The Impact of Marketing Mix Strategies of Indian Pharmaceutical Industry on Doctors' Prescriptions

Dr. Sanjeev Kumar Mathur Professor.

Faculty of Management and Commerce, Poornima University, Jaipur

Dr. Brijesh Awasthi

Professor, Faculty of Management and Commerce, Poornima University, Jaipur

Abstract

The Indian pharmaceutical organizations' revenue generation and profit making solely depends upon the how convincingly they charm doctors to prescribe their organization's products. Every organization's objective is to convince the doctors in private and government hospitals to place trust on its product mix. They strategize and go all out in the fiercely competitive market. The study was intended to evaluate the impact of pharmaceutical marketing mix on the prescribing habits of doctors in India.

Research Methodology: The researchers focused on two distinctive sets of doctors, one from the government hospitals and another from the private hospitals. The doctors were randomly selected from 7major government hospitals and 21 private hospitals of north India. There were 240 doctors who were the sample subjects of the study and the collected data was put to computation of mean, standard deviation, one sample t-test, ANOVA, chi-square test etc. through SPSS-20 tool.

An appointment was taken for this purposive research from the randomly selected doctors and a quick response based on their answers was registered through a well-structured questionnaire.

Results Computation: The overall response of pharmaceutical marketing mix (as observed) impacting doctors to prescribe specific brands was pegged at 55.83%. The perception of doctors about the impact of marketing mix strategy was significant. The doctors ranked price strategy as number 1 with 60.42% impact, product strategy ranked number 2 with 56.25% impact, place strategy ranked number 3 at 54.58%, and promotion strategy ranked number 4 with 52.08% impact.

Background: The factors that exerted influence on the prescribing habits of doctors were their Specialty (p = 0.00), types of Hospitals (p = 0.02) and working areas (p=0.01).

Conclusion: The study made it crystal clear that more than 55.83% population of doctors got influenced on account of distinctive marketing mix related strategies of the pharmaceutical industry of India. The

qualitative design was an endorsement to this viewpoint.

It may be apt to say that the exercise of ethical practices in healthcare sector would provide a perfect sense of direction to the doctors and not get swayed away by unethical lucrative marketing mix strategies.

Keywords: Doctors, Marketing Mix, Pharmaceutical Industry, Prescriptions

Introduction

Indian pharmaceutical industry has grown by leaps and bounds in the 21st century and is one of the most promising industries among the key sectors of Indian economy. Doctors continue to be the fulcrum around which efforts of every pharmaceutical company revolves around as their prescriptions make a humongous contribution to the wellbeing of organizations in terms of revenue generation and profit generation. The working of Indian pharmaceutical industry is such that all organizations through a fleet of their field force operating at different levels of organizational hierarchy devote a humongous time, effort and money to influence the prescription habits of doctors to repose trust on their organizational brands of medicines so that they generate profits in due course of time with the help of economies of scale in the production of medicines (Gadre A. and Shukla A, 2016). Being intensely competitive, every pharmaceutical organization tries to woo the prescribing habits of doctors and that gave motivation to the researchers to evaluate the impact of marketing mix on the doctors' prescription habits. The pharmaceutical organizations are always ready to dig deeper with novel strategies directed at doctors in the major hospitals - both private and government, to stay ahead in the competition. There is a plethora of sales promotional tools/ marketing tools which help an organization to earn the prescription support and thereby, provide strength to the organization to sustain its operations in the midst of over-crowded market.

Being third largest in terms of volume and fourteenth largest in terms of revenue generation in the world market, the Indian pharmaceutical industry has a huge base of registered pharmaceutical houses across India (IBEP, 2021). The way this phenomenal industry impacts the prescription habits of doctors has a direct bearing on the 1.30 billion population of this nation and it is expected that the industry would remain ethical in its endeavor to win the prescription support of the doctor and there would not be any unprincipled practices that would have a negative impact on the society. An undesirable increase of drug prices is a heinous crime in a nation that has a per capita income of merely USD 2000 per annum (ES, 2021-22).

In the backdrop of all this, it was deemed worthwhile to develop an understanding of the subject that has not been discussed and delved much in the past. It is quite an obvious thing that being second most populous nation in the world with low per capita income and asobriquet of pharmacy capital of the world, the nation wants the best possible medical treatment with affordable cost of treatment and that prompted the investigators to do a thorough probe into what makes doctors prescribe the medicines and why do they prescribe certain medicines? What is the role of pharmaceutical organizations in their prescriptions?

It was deemed appropriate to do a serious research study on the impact of marketing mix strategies of pharmaceutical organizations on the doctors' prescriptions. North India which boasts of world class government as well as corporate hospitals in the country with a population base of nearly 500million habitants, the researchers decided to zero in on 7major government hospitals for taking their research deeper alongside 20 private hospitals with excellent footfall of patients. As the time went by, the pharma industry became gigantic in terms of its size and volume and the nexus of both doctors and industry came under the scrutiny of society. Currently, it has become a point of debate whether the doctor- organization nexus is beneficial or it is sucking the progress of medical sciences in the whirlpool of ever increasing economic gains of both the partners. Doctors have a choice to make for every generic salt to prescribe. Then why prescription of a drug that is more expensive is being mooted.

There is a burgeoning spending of industry and drug safety is a new buzz in the society. Thus, no pharmaceutical organization can afford to mitigate the quality of its drugs' efficacy. The investigators tried to understand through this research study as to why do doctors who have a choice to prescribe more economical drugs end up writing those medicines in their prescriptions that may not be so reasonably priced. Do the pharmaceutical organizations through their marketing mix strategies influence prescriptions of doctors? If yes, then are those strategies significant or not?

In India, the investigators sensed that no such comprehensive research of this nature where the perceived impact of a brand promotion on a doctor's choice of prescription was done previously. Hence, the objective setting was clean and clear: To make an assessment of drug's marketing mix strategy on doctors' prescription habits.

Review of Literature

In order to measure the impact of marketing mix strategies of pharmaceutical organizations to change the prescribing habits of doctors which helps the organizations to increase sales revenues and improve the financial position in the competitive market which is pivotal to the sustenance of their operations in the market, the researchers immersed themselves in to exhaustive ransacking of intellectual work being done in the same field by the previous researchers so that they could decide on the direction of research process in pursuit of digging the truth of the doctors' psyche into prescriptions of certain drugs/ brands through the intelligent marketing mix strategies of various pharmaceutical organizations.

One of the studies have suggested that regular visits of 61.7% professional service representatives are very important to them and directly influence their prescription habits. An organization that is inconsistent to represent in their chambers through professional service representatives is less likely to impact their prescription habits (Gupta S., Nayak R., SivaranjaniR., 2016).

According to one of the consulting physician the doctors are not immune to brand promotions of pharmaceutical organizations. They welcome in their chambers pharmaceutical representatives regularly and accept their samples, gifts, sponsorships, CMEs participation etc. and that influences their prescriptions (Goyal R.,2013)In another study, 34% doctors concurred that their prescriptions got influenced by their interaction with sales (Sergeant et al, 2010). Mathur S. K.et al (2018) discovered that doctors psychologically get influenced by the sales promotional strategies and prescribe medicines of such organizations.

Jacobson and Mizik (2004) revealed in their study that samples and representative's detailing exert influence of doctors' prescriptions. Srivastava, et al (2013) revealed in their studies revealed that the doctors' prescriptions are biased towards multinationals on account of their global presence and high brand promotion. The odorouet al. (2009) found out that the in clinic brand promotions through representatives impact their prescriptions.

Uchenna et al (2010) in a study conducted in Nigeria revealed that varied promotional tactics of pharmaceutical organizations impact the doctors in the country to prescribe their promoted brands.

Vishnu Parmer et al (2014) talked about 2 factors namely, arrival of new drug in the market and the persuasive tools. Arora and Taneja, in 2006 told that all marketing mix activities are impactful on doctors' prescription pattern. Narendran, R. & Narendranathan, M.(2013) in their study made that that even small gifts as a promotional strategy to doctors influences their prescriptions.

Waheed et al (2011) found out in their Indian studies that the tangible reward system which is prevalent in Indian pharmaceutical industry plays an important role in the prescription loyalty. There are plethora of prescription behavior studies of doctors all indicating considerable skewed nature of doctors towards rewards from the pharmaceutical organizations which is ultimately responsible for their peculiar prescription patterns.

Research Gap

Pharmaceutical marketing is unique and offbeat in nature from general principles of marketing. Marketers who represent pharmaceutical organizations in this segment are obsessed with sales than being driven by marketing. The reason: they do not know the direct customers of their products i.e. medicines and they reach out to them through doctors who identify the ailment of the patients and prescribe medicines to alleviate them. It is a complex process as chemists/ pharmacists are also involved who are also very important for pharmaceutical organizations and, therefore, execution of marketing gets more attention. The prescriptions of doctors largely depend on 3 Ps i.e. Product, Physicians, Promotion. Earlier researchers' studies implied the following factors influencing doctors' prescription behavior.

Product: It deals with the attributes, distinction and, characteristics such as availability, price, quality etc.

Physicians: Academic qualification with their specialty, expectations and product related requirement of such doctors

Promotion: Pharmaceutical promotional tools such as regular visits of professional service representatives, samples, gifts, distribution of important medical books' latest editions, Complete/ partial sponsorships in conferences/ seminars, excursion trips to abroad with family, invite in CMEs, invite in new product introduction launch meet, organizing periodic camps for diabetes, cardiac ailments, orthopedics etc.

There is a paucity of sufficient data in India to throw adequate light on the role of promotional activities of pharmaceutical organizations which are influencing the prescribing habits of doctors. Inadequacy of research data on factors that impact prescription behavior of doctors encouraged the researchers to build up research process involving doctors around the preferred marketing communication tools for doctors

It is needless to mention the importance of these factors in determining doctors' prescribing behavior for a particular product. The pharmaceutical organizations also need to evolve an in-depth understanding about the doctors' needs and aspirations so that customized differentiated marketing efforts may be channelized to optimize the support of doctors for their products over other competitors.

Proposed Research Objectives

The prime objective of this proposed research work is to analyze the effect of marketing mix strategies on the doctors' product prescribing habits in an Indian context. Also, this study is intended to evaluate changes, if any, in the prescriptions of doctors with demographic factors.

Research Methodology

Driven by the inquisitiveness, the researchers charted out course of action to decode the behavioral pattern of doctors to the promotion mix tactics of varied nature of pharmaceutical organizations in north India which accounts for more than 500 million residents with humongous pressure on the healthcare system which has a farrago of corporate hospitals, private hospitals, government hospitals, nursing homes, private clinics etc.

Period of Study

This study was carried out during the period 3rd September, 2021 - 15th November, 2021 when Covid-19 had subsided in this part of the country.

Sample Selection, Sample Location and Sample Size

The doctors were picked up from7 prominent government hospitals and 20 private hospitals (including corporate hospitals of north India) and there were 255 doctors who were reached out with prior appointment to fill in the questionnaire to understand their prescription behavior based on marketing mix exposure of pharmaceutical organizations. The Professional service Representatives are an indispensable part of pharmaceutical brands promotion and it is their sales acumen coupled with sales promotional strategies of pharmaceutical organizations that make the organizations flourish and that is why 12 such professionals were roped in to consummate the research successfully. A list of FAQs was already made by the investigators beforehand to answer the probable questions of those doctors who were selected for the study. The purpose of conducting such a research was also lucidly explained beforehand to all selected doctors whose responses were to be locked in for further study to avoid any ambiguity on the research matter. Initially, the investigators spoke with some prominent organizations' professional service representatives to zero in on those doctors who were quite experienced and had good clientele as sample subjects.

The researchers went ahead with mixed methods sequential explanatory design to take the research forward. The first phase took off with a cross sectional study to assess the doctors' behavior towards their preference of prescriptions. In the next phase of study, the researchers tried to reach out to the fundamental reasons, thoughts and beliefs that culminated in to a peculiar prescription pattern of theirs under the influence of marketing mix strategies.

It was purposive sampling technique that was applied for qualitative study as they were experienced dealing with the pharmaceutical organizations and had a fairly decently idea about the prescription triggers of the pharmaceutical industry. Based on the recorded feedback, there were 15 rejections on account of incomplete information recorded and 240 were deemed appropriate for study by the investigators.

Data Collection and Data Analysis

A questionnaire enriched with a repertoire of ingredients in the form of marketing mix related strategies was presented to the doctors and they were made to fill in the questionnaire as per the perceived value associated with each question by each one of them. The recorded data was later on subjected to analysis to decipher their response related to marketing mix strategies of pharmaceutical organizations. The questions were gyrating around product, price, place, promotion and social and economic factors besides demographics. The questions were Likert Style sort of, having responses from one extreme of strongly agree to the other extreme of strongly disagree.

Through a well-structured series of open ended question in the personal interview, the qualitative aspect on the influence of marketing mix strategies on doctors' prescription was comprehended and evaluated. The selection of open ended questions was done after ransacking a huge amount of literature. The principal investigators being experienced researchers remained absolutely non-judgmental and noted down the important aspects of the subject matter wherever it was necessary. The questionnaire was put to mettle through Cronbachs Alpha test (0.95)to check for appropriateness of its design and consistency.

Immediately, after the collected of the data from 255 doctors across cities in north India, the completeness of data filling was looked into alongside its consistency and 15such incomplete and deficient responses were out rightly rejected to avoid putting the research process at this stage head for any wrong direction to the research process.

Also, not to put on record any garbled message of doctors on their perception on various issues of brand promotion versus fluctuation in their state of mind, their responses were put back to them to vet and revert back their responses for change, if any, in their interpretation that was recorded with us. The research was conducted keeping on hold the ethical values to the hilt.

Once data got edited, EpiData software (version 4.6.0) was put to do coding and data entry processes. The quantitative data was subjected to analysis utilizing the Statistical Package for Social Sciences (SPSS) version 20. The statistical features in the form of percentage, mean and standard deviation (SD) were utilized to do the job of computation so as to arrive at the stated objective. All figures and tables were made through MS excel. Also, inferential statistics computation was done with the help of multiple linear regressions for measurement of the relationship between independent and dependent variables with a 95% confidence interval and variable with p-value < 0.05 taken as statistically significant.

Socio-Demographic Characteristics of Respondents

As stated earlier, an overall 240 responses were obtained that were complete in all respect, which accounted for 94.11 % of doctors approached. They represented varied specialties in terms of their practice such as consulting physicians, surgeons, gynecologists, cardiologists, orthopedic surgeons, and ENT surgeons. Thus, they represented different specialties of medical profession, age, qualification, areas (urban, rural and/or suburban), experience and gender which were taken up as the differentiators to put demographic factors under scrutiny for changes, if any.

Profile of Qualitative Research Professionals

There was a selection of 20 renowned doctors who were a mix of male and female (75:25) in the age group of 35-44 with mean and SD 41.95 ± 4.55

As regards place of work, 13doctors who got interviewed belonged to government hospitals and 7 were from private hospitals. They were a conglomeration of different specialties ranging from neurologists, to urologist to physicians to surgeons. Their work experience ranged from 11=20 years with mean and SD10.09±2.74.

Results

Impact of Promotional Strategy on Doctors' Prescriptions

It was the considerate opinion of doctors that the role of PSRs as information disseminators (3.85 ± 1.11) , companysponsored CME participants (3.61 ± 1.2) , participating presence in new product launch (3.5 ± 1.01) , regular visits of PSRs (3.64 ± 1.08) , 2 or 4 page promotional material in the form of leaflets (3.47 ± 1.42) , and visit to pharmaceutical manufacturing plant to see the facilities (3.52 ± 1.22) all were impactful to their prescribing behavior. However, in clinic promotional gifts strategy was not deemed to be impactful (2.9 ± 1.5 6). Also, the doctors were nonchalant towards personal relationship to company (2.74 ± 1.11) when they tried to strike a relationship between their prescribing behavior and the promotional strategy of the pharmaceutical industry. (Table).

No.	Variables	Categories	Frequency	Percent
1	Gender	Male	186	77.50
		Female	54	22.50
2	Age	Below 35	24	10.00
		35-45	72	30.00
		45–55	84	35.00
		Above 55	60	25.00
3	Education	Post Graduates	211	87.9
		DMs	29	12.1
4	Specialty	General Medicine	95	39.58
		Surgeon	39	16.25
		Gynecologist	22	9.17
		Pediatrician	24	10.00
		Cardiologist	18	7.5%
		Dermatologist	11	4.58
		Orthopedics	20	8.33
		Neurolgist	11	4.58%
5	Working experience (Years)	Below 10	19	7.92
		10-20 years	74	30.83
		20-30 years	82	34.17
		More than 30	65	27.08
6	Working	Government Hospital	96	40.00
		Private Hospital	144	60.00
7	Area	Urban	124	51.67
		Suburban	66	27.50
		Rural	50	20.83

Table 1 Socio-demographic characteristics of respondents in Indian hospitals (n = 240)

Overall 240 correctly filled in questioners were picked up for further study out of 250 total sample size at the time of data collection period with the response rate 94.11% to assess the impact on account of differential socio-economic factors. It is quite evident from Table 1 that 186 (77.50%) subject of the study were male and 54 (22.50%) were female. The chunk of respondents 84 (35%) were between the age of 45 - 55 years. On specialty front, there were 95(39.58%) doctors from General Medicine, 39(16.25%) Surgeons and 22(9.17%) Gynecologist. 144 (60.00%) of the respondents were working in private hospitals. The majority of respondents 124 (51.67%) doing practices in urban areas and rest were practicing in suburban and rural areas. 147 (61.25%) of the respondents having more than 20 years of experiences.

Impact of Promotion Strategy on Physicians Prescribing Behavior

Table 2 Observed immed af	much of on stude or or	, m havai a i a mat	www.authing.haharian in India	h_{α} has the late $(n - 240)$
Table 2 Observed Impact of	promotion strategy on	i physicians [*]	prescribing behavior in India	1 nospitais ($n = 240$)

No.	Type of Promotional Tool	Mean (SD)
1	Company Sponsored Participation in National/ International Conferences	3.22 ± 1.06
2	Information from Medical Representative	3.39 ± 1.09
3	Frequent Visits of Medical Representative	3.87 ± 1.31
4	Frequency of Visits by Medical Representative	3.44 ± 1.28
5	Sample Disbursement	3.16 ± 1.09
6	Drug Related Promotional Material	3.58 ± 1.13
7	Different gifts from pharmaceutical company	3.07 ± 1.26
8	Company Sponsored Excursion Visits	2.96 ± 1.19
9	Travel Sponsorship during Conferences	3.53 ± 1.26
10	Journals Sponsorship	3.02 ± 1.11
11	Invitation to Company Manufacturing Site/ Corporate Office	3.25 ± 1.07
12	Personal Rapport	2.64 ± 1.16
13	Participating to product launch meeting	3.15 ± 1.09
14	Public relations of pharmaceutical company	3.18 ± 1.13

Physicians valued MR visits and the information sharing (3.39 ± 1.09) , their invite to the CMEs (3.22 ± 1.06) , new product launch meetings (3.15 ± 1.09) , frequent visits of MRs (3.87 ± 1.31) , information from promotional drug brochures (3.58 ± 1.13) , and experiencing production facilities onsite (3.25 ± 1.07) as various factors that were

instrumental to impact their mind towards the company's products. However, doctors were least moved by the promotional strategy tools like receiving in clinic gifts $(3.07 \pm 1.26$, sponsored excursion visits (2.96 ± 1.19) and personal relationship to company (2.64 ± 1.16) (Table 2).

Impact of Place Strategy on Physicians Prescribing Behavior

Table 3 Perceived influence of place strategy on physicians' prescribing behavior in Indian hospitals (n = 240)

No.	Factors	Mean ± SD
1	Product Distribution Index	4.36 ± 0.86
2	Standard Prescription comprising Company Brands in the Hospital MedicineList	3.18 ± 1.08
3	C & F Agent and/ or Stockist of Pharmaceutical Company	3.26 ± 1.09
4	Product Information at Stockist/ Retailer Levels	3.27 ± 1.25
5	Availability of Retailers	2.78 ± 1.31
6	Efficient Distribution System	3.86 ± 1.38
7	Reverse pharmaceutical (product recall)	3.51 ± 1.17

It was the considerate opinion of those who participated in the study as respondents to give huge weightage to high Product Distribution Index (4.36 ± 0.86), brand mention in standard prescriptions of hospital (3.18 ± 1.08), C & F/ stockist presence (3.26 ± 1.09), efficient distribution channel (3.86 \pm 1.38), product information at stockiest/ retailer level (3.27 \pm 1.25) as influencers to decide which medicine to prescribe to the patients. Whereas Presence of sole supplier (2.78 \pm 1.31) was not of any significance. (Table 3).

Impact of Price Strategy on Doctors' Prescribing Behavior

Table 4 Perceived influence of price strategy on physicians' prescribing behavior in Indian hospitals (n = 240)

No.	Description	Mean ± SD
1	Disclosure of actual price of the product	3.87 ± 0.97
2	Price discounts technique for the product	3.52 ± 1.08
3	Price of the drug and effectiveness of therapy	3.94 ± 1.02
4	Price of medication in relation to quality 3.89 ± 1.0	
5	Price competition among pharmaceutical company	3.84 ± 1.18
6	Price for full course therapy	3.57 ± 1.21

The price strategy is vital in the prescription influence of doctors. The doctors agreed that drug price (3.94 ± 1.02) , its actual price knowledge (3.87 ± 0.97) , knowledge of price discount strategy, if any (3.52 ± 1.08) and total cost of

treatment to quality (3.89 ± 1.05) were quite important for them. However, doctors had nothing to do with prices of other pharmaceutical companies (3.84 ± 1.18) and total therapy cost (3.57 ± 1.21) (Table 4).

Impact of Product Strategy on Doctors' prescribing Behavior

Table 5 Observed impact of product strategy on physicians' prescribing behavior in Indian hospitals (n = 240)

No.	Description	Mean ± SD
1	Type of Manufacturer – Domestic or International	3.71 ± 1.19
2	Brand Equity of Pharma Company	3.81 ± 1.01
3	Drug Efficacy	4.15 ± 0.99
4	Unique Combination	4.06 ± 1.39
5	Form of delivery of the medicine	3.36 ± 1.25
6	Attractive Brand Name	3.49 ± 1.26
7	Pharma Company Reputation	3.09 ± 0.98
8	Drug Quality	4.21 ± 1.07
9	Fixed Dose Packaging	3.88 ± 0.97
10	Full Therapy packaging	3.56 ±1.07

Regarding product strategy dimensions, physicians valued drug (4.15 ± 0.99), drug combinations (4.06 ± 1.39), Fixed-dose packaging (3.88 ± 0.97), domestic production/ drug

import (3.71 ± 1.19) , attractive brand names (3.49 ± 1.26) and Form of delivery of the medicine $(3.36 \ 1.25)$ were influenced physicians' prescribing behavior (Table 5).

No.	Marketing mix strategies	Influenced N (%)	Not influenced N (%)	Mean ± SD	<i>P</i> -value
1	Product strategy	135 (56.25)	105 (43.75)	3.73 ± 1.11	.000
2	Place strategy	131 (54.58)	109 (45.42)	3.46 ± 1.16	
3	Price strategy	145 (60.42)	95 (39.58)	3.77 ± 1.08	
4	Promotion strategy	125 (52.08)	115 (47.92)	3.24 ± 1.15	

Table 6 Marketing mix strategies employed by pharmaceutical companies

 Table 7 Effect Socio-demographic characteristics on pharmaceutical marketing mix strategies on physicians' prescribing behavior in Indian hospitals

No.	Variables	p – value
1	Gender	0.36
2	Age	0.52
3	Education	0.41
4	Specialty	0.00
5	Working experience (Years)	0.28
6	Working	0.02
7	Area	0.01

Overall Impact of Marketing Mix Strategies

Since the data fulfills normal distribution assumption, the mean score ought to be deemed as perfectly alright to do the classification of pharmaceutical marketing mix strategies to do proper analysis of its impact to assess the prescriptions of doctors. The marketing mix strategies in the form of 4 Ps strategies associated with promotion, product, place, and price having mean values of 3.24, 3.73, 3.46 and 3.77 respectively suggest that the marketing mix strategies are impactful on doctors' prescriptions. It is evident from figure 1 that all of marketing mix strategies are valuable and impactful from the perspective of doctors. Since 55.83% respondents reported above the overall mean score, it indicates that promotional activities of pharmaceutical industry is impactful on doctors and need to be taken up seriously. Since 44.17% respondents had below the overall mean scores that indicates that the marketing mix activities are not able to exert its influence to impact doctors or incite doctors to prescribe certain drugs on account of pharmaceutical promotion.

There was a statistically significant difference among marketing mix strategies employed by pharmaceutical companies to influence physician prescribing behavior (p < 0.05). The Post Hoc test revealed that promotional

strategies have a statistically significant difference with product, place and price. (Table 6).

The current study also recognized that it is the specialty as well as type of areas that were equally impactful on physicians' prescribing behavior (p < 0.05). However, demographic factors in the form of gender, age, education and working experience were statistically inconsequential. (p>0.05) (Table 7).

Conclusion

The study was an eye opener that in a country like India that has a vast population of 1.38 billion people, a sizeable percentage of 55.83 i.e. 0.625 million doctors out of 1.2 million feel the pressure of pharmaceutical organizations' marketing mix strategies and they succumb to pressure by way of exhibiting their preferences to the product mix of such organizations that they are getting exposed to, day in day out. It is the dynamic marketing mix strategies of the pharmaceutical industry of India that has sustained the excitement of ever changing marketing mix strategies in the pharmaceutical industry. It is also significant to make a mention of, that demographic factors such as specialty, working hospitals and area of practice are impactful on the prescriptions of doctors. A pragmatic explanation is that the sustenance and profitability of specialty division of pharmaceutical organizations is possible provided they take a good care of specialty doctors who are limited in India in each segment be it cardiologists, neurologists, dermatologists, orthopedics etc.

As regards perceived value of marketing mix is concerned from the perspective of whether doctors and from government or private hospitals, it quite obvious that Indian Medical association is particular that the OPD doctors in government hospitals have to prescribe the basic salt of medicine i.e. only generics and not branded ones. Hence, this perceptible change in the attitude of doctors!

Also, the urbanites have a better education and per capita income and that is why they can not only afford the higher cost of branded medicines, but also they would never allow the chemists to substitute the doctor's prescription. The same does not hold true with doctors in rural/ suburban areas where cost of medicines is important for any prescription honour. Hence, doctors prefer low – priced medicines to be a part of their prescriptions and the industry also acknowledges.

References

- Arora U., Taneja G., "An Analytical Study of Physicians Behaviour towards Marketing of Pharmaceutical Products"; Indian Journal of Marketing 36(11):10-13, January, 2006
- Economic Survey (ES), Statistical Appendix (2021-22)
- Gadre A. and Shukla A., "How Pharmaceutical Companies Entice Doctors into Prescribing Expensive Medication", Dissenting Diagnosis 16 April 2016
- Goyal R., "Why do doctors still think pharma doesn't influence them?"; April 8, 2013
- Gupta S., Nayak R., SivaranjaniR.; "A study on the interactions of doctors with medical representatives of pharmaceutical companies in a Tertiary Care Teaching Hospital of South India"; J Pharm Bioallied Sci. 2016 Jan-Mar; 8(1): 47–51:

- Handa M., Verma A., Srivastava V., "Perception of physicians towards pharmaceutical promotion in India"; Journal of Medical Marketing May, 2013 (2): 82-92
- Ijoma U.,Onwuekwe I.,Onodugo O., "Effect of Promotional Strategies of Pharmaceutical Companies on Doctors' Prescription Pattern in South East Nigeria"; TAF preventive medicine bulletin February, 2010
- India Brand Equity Promotion (IBEP) https://www.ibef.org/industry/pharmaceutical-india, June, 2021
- Jacobson and Mizik: The Financial Value Impact of Perceptual Brand Attributes 2004
- Mathur S., Mathur S., "Psychological Impact of Sales Promotional Tools on Prescribing Habits of Doctors in India"; ELK Asia Pacific Journal of Marketing and Retail Management, Vol. 9, Issue 2
- Narendran R., Narendranathan, "Influence of pharmaceutical marketing on prescription practices of physicians"; The Journal of the Indian Medical Association 2013, 111 (1), 47-50
- Parmer V., "Factors Influencing Prescription Behavior of Physicians", The Pharma Innovation Journal 2014; 3(5), pp.30-35
- Sargeant, J, Armson, H., Chesluk, B., Dornan, T., Eva, K., Holmboe, E., Lockyer, J., Loney, E., Mann, K., Van der Vleuten, C., "The Processes and Dimensions of Informed Self-Assessment: A Conceptual Model"; Academic Medicine: July 2010 - Volume 85 - Issue 7 - p 1212-1220
- Theodorou M., "Factors influencing prescribing behaviour of physicians in Greece and Cyprus: results from a questionnaire based survey. BMC Health Services 2009; 9-150
- Waheed(2011), "Prescription loyalty behavior of physicians: an empirical study in India", International Journal of Pharmaceutical and Healthcare Marketing, Vol. 5 No. 4, 2011pp. 279-298