
Regonda (Warangal District)	05 (12.5%)	10 (25%)	10 (25%)	15 (37.5%)	**40**
Ellanthakunta (Karimnagar District)	07 (17.5%)	08 (20%)	19 (47.5%)	06 (15%)	**40**
Pagideru (Khammam District)	08 (20%)	06 (15%)	16 (40%)	10 (25%)	**40**
Total	**20 (16.6%)**	**24 (20%)**	**45 (37.5%)**	**31 (25.83%)**	**120 (100 %)**

Source: Field survey

From the rural consumers of 3 select villages of Telangana region, it was found that 37.5% of them have perceived that 'increasing regulation over fake brands is the best measure. Further 25.83% and 20% of the rural consumers have opined that period inspection by medical inspectors and increasing rural awareness with the co-ordination of policy makers & village committees are the best measures to overcome from the influence of fake branding in pharmaceuticals in rural villages.

Two-way Analysis of Variance is made in order to analyze whether there is a significant difference in the perception of rural consumers of select districts and perception of the rural consumers with reference to the measures to overcome from the problem of lapsation. The test results are given below.

Table No.9: Two-way ANOVA results

ANOVA of Two-way Classification						
Source of Variation	*SS*	*df*	*MS*	*Ftab*	*P-value*	*F crit*
Rows	0.166667	1	0.166667	0.023256	0.892789	**18.51282**
Columns	134.3333	2	67.16667	9.372093	0.096413	**19**
Error	14.33333	2	7.166667			
Total	148.8333	5				

From the test results, it was found that there is a significant difference in the perceptions of rural consumers of select districts. And also, there is a significant difference in the perception of rural consumers with reference to the measures to overcome from the problem of fake branded pharmaceutical products.

8) Findings & Suggestions

The pharmaceutical companies & industry relies to a great extent on the brand awareness to generate revenue which in turn cannot usually sell directly to its end consumers. In order to protect the consumers against fake branded pharma products especially from rural villages, anti-counterfeiting strategy needs to be coordinated across the whole medical profession. As more than 70% of the people in India lives in villages hence there is a responsibility for all sections of society including importers, distributors, repackagers, physicians, pharmacists, and finally patients(consumers) themselves. Rural consumers' education and income levels are one of the important factors affecting their awareness and preference of pharma products. Hence, the government as well as pharma brand owners must get into the act of providing information and awareness campaigns to literate rural consumers about pharmaceutical products. Though the policy makers' role is very crucial in safeguarding the rural consumers but there is a definite need for consumerism in identifying their problems especially deceiving from fake pharmaceutical products. Further, selling the pharmaceutical products in the respective local language and providing authenticated strips is a healthy measure to counter attack counterfeits. The government needs to encourage and regulate the pharma companies for nonclonable ID nanotag for all pharma drugs manufactured. A committee set up by the Indian Ministry of Health has approved a proposal to put 2D barcodes, and scratch-off labels on medicines. QR codes (quick response) can also be tested and it helps anyone with a camera enabled phone and web access can scan the code and be

taken instantly to the pharma company website to authenticate the drug. Further, the healthcare Centres must ensure the qualitative pharma products and it must also guarantee for prescripted medicines in all rural places. The role of medical representatives, NGOs and educated consumers is also very vital to effectively eliminating fake branded pharmaceutical products in rural areas and to safeguard rural consumers.

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