

A Study on Factors Affecting Doctor's Prescription Behaviour towards the Relationship Management Practices offered by Pharmaceutical Companies in Haryana

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Abstract: The purpose of the present study is to make a fresh attempt to understand the role of Relationship Management practices to influence drug prescription behaviour of Doctors. The present study has considered relationship management practices as services offered by pharmaceutical companies. As a matter of fact relationship management practices play significant role in prescribing products of pharmaceutical companies which influence the behavior of doctors. The current study seeks to put in the construct of expectations of Doctors towards the services offered by Pharmaceutical companies and construct the factors which influence the Doctors while prescribing drugs. First of all descriptive analysis has been used to draw some information after that Factor analysis has been used to identify factors which influence the prescription behavior of Doctors. Research concluded that for Doctors' knowledge management, Gifts on special occasions, Responsive behavior of sales force, Customer's centric cost management, Learning and Testing opportunities and pleasure and educational tour are the most influential factor.

Keywords: Relationship Management Practices, Pharmaceutical Companies, Doctors, Prescribing Behaviour

Introduction: The Indian pharmaceutical market is a very uneven market and does not Veronese product patent. Hence brand differentiation is very complex in a market where there are over 50 brands for every molecule. Thus the relationship between the Medical Representative (the main medium of promotion) and the doctor is the key driver for sales. Identification of the customers is the first move for any CRM program; the first task which a Medical representative has to do that is to maintain a list of doctors of his vicinity. With the help of stockiest, retailers as well as his peers from other company's medical representative can produce the list. The lists MSL (must see list) and MLV (must visit list) contain the

name, address, telephone number, qualification, visit timings and other basic details of the doctor.

The success of any Conference/Refresher programme lies in clearly identifying core customers. Normally an ABC method is used to categorize Doctors as Core, Significant and others based on his Specialization and value of business MR gets from Doctors.

The Sole Objective now is to filter the data collected at the first stage in order to have a personal and professional insight of the doctor, his Preferences, likes and dislikes, Family details etc. The basic principle is to know the Doctor as he is as good as anybody else so knowing him personally becomes very important. So the information gathered and validated is of great significance which would be of huge help when information sharing is done at both ends. Now is the time to start utilizing this Data. The first and foremost is to start greeting the doctor on their special occasions. On the occasion of Birthday and Anniversary, Card and cake can be presented personally to the Doctors. Even bunch of flowers can be sent to them. Companies can even arrange dinner for the doctor with family on their Marriage Anniversary. Gifts based on the interests and hobbies can be offered and even the sponsorship to the Conferences etc can be prearranged. The success of the entire exercise of relationship building is based on the efficient transmission of the data of the Doctor in such a way to their field force that they can implement the data and this will ultimately lead to building corporate image and Revenue generation. He is in fact the man of the moment who can deliver the needful. It is necessary that information received.

RESEARCH METHODOLOGY:

Objectives of the Study: Objective of the Research Paper is to find out Doctor's opinion and expectations towards services offered by Pharmaceutical companies.

RESEARCH TYPE:

The research is based on quantitative study. The researcher used descriptive analytical approach in conducting the research. According to the research purpose, the present study was mainly of applied nature as the researcher tried to make out the impact of the Relationship management practices by Pharmaceutical companies. Further, the survey method was adopted and data was compiled by distributing a questionnaire on the target population. Secondary data is also used by the researcher from journals, articles and previous research papers that are linked to the research study.

Sample Design:

The study covers the five districts of Haryana and the data has been collected for the time period 2012 to 2016. Thus a good sample would be a miniature version of the population, which would involve the following:

- Universe and population
- Sample units
- Sample size
- Area of the study
- Sampling technique

Population:

The population addressed under the present study includes Doctors who play a very significant role to prescribe drugs of Pharmaceutical Companies.

Sample size:

To achieve research objective of present study, information was collected from Doctors who are prescribing medicines of these companies. Total 200 respondents were approached from the selected cities of Haryana (Rohtak, Bhiwani , Gurugram, Faridabaad, Bahadurgarh).

Breakdown of the answered questionnaire regarding location

Location	Total no of online Respondent	% of selected respondent	Total no of selected respondent
Rohtak	200	20%	40
Bhiwani	80	20%	16
Gurugram	600	10%	60
Faridabad	700	10%	70
Bahadurgarh	70	20%	14
		Total	200

Sampling Techniques:

In the present study under the non-probability Sampling technique, convenience sampling and judgmental sampling is used to select the respondents. And for the selection of 5 districts random sampling is used.

Based on previous studies following services of relationship management practices were used in the questionnaire to know the expectations of Doctors towards the services offered by pharmaceutical companies Namely:.

Company image, Cost of medicines, Scientific composition of drugs, Physician samples, Coupons for giving free samples to patients, Regular visit of medical representative/manager, Rapport with medical representative/manager, Personality of medical representative/manager, Communication skill of medical representative/manager, Remedial equipments as gifts, Greetings on birthdays/anniversary with gifts, Small gifts with brand name, High value personal gifts, Subscription of journals, Textbooks as gift, Product literature /updates, Funding for attending CME events/national and international conference, Non-industry sponsored events ,Sponsorship for personal tour, Organization of free disease curing camps.

Data Coding and Entry:

Data is entered in questionnaire systematically and efficiently with the help of codes representing numerically in different numbers. The Data was filled using SPSS (The Statistical package for Social Science). An expert “statistician” was consulted to take decision regarding the statistical tools used in the study. For measuring the opinion and expectations of Doctors towards the relationship management practices offered by Pharmaceutical companies 5 point likert scale are used.

Statistical analysis tools:

Quantitative data analysis method has been used by the researcher. The analysis was based on utilizing (SPSS 21). The following statistical method has been used:

1. Cronbach's Alpha for Reliability Statistics
2. Frequency and Descriptive analysis
3. Exploratory Factor Analysis and Anova

Reliability statistics of the questionnaires:**Table –VI Cronbach’s Alpha for each factor of the questionnaire and the entire questionnaire**

Variables used in Ist Questionnaire	Cronbach’s Alpha
Fac. – I Knowledge Management	0.893
Fac. – 2 Gifts for special occasions	0.889
Fac. – 3 Responsive behaviour of sales force	0.884
Fac. – 4 Customer centric cost management	0.718
Fac. – 5 Learning and drug testing opportunity	0.805
Fac. – 6 Pleasure and educational tour	0.778
Overall	0.804

Table 6 shows the values of cronbach’s alpha for each factor and the entire questionnaire. For each factor in Doctor’s questionnaire cronbach’s alpha ranges between 0.718 and 0.804. This range is quite high, so the result shows the reliability of each factor of the questionnaire. Cronbach’s alpha equals 0.804 for the entire questionnaire which indicates good reliability of the entire questionnaire.

Exploratory Factor Analysis:

Further researcher has applied exploratory factor analysis to identify the most influential factors while prescribing medicines. Factor analysis is a method which helps to reduce data and transforms the data in a reduced size. After that variations of the original set of data have been explained by these factors.

In the Analysis Mean scores were calculated by allocating values of 1,2,3,4,5 respectively to the responses 'always', 'mostly', 'sometimes', 'rarely', 'never'. Hence a lower value shows that particular Relationship management practices is more influencing as compared to Relationship management practices with higher score. According to the objectives of the study the data collected through questionnaire was coded and tabulated in a systematic manner. It was further suitably analyzed by calculating percentages, frequencies and factor analysis method. The data was analyzed using SPSS version 21.0 for windows throughout the study.

Reliability and Validity of the obtained reduction is established after calculating the strength of the factor analysis and this can be done with the KMO and the Bartlett's test of sphericity. The results on KMO and Bartlett's test are given in the table

Hypothesis: correlation matrix is identity matrix.

Table 3

Kaiser – meyer – OIKIN measure of Sampling Adequacy		
Bartlett's Test of Sphericity	Approve .cm square	.758
		2205.131
	d.f	171
	Fig.	.000

It is observed from the above Table that the value of KMO statistics is greater than 0.5 which indicates that factor analysis could be used for the given set of data. Further, Bartlett's test of sphericity signifies the correlation matrix of the variables which indicates that the correlation co-efficient matrix is significant as indicated by the p value corresponding to the chi-square statistic. The p-value is 0.0000 which is less than 0.05 from the assumed level of significance so it can be concluded that Null hypothesis is rejected and the correlation matrix of the variables is insignificant.

Principal component analysis with Varimax and Rotated component matrix was used for extracting factors and on the basis of their eigenvalues and variance explained six factors were retained. The total variance explained by each factor is represented by Eigenvalues. According to the standard practice all the factors with an Eigen Value of 1 or more should be extracted. Table 3.1 clearly shows that there are six factors having eigen values more than 1 which have been extracted. Interpretation and Naming of factors is done after the number of extracted factors is decided. The names of factors are identified on the basis of association between the original variables. Rotated component matrix gives the loading of each variable on each of the extracted factors. This is similar to correlation matrix, with loadings having values between 0 and 1. Values close to 1 represent high loadings and those close to 0, low loadings.

Thus table (rotated component matrix) clearly depicts that factor 1 is linear combination of variables with loadings physician samples (.941), literature (.849), journal (.843) and text book as gift (.794) and eigen value 5.045 with total variance explained (16.690) and ($\alpha = 0.893$), factor 2 in linear combination of variable greetings (.892), high value gifts (.889), small gifts(.805) and equipments (.763) with eigen value 2.821 and total variance explained (16.627) ($\alpha = 0.889$). Factor 3 is linear combination of variable regular visit of medical representative (.873), rapport with medical representative (.865), communication skills of medical rep(.847) , and personality of medical rep(.834) eigen value 2.620 with total variance explained (15.936) and ($\alpha = .884$). Factor 4 is linear combination of variables company image (.827), coupons (.785) and cost of medicine (.755) with eigen value (1.794) and total variance explained (10.4750 ($\alpha = .778$). Factor 5 is linear combination of organization of free detection disease camp (.922) and sponsorship to attend CME (.822) with eigen value (1.297), total variance explained (8.765) and ($\alpha = .805$). Factor 6 is linear combination of variables personal tour (.848) and sponsorship for non-industry events (.822) with eigen value 1.018, total variance explained (8.329) and ($\alpha = 0.778$). (α denotes the degree of internal consistency).

Naming of Factors:

All the factors have been given appropriate names according to the association between the variables that have been loaded on each factor. The six factors depicted in table 3.1 are discussed below:

Factor 1: Knowledge Management:

The rotated matrix has revealed that respondents have perceived this factor to be the most important factor with the highest explained variance of 16.690. Four out of nineteen services load on significantly to this factor. Researcher has named this factor as knowledge Management as it includes Samples, Literature, journal and text-book provided by pharmaceutical companies which updated the knowledge of physician and physicians expect this knowledgeable content from the Pharma companies and it can be concluded that this tool influences the physicians while prescribing products of a particular company.

Factor 2 : Gifts on special occasions:

It has been revealed to be the second most important factor with explained variance of 16.627. Four types of services were loaded onto this factor. There are the reminders for the physician for example providing small gifts with brand name, offered medical equipments as gift , sending good wishes to the doctors on their birthdays and anniversary, in spite of all these things high value gifts can be offered to the physician for getting favors towards pharmaceutical companies, so researcher has named this factor as Gifts on special occasion.

Factor 3: Responsive behavior of sales force:

This is the next, important factor which accounts for 15.936 of the variance. Four types of services were loaded onto this factor the factor includes regular visit of Medical representative, rapport with medical representative and managers, communication skill and personality of medical representative and managers. All these are related with the abilities and capabilities sales force of the pharmaceutical company so researches has named this as responsive behavior of sales force.

Factor 4: Customer's centric cost management:

Three types of tools load on this factor and together account for 10.475 of the variance. This factor includes company image, providing coupons for free samples to patient and cost of medicine. So the researcher has names this factor as customer's centric cost management.

Factor 5: Learning and drug testing opportunities:

Two types of tools load on this factor and together account for 8.765 of the variance. This factor includes organization of disease detection camp and sponsorship for attending CME, so the name has been assigned to this factor is **learning and drug testing opportunities**.

Factor 6: Pleasure and educational tour:

This is the last factor which includes personal tour and non-industry sponsored events with the loading 8.329 of the variance. The researcher has named this as pleasure and educational tour.

Table 3.1: Total Variance Explained

Component	Initial Eigen values			Extraction sum of square loading				sums of square loading		
	Total	/of variance	Cumulative /	Total	/ of variance	Cumulative	Total	/ of variance	Cumulative /	
1	5.045	26.552	26.552	5.045	26.552	26.552	3.171	16.690	16.690	
2	2.821	14.849	41.401	2.821	14.849	41.401	3.159	16.627	33.317	
3	2.620	13.791	55.192	2.620	13.791	55.192	3.028	15.936	49.254	
4	1.794	9.444	64.637	1.794	9.444	64.637	1.990	10.475	59.729	
5	1.297	6.827	71.464	1.297	6.827	71.464	1.665	8.765	68.494	
6	1.018	5.359	76.823	1.018	5.359	76.823	1.583	8.329	76.823	
7	.595	3.133	79.956							
8	.535	2.818	82.774							
9	.514	2.708	85.482							
10	.482	2.539	88.021							
11	.385	2.027	90.048							
12	.347	1.828	91.876							
13	.328	1.724	93.601							
14	.315	1.656	95.257							
15	.261	1.373	96.630							

16	.219	1.153	97.783						
17	.193	1.018	98.801						
18	.172	.908	99.709						
19	.055	.291	100.00						

Table 3. 2: Rotated Component Matrix

	Component					
	1	2	3	4	5	6
Samples	.941					
Literature	.849					
Journal;	.843					
Textbook	.794					
Greeting		.892				
High value gifts		.889				
Small gifts		.805				
Equipments		.763				
Regular visit			.873			
Rapport			.865			
Communication			.847			
Personality			.834			
Company image				.827		
Coupons				.785		
Cost of medicine				.755		
Detection camp					.922	
Sponsorship					.822	
Personal tour						.848
Non – industry even						.822

Table 3.3 Naming of factor

Factor no	Name of dimension	Variables	Factor loading
Fac.1	Knowledge Management	Physician samples	.941
		Product literature/updates subscription of journals	.249
			.243
		Textbook as gift	.794
Fac.2	Gifts on special occasions	Greeting on birthday / anniversary high value gifts	.892
			.889
		small gifts with brand name	.805
		medical equipment as gifts	.763
Fac.3	Responsive behaviour of sales force	Regular visit of MR/ Manager	.873
		Rapport with MR/ Manger	.865
		communication skills	.847
		personality of MR/Manager	.834
Fac.4	Customer's centric cost management	Company image	.827
		Coupons for free sample	.785
		cost of medicine	.755
Fac.5	Learning and drug testing opportunities	Organization of diseases detection camp	.922
		sponsorship for attending CME	.822
Fac.6	Pleasure and educational tour	Personal tour	.848
		non-industry sponsored event	.822

Suggestions:

1. Knowledge Management is the most importance tool for the Doctors as they stands responsible to treat and cure their patients for which they suppose to use the latest and approved drugs which are not only cost effective but also ensures patient compliance. Pharmaceutical companies should not only provide the latest information regarding the development of new molecules but also train and upgrade their field force so that the information should pass down to doctors in a scientifically framed pattern, So that it makes it convenient and confident for the doctors to use the drugs efficiently.
2. Since the study was conducted to address and understand the concern of Doctors regarding branding actions of Pharmaceutical companies. These can take many forms, including overt advertising, provisions of gifts and perquisites to individual Doctors etc. It becomes very significant to recognize and understand that they are the indirect targets for advertising and promotional activities as they are not the actual consumers. Doctors act as a medium to reach the final consumer which is their patients so their relationship with the latter, are both guided by ethical considerations.

As a standard rule, the commitments between Doctors and Pharmaceuticals companies should be open and transparent; the possibility of a conflict of interest could be raised either in clinical practice or in research that should be declared openly to patients. It should be mandatory for the Doctors to judge for themselves what is and is not acceptable, but should err on the side of rejection of gifts. Service oriented items may be acceptable occasionally. The significance of impropriety should be taken under consideration before accepting lavish dinners and entertainment, even if accompanied by Scientific Presentation.

3. There is a significant need to focus on the upgradation and proper communication of the field force since it is the most important channel through which the information is to be imparted by the company to the Doctors. So the sales person should have a responsive behavior which will help in delivering precise but complete scientific information.
4. Doctors and Pharmaceutical companies do share a number of familiar interests such as encouraging the effective and responsible use of existing drugs as well as innovative research in developing new ones. (Komersaroff, Kerridge, 2002) Physicians being the most vital contributor in pharmaceutical sales since doctors write the prescription after determining which drug should be used by the patient, they

should never ignore that the prescription should be Customer's Centric and Cost Effective.

Disease detection camps should be a regular activity as it helps the doctor not only to make proper diagnosis but also helps him to try latest drugs and analyze the response in all category and age group of patients.

Pleasure and educational tours should be organized keeping Up Gradation of knowledge of a Doctor as a priority in addition to enjoying the geographical locations.

5. There is a need to focus on Relationship management practices through Interactive Technologies because marketing is there to spend to get more Revenue but service is here to Attract and to retain the Customers.

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