

A Proposed Study on the analysis of Factors Affecting the Prescription behavior of Physicians in and around Hyderabad, India: A study of Anti-Allergic Drugs



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Abstract

Pharmaceutical marketing is different from general marketing. Marketers in this segment are often more sales driven than marketing driven and, therefore, more attention is paid to the execution parts of marketing. Physicians Prescription behavior is the result of 3P's namely Product, Physicians, Promotion. Previous Research studies stated that the impact of product attributes, promotional tools adopted by pharmaceutical marketers, effect of medical representative, Gifts & sponsoring to conferences on physicians prescribing behavior. With increase in branded generic brands, differentiation / customized marketing communication is the key for the success which calls for in-depth understanding of physician's personality trait, demographics, price point & branding elements which is considered for prescription initiation for a product. Most studies related to factors affecting Physicians personality traits /demographics on prescribing behavior have taken place in a limited number of countries, for example in Greece, Iran. Conducting a study of this type in an Emerging market from Asia, Particularly in India –having a different culture with wide diversity - will help in understanding the factors that affect the doctors' prescribing behavior and give more insights for better understanding of the relationship and impact of these factors when prescribing anti-allergic drugs taken as an example in this study.

Key Words: Pharmaceutical marketing strategies, doctors' prescribing behavior, India, Private and Public sector hospitals, Physician demographics, marketing communication elements.

Indian Pharmaceutical Market

Indian Pharmaceutical Market (IPM) is 3rd largest in the world in terms of volume and 13th largest in terms of value. Currently IPM is valued at about 20 billion USD and is expected to touch 100 billion USD by 2020 with a CAGR of 20%. Branded generics forms 70-80% of the market. WHO health statistics report has named the following 10 diseases responsible for maximum number of deaths among Indians

Diseases Responsible for Top 10 causes of deaths

Serial No	Disease	% of Deaths
1	Ischemic heart disease	12%
2	Chronic obstructive pulmonary disease (COPD)	11%
3	Stroke	9%
4	Diarrheal disease	6%
5	Lower respiratory infections	5%
6	Others	13%

Source: WHO world Health statistics, 2012

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IPM has been registering a decent growth post economic reforms with infrastructure development, technology base creation, and production of a wide range of therapeutic products. With this, India is currently accredited as the global pharmacy of the developing world and has attained cost-competitive manufacturing capabilities to provide quality medicines at lower costs.

At domestic front, important factors like, rapid urbanization, increase in disposal income, emergence of insurance sector, changes in life style and access to better healthcare facilities has brought healthcare within the reach of common Indian who otherwise could not afford in the past.

With growing urbanization, pollution, life expectancy (women and Men is 68 & 65) and changes in life style (food, stress), most of the population is at increased risk of getting diagnosed with life style diseases at an early age leading to suffering and managing the disease rest of the life (chronic disease) over traditional , seasonal diseases which are acute in nature.

Having identified chronic diseases as the growth driver, pharmaceutical companies started working towards consolidating their leadership position with existing products & aligning their portfolios towards growing therapeutic areas like gastrointestinal, cardio-diabetic and oncology segments with differentiated products either through product differentiation or Joint Venture (JV) with innovators for getting them promoted to the respective physicians.

Promotion of ethical drugs in India is regulated by strict regulations led by DCGI, MCI. Promotion of ethical drugs can be done as follows

- a) Detailing to doctors by Medical representatives.
- b) Mailing brochure and literature to doctors or pharmacists.
- c) Advertisement in health care journals.
- d) Symposiums and Society Meetings.
- e) Clinical meetings & public relation campaign.

Physician decision on prescribing drugs is an essential factor to curing of patients. The role of physician is very dominated in India. Medical representatives form the core of Pharmaceutical marketing. Pharmaceutical companies appoint medical representatives and assign them pre-defined territories with a set of doctors, from various specialties and chemists, stockiest as per company norms. Medical representatives puts efforts and tries to influence prescription pattern of doctors in favor of their brands. (Sahad P.V. & E. Kumar Sharma, Business Today, December 4, 2005) [1], (Dr. Rajan T D, Getting into the physicia' s mind, Express Pulse 2006) [4]. Typically, for any large scale pharmaceutical company, the expense of this sales force ranges from 15-20% of annual product revenues. Hence understanding factors affecting physicians prescription behavior of a brand / product is vital for a Marketer in developing effective marketing strategies for getting them communicated through medical representatives is key for success.

Literature Review

Marketing is a process of developing business and adjusting its proposition to necessity and demand of a market which will be in constant evolution.

Kotler and Armstrong (2012) defined marketing as a process from an organization which intends to create values to customers and make strong relationships with them in order to get values from the customers as returns. The marketing consists of five steps as follows:

- 1) Understand needs and desires of customers,
- 2) Design strategy to get, maintain and improve targeted customers,
- 3) Develop marketing program,
- 4) Collecting the results.

Marketing mix is, a term used to describe the 4P's which include, Product offered, price structure, promotion activities, and distribution.

Decision Making

According to Moven and Minor (2002) mentioned that the most complex human decision is comprised of 5 stages which includes Introducing, seeking, alternative evaluation, selection and Evaluation post accusation.

In introduction stage, consumer's confess that they need something which is encouraged by undertaking promotion. If the needs are strong, promotion will motivate the prospected buyers to enter second stage namely information seeking which is limited from the consumers involvement.

In third stage, customers will do alternative evaluation to solve the problem. This is followed by action to consume and use the product or service.

Miller (1973) noted that the drug attributes affecting adoption of a new drug are social reward, consistency of therapeutic response, communicability, pharmaceutical attractiveness, and relative advantage. Negative factors influencing physician prescribing are risk and a high continuing cost of therapy.

Benedetto et al (1999) stated that careful execution of market research, testing activities and information gathering is required to obtain key information about customers and the effectiveness of the marketing activities undertaken, as well as to provide feedback both during and after launch. There was much room for improvement of advertising execution.

Chandler and Owen (2002) have further developed the concept of pharmaceutical brands. They argued that brands play an important role in differentiation as a large number of drugs is available to physicians. This is particularly true when the product attributes are very closely related. Differential advantages in crowded therapy areas can be obtained only by building a clearly communicated brand (Chandler and Owen, 2002) that helps physicians differentiate between two identical products.

Dickov (2011) mentioned that pharmaceutical market is a complex system in which a number of stakeholders put their interests. Product diversities and geographical coverage push companies to establish their strategy in an individual level.

Rollins and Perry (2014) stated that pharmaceutical marketing is different from general marketing. The market is comprised of doctors who are legally entitled to make prescriptions and patients as the final consumers of the pharmaceutical industry. Drugs are sold indirectly in which the final users (patients) has to buy the products from a pharmacy.

Bathia *et al.* (2006), from their research found that pharmaceutical marketing for prescribed drugs is different with other products as regards to two aspects. These are firstly, serious consequence and side effects of incorrect prescribed drugs by which legally and professionally it is doctor or physician allowed to select the product. Secondly, there are not any best quality of drugs as their effectiveness vary to patients factors. As a consequence, patient characteristics, history of medication and comorbidity are important factors in selecting drugs to patients.

Vasiljev S and Pantelic D (2010) stated that the marketing perspective on a pharmaceutical product is as accordance to its capability of pharmaceutical companies in comprehending their customers. Organization and work to meet the costumers needs efficiently.

Sumarwan (2012) stated that consumer decision making process in purchasing or consuming product or service are affected from three factors: a) marketing actions as done by producer and other institution, b) difference factors of individuals, c) environmental factors of consumers. In health areas, decision making reach to wide terms which can be applied to process to select between some choices to get cure.

Thomas (1991) mentioned that clinical decision making of medical personnel is a decision considered as a complex one. Decision is not only for a personal but originated from limited choices. Medical team have to make decision on various consideration including diagnosis, intervention, interaction and evaluation within a dynamic context by using knowledge foundation. The knowledge include literature used as a foundation of involved variable and individual.

Vries *et al.* (1994) according to them , there are 6 steps in the writing of prescriptions that define the patient's problem, determine treatment, verifying the suitability of the drug for patients, write prescriptions, provide information to patients about medications prescribed by explaining the appropriate instructions and warnings on the drugs that exist, and do monitoring.

Chapman (2004) found that clinical decision making generally involves decision making process of health practitioners acting on behalf of patients.

Edwards *et al* (2004) stressed out that clinical decision making is a result from collaboration process involving patient and professional team of health sectors. So, the decision has to have considered the patient decision.

Jueridini and Mansfield (2001) stated that Pharmaceutical companies influence the doctors through published clinical materials on international and muti centered studies. These companies do not just promote drugs and they also promote illness which is considered as a subtle way of promotion

Gibbon *et al*, (1998) stated that medical educational conferences are also influence the physicians prescribing drugs, although in pharmaceutical industry gifts are more influential they are considered as less appropriate.

Fremantle and Eastaugh (2002) argue that cost effectiveness as an important factor that influences doctors prescribing behavior.

According to Philips (1984) Product attributes and benefits are also found to be important factors which influence the physician's prescription behavior of a product.

According to (Luminița Mihaela **Ion**)the physicians' suitable prescription is influenced by several factors that act on the decision to prescribe medication, such as: drug characteristics (quality, price, and availability), patient's state, the prescriber, professional background. In the research from Romania it has been confirmed that the increased quality of a drug constitutes a key factor that leads to the success of any pharmaceutical company on the market, as this is a priority for most doctors/ pharmacists when they recommend/ prescribe a drug/ product.

Lalit et al (2012) through their research found that a regular visit by a smart, dedicated, well groom having soft skills medical representatives is the best tool of promotion for a pharmaceutical company. Presenting good quality literature, journals and sponsorship for conferences or personal tours are preferable promotional tools in comparison to organization of free camps, personal gifts, medicine samples or any other incentive.

Lalit et al (2012) further confirmed that, it is vital that sales professionals become involved in the process and doctors must go through in order to change their clinical behaviors and prescribing habits. By training representative to view time with a doctor as a part of a larger educational process, you make it possible for them to contribute to that learning process and meet their goals more quickly. Scientific information is more effective when used as an educational tool rather than a sales tool.

Saroj Kr Datta et al (2013) stated that pharmaceutical marketers are often more sales driven than marketing driven and, therefore, more attention is paid to the execution parts of marketing. They generally have not done market research to determine their brand identity and to verify Physicians' perceptions about it.

The authors further stated that Indian companies are no exception; rather they are showing their lack of initiative in conducting marketing research and verifying the importance of brand name identity. Since branding is an integral part of the benefit process having the main purpose of customer satisfaction and customer loyalty, more can be done to form a "brand" relationship that transcends the functional aspects of the product. In India, no remarkable research work except that of Bhardwaj and Jadeja (2008), Waheed et al. (2011) and Panchal et al. (2012) has been identified on this issue in Indian pharma perspective. But these research works are not adequate to describe the dynamics of branding strategy of pharmaceutical products, particularly the branded generic drugs.

Boltri et al (2002) stated that the influence of promotional tools by pharmaceutical industry on prescribing behaviors of physicians has a greater impact. The general promotional tools like gifts and etc. These are more influential rather than scientific promotional tools for the physicians contrast with consultants.

Chew LD (2000)Analyzed the effect of drug sample availability on physician prescribing behavior. Based on their review, they investigate that most accepted view that the medicines free samples are beneficial to the patients and indirectly the good caring response come from the doctors from the free samples that's why it should be reconsidered.

Vishnu Parmer et al (2014) further concluded from their research that there are 2 factors which impact a lot than any other factor i.e. one is New Drug in market and the promotional tools.

Waheed et al (2011) from their study from India, found that the tangible rewards lead to prescription loyalty. Although several prescription behavior studies have suggested that physicians consider rewards in their prescription decisions.

(Wazana, 2000; Madhavan et al., 1997; Brett et al., 2003), the study further found that tangible rewards are a significant factor in physicians' continuity in prescribing the same company drug.

The 2 major findings of the above research are that, firstly physicians are committed in prescribing a particular company's drugs on the basis of the recognition shown by the pharmaceutical company for continuous patronage. Secondly PSR professional values impact significantly on the prescription loyalty behavior of physicians. This is an important result for the pharmaceutical companies in terms of adopting and nurturing the professional values of their PSRs. This is even more important, due to the fact that most of the countries like India who have brought in strong regulations relating to physicians accepting tangible rewards. If providing tangible rewards (which is found to be a significant factor for prescription loyalty) seems more difficult, companies need to understand that tangible rewards can no longer be a "point of difference" due to government agency intervention, so that they have to focus far more on PSR professional values.

Mamas Theodorou et al (2009), from their study involving physicians from Cyprus and Greece highlights that the attitudes and the factors influencing physician behavior in the two countries. They further confirmed that clinical effectiveness is the most important factor considered in drug prescription choice in both Cyprus and Greece. Physicians believe that new drugs are not always better and their higher prices are not necessarily justified.

Research Gap

Pharmaceutical marketing is different from general marketing. Marketers in this segment are often more sales driven than marketing driven and, therefore, more attention is paid to the execution parts of marketing.

Physicians Prescription behavior is the result of 3P's namely Product, Physicians, Promotion. Previous Research studies stated that the following factors affect physicians prescribing behavior.

- Product : attributes, differentiation, characteristics like quality , price, Availability, product diversities, geographical coverage
- Physicians: Professional back ground, attitude & needs of physicians.
- Promotion: Pharmaceutical tools like clinical material, good quality lit, journals, sponsoring to medical educational conferences, gifts, organizing free camps for disease detection, medical samples, are more influential coupled with Professional sales representative's professional values impact significantly on the prescription loyalty behavior of physicians (a regular visit by a smart, dedicated, well groomed, having soft skills medical representative).

Though limited data is available from Greece & Iran, from India, research work has not been carried out on factors affecting the prescription behavior of physician revolving around the importance of physician's,

- Personality traits or value
- Demographic profile,
- Product selection criteria / shifting criteria,
- view on the importance of price point and finally
- Physicians Preferred marketing communication elements

These factors not only plays an important role in physician’s prescribing behavior of a product but also helps marketers in in-depth understanding physicians need and thereby design customized, differentiated marketing efforts leading to prescription of targeted product/brand over competition in the respective therapy.

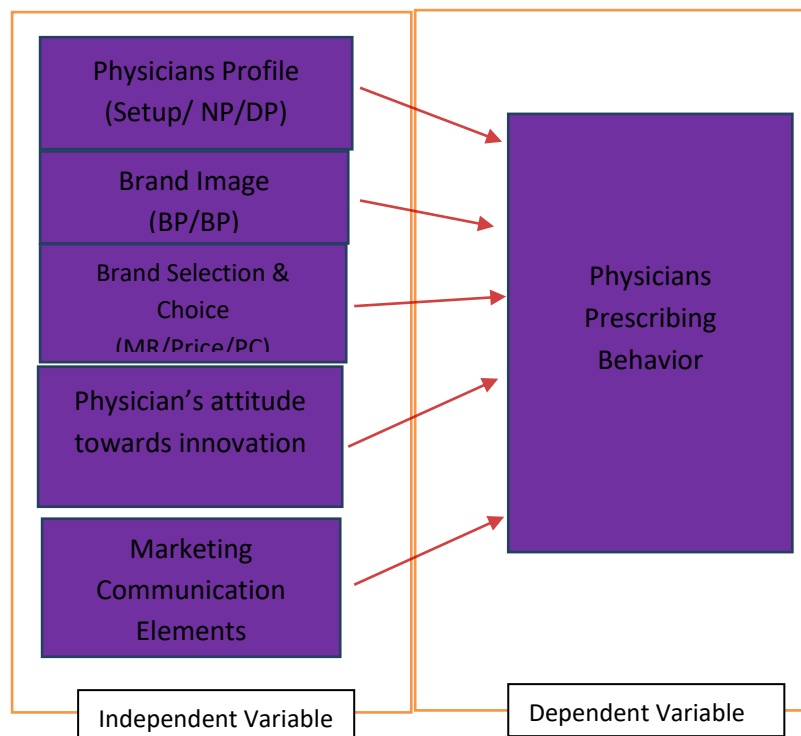
Proposed Research Objectives

The main goal of this proposed research work is to analyze the effect of factors like Physicians Personality, demographics, Product price point, Product loyalty & marketing communication mix on the physician’s product prescribing behavior in an Indian set-up.

To achieve this goal the following objectives will be fulfilled:

- To assess the effect of doctor’s personality on doctors’ prescribing behavior
- To investigate the awareness and the knowledge of the doctors of the drug prices and the extent of its effect on doctor’s prescribing behavior.
- To assess the effect of doctor’s professional knowledge and experience on doctors’ prescribing behavior.
- .To assess the effect of drug characteristics on doctors’ prescribing behavior.
- To assess the effect of drug innovation on doctors prescribing behavior
- To assess the effect of pharmaceutical marketing strategies on doctor’s prescribing behavior.
- To assess the effect of patient’s expectations on doctors’ prescribing behavior and how is the doctor’s image important as a tool to gain patients.

Proposed Theoretical frame work:



Research Importance/ Expected contribution to the domain of management

As most studies related to factors affecting Physicians personality traits /demographics on prescribing behavior have taken place in a limited number of countries, for example in Greece, Iran, conducting a study of this type in an Emerging market from Asia, Particularly in India –having a different culture with wide diversity - will help in understanding the factors that affect the doctors' prescribing behavior and give more insights for better understanding of the relationship and impact of these factors when prescribing anti-allergic drugs as an example in this study. This proposed research study from India with the discussed frame work & well designed methodology (which is in progress) will provide marketers managing brands in chronic therapy where the competition is intense with a richer information on the relative importance of the above mentioned factors, when considering customized marketing communication programme for the selected/ targeted physician towards product getting prescribed in a competitive environment.

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