EFFECT OF BRAND REPUTATION ON DRUG PRESCRIBING PATTERN IN INDIA

Mohit Patidar*1, Dr. Shushmita Singh*2

*1Student, Parul University Faculty Of Management   Studies, Vadodara, India.

*2Guide, Assistant Professor, Parul University Faculty Of Management   Studies, Vadodara, India.

ABSTRACT

The purpose of this paper is to examine existing literature on physicians' perceptions towards brand medicines, to examine the extent to which brands influence drug prescription and whether pharmaceutical industry influences the prescription of brands, as well as to examine the loyalty of physicians to a brand when prescribing drugs or willingness to switch to generic drugs. Methods Related articles published in different online databases from 2000 to 2017 were surveyed; 38 scientific articles indexed in Google Scholar, Science Direct, and PubMed were selected for review. Articles focused on physicians' perceptions towards brand drugs and its effect on prescribing were extracted. The experimental design and quantitative and qualitative methods used in the studies were analyzed. The deductions made in each study were examined in tandem with the objective of the review. Findings The studies showed that physicians from high-income countries are inclined to prescribe generic drugs more than brand, whereas those from low-income countries heavily prescribe the brand drugs. The studies also revealed that brand influences the prescribing behavior of physicians. Five studies reported that marketing endeavors encourage the physicians to prescribe brand medicines, while three studies stated that physicians have a high loyalty toward brand medicines irrespective of country's income. Other studies provided evidence that physicians are disposed to switching from brand to generic medicines under certain conditions. Marked differences in the prescribing generic drugs use by physicians among different age were observed. General physicians and pediatrics were more likely to suggest switching from the brand to generic drugs. The majority of physicians were familiar with biosimilars drugs. Conclusion Generally, the studies showed that physicians tend to have mixed views regarding prescribing brand medicines. The perceptions of physicians towards the brand drugs were found to differ in relation to the nature of healthcare system and level of development.

Keywords: Expectations; Prescribing; Physician; Promotional Tools.

I.   INTRODUCTION

The appropriateness of marketing relationships between physicians and the pharmaceutical industry has been debated since the 1960s. The global pharmaceutical industry is one of the most important driving forces of, and dominant players in the modern global economy, securing approximately one trillion US dollars in revenues every year. Prescription drug marketing is unique. The physician decides which drug a patient will purchase, so marketing strategies focus mainly on influencing the decision of the physician. Since prescription drugs constitute the primary source of revenue for the pharmaceutical industry, marketing practices for prescription drugs have received the most attention from the industry. Physicians, therefore, are the chief players in pharmaceutical marketing since they specify the prescriptions to be used by the patient. Thus, the focus relies on the physicians rather than on the patients. Some of the promotional techniques that pharmaceutical companies have used to maximize their profit margins are informed by two factors: the need to promote specific drugs; and the need to enhance company reputation through stronger relations with physicians. However, a pharmaceutical company that improves its reputation is likely to sell more drugs, while a company that enhances the sale of specific drugs will also have improved chances of acquiring a positive reputation.

II.   LITERATURE REVIEW

Tariq Mehmood Dar (2020)

Branding is an integral part of any product or service. Branding gives a product an identity, whether tangible or intangible. Branding tactics and strategies are nothing new in fast-moving consumer goods (FMCG) marketing, but difficult in pharmacies (prescription drugs).

Dag Isacson Kerstin Bingefors (1993)

An important consideration when discussing psychotropic drug prescribing and use is the amount of drug prescribed at each visit. In this study, the Swedish Diagnostic and Therapeutic Survey was used to analyze high-dose benzodiazepine prescriptions.

Marilyn Y. Peay (1990)

This study investigated the introduction of new prescription drugs by professionals treating serious illnesses using relatively high-risk drugs with potentially serious side effects. One hundred and fifty-six experts, practicing primarily in the medical specialty, evaluated a variety of drug information sources and reviewed these sources in the general drug approval process and his one adoption of several targeted drugs. reported for use.

Micheline Khazzaka (2019)

Pharmaceutical manufacturers rely on marketing efforts to influence physicians. Previous research has shown that pharmaceutical companies have successfully controlled the prescribing behavior of physicians in developed countries.

Ravindra Goyal (2013)

The World Health Organization defines drug advertising as any information or persuasion by manufacturers and distributors whose effect is to influence the prescription, supply, purchase or use of a drug, but misleading information Incentives and unethical commercial practices using How to increase prescriptions and sales of medicines. Healthcare practitioners provide incomplete medical information to influence prescribing practices. We also offer incentives such as conferences, seminars and national and international sponsorships.

Aisha Muhammad Arif (2015)

Pharmaceutical companies use a variety of marketing communication strategies and tools to favorably influence physician prescribing.

These communication strategies and tools play a very important role in improving a pharmaceutical company's profitability and sales. The present study was a multicenter, cross-sectional, descriptive study that aimed to identify the impact of strategies and tools on physician prescribing preferences.

III. RESEARCH METHODOLOGY

Research aim

The aim of the research is to find the perception of pharmaceutical marketing strategies' influence on physician's prescription behavior.

Research Objective

The objective of this research was to examine the influence of drug companies' strategies on physicians' prescription behavior in the Lebanese market concerning physicians' demographic variables quantitatively. Moreover, this study tested whether Lebanese physicians considered gifts and samples acceptance as an ethical practice.

Research design

Results found that pharmaceutical marketing strategies are correlated to physicians' prescribing behavior. We demonstrated that the majority of the promotional tools tested were mostly or sometimes motivating physicians to prescribe promoted drugs. The major tools that physicians agreed to be mostly motivated by are visits of medical representatives and drug samples while sales calls made by pharmaceutical companies are the less influential tool. Regarding gift acceptance, this study demonstrated that physicians consider gifts' acceptance as a non-ethical practice. Results showed that most physicians use free samples to treat their patients. We demonstrated that there is a relationship between physicians' prescribing pattern and their age, gender and the location of practice.

Sampling design

Findings of this study provided an insightful work, serving as one of the first humble steps in the imminent direction of merging this paper with the previous literature. From a managerial perspective, pharmaceutical marketing managers of drug companies can use the research findings to design better their strategies directed to the Lebanese physicians who can also benefit from the results obtained.

Data Analysis

Number of prescriptions collected from various departments of tertiary care institutes of India.
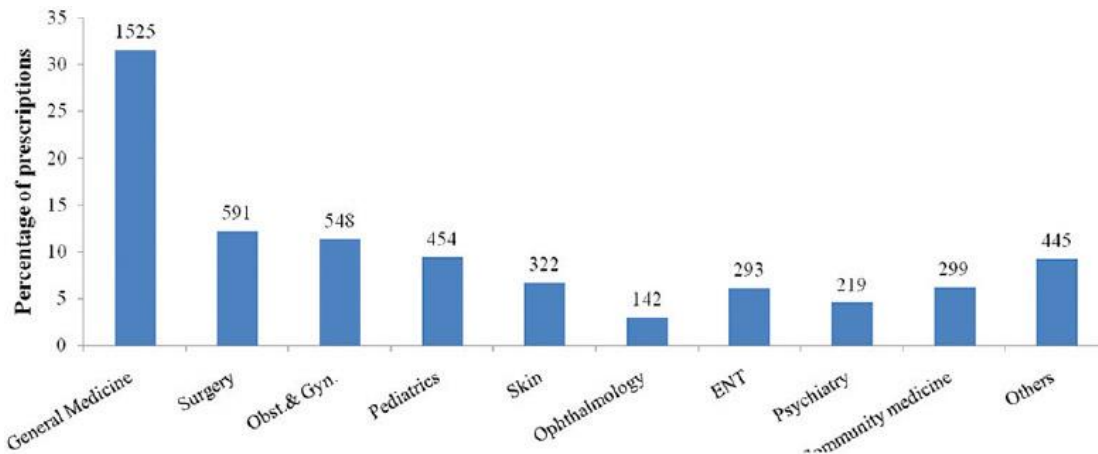
Data were collected from thirteen different centers of India. A total of 4838 prescriptions were analyzed from different departments of the institutes. The maximum number of patients that participated in the study was from the department of General Medicine comprising about 31.52% of the total patients. In addition, the patients from General Surgery and Obstetrics and Gynecology each comprised more than 10% of the total participants. On the other hand, the least number of the study participants were from ophthalmology constituting only 2.93% of the total patients.

Table 1: Summary of parameters assessed as per World Health Organization drug use indicators from all the centres.

Parameters	n (%)
Total number of prescriptions collected	4838
Number of prescriptions with monotherapy	820 (16.94)
Number of prescriptions with polytherapy	4018 (83.05)
Number of prescriptions with brand names	2778 (57.42)
Number of prescriptions with FDCs	2093 (43.26)
Number of prescriptions with drugs not from the hospital formulary	1086 (22.44)
Number of prescriptions with drugs not from NLEM	2677 (55.33)
Number of prescriptions with antimicrobials	853 (17.63)
Number of prescriptions with injectables	241 (4.98)
Number of prescriptions with Vitamins/iron preparations	2610 (53.95)

Out of the 4838 prescriptions, 83.05% had been prescribed with more than one drug for their treatment. Furthermore, in 57.42% of the prescriptions, at least one of the drugs were prescribed by their brand names. In the present study, FDCs were prescribed in 43.26% of the prescriptions. Moreover, 22.44% of the prescriptions were containing drugs not available in the list of their hospital formulary. On the other hand, the prescriptions with drugs not from NLEM were 55.33% from the total prescriptions. The results of the prescription summary in the present study also revealed the prescriptions of antimicrobial drugs, injectables, vitamins, and iron salts, etc., It has been found that 17.63% of the prescriptions had at least one antimicrobial drug and only 4.98% of the prescriptions had injectables. However, the vitamins and iron salts were prescribed in 53.95% of the total collected prescriptions.

Table 2: Detail of average number of drugs of each parameters as per World Health Organization drug use indicators from all the centres

Parameters	Average
Average number of prescribed drugs	3.35
Average number of drugs with brand names per prescription	1.74
Average number of FDCs per prescription	0.76
Average number of drugs per prescription not from the hospital formulary	0.557
Average number of drugs per prescription not from NLEM	1.08
Average number of antimicrobials per prescription	0.28
Average Number of injectables per prescription	0.103
Average number of iron/Vitamins containing drugs per prescription	0.4

On an average, about three drugs (3.34) were prescribed to patients per prescription. The average number of branded drugs in a prescription was 1.74. In addition, the average number of FDCs per prescription was about 0.76. Moreover, the number of drugs per prescription that were not from the hospital formulary was 0.56 and not from NLEM were about 1.08. The number of the antimicrobial drugs was calculated to be 0.28 per prescription and injectables were prescribed on an average of 0.103 per prescription. It has been found that more than 50% of the patients were prescribed vitamins and minerals with an average of 0.45 per prescription.

Table 3: Detail of completeness of prescription as per World Health Organization indicators

Parameters	Total (n=4838), (%)
Complete prescriptions	2968 (61.34)
Incomplete prescriptions	1870 (38.65)
Dose not mentioned	1106 (22.86)
Frequency not mentioned	305 (6.30)
Duration not mentioned	759 (15.69)
Formulation not mentioned	178 (3.68)
Follow-up visit not mentioned	1319 (27.26)
Instructions not mentioned	2358 (48.74)

Out of the total prescriptions, 1870 (38.65%) prescriptions were found to be incomplete. The completeness of prescriptions was assessed based on parameters such as failure to mention the proper instructions such as dose, frequency, or duration of time of the medication, not mentioning the formulation, or the follow-up visit. Among total prescriptions, the commonly identified reasons for the incompleteness of prescriptions included not mentioning the follow-up visits (27.26%), followed by the omission of dose (22.86%) and duration of medication (15.69%). In contrast, not mentioning the frequency and formulation were the least likely reasons for incomplete prescriptions [Table 3]. The prescriptions had more than one errors of omission. Moreover, instructions not mentioned (48.74%) were not considered omissions since these are provided by the pharmacist. Hence, it was exempted from the reasons of incomplete prescriptions.

IV. FINDINGS

The average number of drugs prescribed per prescription, i.e., 3.34 was found to be higher than prescription studies conducted in other countries such as Ethiopia (1.8–2.4), Kenya (2.7), and lesser than the study conducted in Ghana where the average number of drugs per prescriptions was 4.8.[2,11,12] Moreover, data of 3.11 drugs per prescription were reported by a single-centric study conducted in India in the year 2014 in a

tertiary care center which is comparable to the present multicentric study.[13] All these studies observed a much higher "drugs prescribed per prescription rate" than the WHO recommended range of 1.6–1.8. The high rate of polypharmacy in the present study can lead to the increased likelihood of drug-drug interactions, augmented side effects, chances of noncompliance, high cost, etc., The collection of prescriptions of patients attending tertiary care centers with co-morbid conditions can be one of the contributing factors to the higher average number of drugs per prescription in the current study. In addition, more than one-third of the prescriptions were from General Medicine which included patients of Cardiology, Neurology, etc., followed by General Surgery where polypharmacy is common, perhaps due to multiple comorbidities.

V.   SUGGESTIONS

According to prescribing indicators of the WHO, the rational use of medicines should be improved in clinical practice as prescription assessment revealed inappropriateness in the standard criterion of prescribing. The major areas of concern are polypharmacy, limited generic prescribing, prescriptions of FDCs, and drugs not from NLEM. Thus, there is an urgent requirement to revise the standards of prescriptions in various aspects. The policymakers and governing bodies should encourage the use of generics and medicines from NLEM, and limit the use of FDCs to rational combinations only. The results of this study would be used to develop the prescribing skill course by providing practical examples of the complete and incomplete prescriptions as per WHO indicators. Furthermore, being a multicentric study, data would be analyzed to interpret the regional differences in prescribing pattern of drugs across the country.

VI.   CONCLUSION

Most of the investigated physicians change their prescribing behavior, and it can simply be concluded that prescribing pattern of Indian physicians is negatively affected by promotion tactics.

It can be concluded that the pharmaceutical marketers have to understand the real needs, beliefs, and behaviors of physicians towards their marketing and promotional tools while taking into account physicians' demographic factors and physicians' opinion regarding ethical acceptability of gifts and samples. Physicians are the most substantial determinants in pharmaceutical sales by deciding which drug will be used by patients. Influencing the physician is a key to pharmaceutical sales. The marketing efforts of drug companies must target female, young physicians practicing in rural regions. This might generally be the most influenced category of practicing physicians.

VII.   REFERENCES

[1] Ofori-Asenso R, Agyeman AA. Irrational use of medicines – A summary of key concepts. Pharmacy (Basel) 2016;4:35. [PMC free article] [PubMed] [Google Scholar]

[2] Yilma Z, Liben M. Assessment of drug prescription pattern in Mekelle General Hospital, Mekelle, Ethiopia, using World Health Organization prescribing indicators. Biomed Res Int. 2020; 2020:3809157. [PMC free article] [PubMed] [Google Scholar]

[3] World Health Organization. Guide to Good Prescribing. Geneva: World Health Organization; 2021. [Last accessed on 2021 Jul 23]. Available from: https://apps.who.int/iris/bitstream/handle/10665/59001/WHO_DAP_94.11.pdf . [Google Scholar]

[4] Masoud A, Noori Hekmat S, Dehnavieh R, Haj-Akbari N, Poursheikhali A, Abdi Z. An investigation of prescription indicators and trends among general practitioners and specialists from 2005 to 2015 in Kerman, Iran. Int J Health Policy Manag. 2018;7:818–27. [PMC free article] [PubMed] [Google Scholar]

[5] Jain S, Upadhyaya P, Goyal J, Kumar A, Jain P, Seth V, et al. A systematic review of prescription pattern monitoring studies and their effectiveness in promoting rational use of medicines. Perspect Clin Res. 2015;6:86–90. [PMC free article] [PubMed] [Google Scholar]