

Classification of Physicians for Detailing/E-Detailing Preference

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ABSTRACT

Pitching the right product to physicians has always been challenging for the pharmaceutical companies. The preferred mode of communicating about the products has been through face-to-face, in person detailing process by the medical representatives of the company. With evolution of technology, e-detailing or detailing through electronic media had gained ground. E-detailing involves use of digital technologies like internet, video conferencing and interactive voice response. This study aims to determine if significant differences exist across traditional detailing/e-detailing preference across physicians. 7 factors were identified for the study. Samples were taken from 433 non-allopathic practitioners from eastern India. With the help of t-test and discriminant analysis the survey responses were analyzed and it was found that physicians differ considerably in their preference for selected benefit variables. E-detailing will help in minimizing the sales force time, shrink costs and enhance the prescribing time of physicians. Tailored information is possible when medical representatives understand the interests, personality and inclinations of individual physicians whom they meet personally.

Keywords: - Discriminant Analysis, Traditional Detailing, Electronic Detailing, Physician, Personalized Information

I INTRODUCTION

The pharmaceutical industry of India was assessed to be around 12.5 billion USD in 2011 has grown significantly to around an \$20 billion USD industry in 2014, and this has resulted into an enormous growth of the medical infrastructure advancement, technology enhancement and production of extensive variety of products Banerjee & Dash [1]. In pharmaceutical marketing among all the P's such as Price, Product, Promotions and Physical distribution, the promotion 'P' is given the utmost importance Stros & Lee [2]. According to Hurwitz & Caves [3] "the pharmaceuticals industry promotes its products heavily" and the promotional campaigns assist in differentiating products, strengthening brand loyalty and checking price competition. Promotion is a crucial component of the pharma industry Rizzo [4]. Face to face promotion is the dormant instrument used in pharmaceutical marketing Bernewitz [5]. It is used extensively for promotion of medical equipment, prescription drugs, and other pharma products. According to pharma representatives, the process of detailing is for few minutes while majority of the time and energy is waste during the elongated waiting periods. In the recent years, the trend has shifted to use of technology and use of interactive e-detailing techniques. E-detailing in the form of videos and online forums have also gained popularity Banerjee & Dash [6].

campaigns being run by the pharma industries: the number of blockbuster drugs (drugs with sales value greater than \$1 billion) is very less, the growth potential of drugs is limited, long gestation period of new drugs and shorter life cycles. E-detailing involves use of digital technologies like internet, video conferencing and interactive voice response. Interactive (Virtual) and video are the two types of E-detailing. To utilize e-detailing devices to maximum potential it is important to understand the usefulness of the e-detailing from medical representatives (MR's) perspective. The studies conducted by Mishra et.al., [8] investigate into the potential use of electronic devices like laptops and tablets in the pharmaceutical marketing along with the complications involved in the use of these devices and the potential improvements in its use.

Product distinction among different brands within a product category is brought about by using a combination of branding along with the marketing process. In the case of medicines, the product positioning depends on its characteristics like tolerance, efficiency, safety etc. Schuiling & Moss [9]. The pharma companies use an amalgamation of promotional strategies to meet its marketing objectives. Advertisements are provided in the journals related to medicine, conferences, symposium, free samples, MR visits, e-detailing Sanyal et.al., [10]. Thus, brands can be built using a mixture of promotional inputs. As per the studies conducted by Boehm et.al., [11] pharmaceutical sales representatives have doubled over the past decade. Another study conducted by Bates et.al., [12] computed that the cost of detailing in US ranges anywhere in between 45 to 70 percent of the total marketing expenditure. Also, the sales forces expanded about 21% globally from 1999 to 2001 as per the study conducted by Trucco & Amirkhanova [13]. E-detailing will help in minimizing the sales force time, shrink costs

II LITERATURE REVIEW

There is a "strong positive link between exposure of products to a physician and their prescribing behavior of products" Kremer et.al., [7]. Thus, promotion becomes a major component for pharma firms. There are many reasons behind heavy investment on promotional

and enhance the prescribing time of physicians Nalini [14]. The visiting time to a doctor of a pharmaceutical company's MRs for information sharing about the products is very less Gleason [15], McKillen [16] and this face-to-face detailing process is the most common method of detailing preferred by the pharma companies Molloy et al., [17].

Due to increased cost of MRs, the effectiveness of detailing through face-to-face is dipping Montoya [18] Ventura et.al., [19]. As an substitute to the detailing technique through face-to-face, pharmaceutical companies have evolved the technique of detailing through the use of electronic media (E-Detailing) Alkhateeb & Doucette [20], Davidson & Sivadas [21], Kwak & Chang [22]. E-detailing supported by modern ICT provides valuable opportunities for pharmaceutical companies to increase the efficiency of promotion Zhadko & Mostafa [23]. Parekh et.al., [24] and Kaplan & Haenlein [25] conducted studies which points to greater endorsement by physicians in the use of social media and other digital tools. Jawaid & Ahmed [26] supervised a study which highlights the widespread availability of digital marketing by pharmaceutical firms. E-Detailing or product Promotion through Technology Enabled Tools Detailing Form is the preferred mode of promotion by the MRs while interacting with the doctors as per the study conducted by Nandy & Pal [27].

The study conducted by Al-Areefi et.al.[28] founded that most of the surveyed physicians reported having a fruitful interaction with the MRs. They allowed MR visits for

having better social contacts and shared benefits like information and knowledge about the new advancement in drugs, equipment etc. However, some physicians refused to meet the MRs due to lack of belief on the products advertised by the MRs and obligation of prescribing the drugs from the company. They did not want to be under pressure from the companies to prescribe the medicines.

III METHODOLOGY

The study is empirical in nature. It is conclusive by design. The objective of the study is to determine if significant differences exist across traditional detailing/e-detailing preference across physicians. For the purpose seven benefits that are widely sought by physicians have been identified and these are provided in the table along with their respective codes. Preference for traditional detailing (as against e-detailing) was sought with one statement – I prefer traditional detailing over e-detailing. All responses were sought on a seven point Likert scale ranging from 1 (Strongly disagree) to 7 (Strongly agree). For the survey the population comprised of physicians from eastern India. Non-allopathic practitioners were not included. The sample size was 433. Responses were personally collected and recorded. SPSS version 23 was used to analyze the data and discriminant analysis was conducted. Following table 1 displays the list of variables taken for the study.

Table-1
Encoding of variables

Sl.No.	Description	Variables
1	Enhanced Information	EF
2	Tailored information for the individual	TII
3	Convenient time	CT
4	Long interaction time	LT
5	Technical fault	TF
6	Convenient day	CD
7	Social communication with MR	SR

IV RESULTS AND DISCUSSION

In order to understand if significant differences exist across traditional detailing/e-detailing preference across physicians a t-test was conducted on the data and the results have been shown in Table-2. From the table we find significant differences exist in variables vis-à-vis selected variables. The highest (t-value 21.79) exists with *Long interaction time* closely followed by *Enhanced Information* and *Tailored information*. It appears whereas those who prefer e-detailing are inclined to assign greater value to *convenient day and time*, *Long interaction time*

and *Enhanced Information*. Those prefer traditional detailing are inclined to consider *Social communication with MR*, *Tailored information for the individual* and *mistrust Technology*.

Discussion-1: This is logical; it is easier to reach out through information technology at a convenient date and time. E-detailing also allows for longer interaction time and provides enhanced information. But it certainly is susceptible to technological failure and does not cater to a face-t-face interaction. Further tailored information is possible when medical representatives understand the

interests, personality and inclinations of individual physicians whom they meet personally.

Table-2
t-test on variables and preference

Group Statistics						
Preference		N	Mean	Std. Deviation	t-value	P-value
CT	Trditional	120	3.18	1.31	21.11	0
	eDeatiling	313	5.94	0.92		
CD	Trditional	120	2.87	1.20	20.30	0
	eDeatiling	313	5.42	1.09		
SR	Trditional	120	4.52	1.13	13.94	0
	eDeatiling	313	2.90	0.93		
LT	Trditional	120	1.97	1.01	21.79	0
	eDeatiling	313	4.36	1.06		
TF	Trditional	120	4.90	1.23	13.18	0
	eDeatiling	313	3.26	0.93		
EF	Trditional	120	2.55	1.26	17.31	0
	eDeatiling	313	4.96	1.39		
TII	Trditional	120	4.43	1.41	10.02	0
	eDeatiling	313	2.93	1.34		

Discriminant Analysis: When it was confirmed that differences exist between two sets of physicians, next logical step is to find if these two can be accurately classified on the basis of values they assign to selected variables. Discriminant analysis requires measurement of canonical function and which ranges from 0 to 1 with

higher values confirming suitability of discriminant analysis. In this case value is 0.788 and which is high enough. The same confirmation is also arrived from the value of Wils’s Lambada (Table-4). It has a value of 0.376. Lower values signify a greater suitability.

Table-3
Canonical Correlation

Eigenvalues				
Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	1.639	100.0	100.0	.788

Table-4
Wilk’s Lambada

Wilks' Lambda				
Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	0.379	414.903	7	.000

Having satisfied these conditions, the next focus is upon Canonical discriminant functions. These are mentioned in Table-5. These functions provide information the degree to which each variable discriminates. From the table we

find the three most discriminant functions are *Social communication with MR, Convenient time and Long interaction time* with respective values (0.55; 0.502 and 0.307)

Table-5
Canonical Discriminant Functions

Standardized Discriminant Coefficients	Canonical Function
	Function
	1
CT	.502
CD	.195
SR	-.550
LT	.307
TF	.183
EF	-.111
TII	.025

Finally, we arrive at the classification. From the Table-6 it is evident that out of 120 Traditional detailing preferring physicians 112 are classified correctly and 8 have been put in wrong group. Similarly, for the physicians preferring e-detailing, out of 313 physicians 307 are identified correctly. These figures are extremely high and

suggest that the two categories of physicians differ considerably in their preference for selected benefit variables. Percentage of correct identification is as high as 96.8. Values above 75% signify successful classification. 96.8, therefore may be accepted as very high.

Table-6					
Classification Results					
Preference		Predicted Group Membership			Total
		Traditional	eDeatiling		
Original	Count	Trditional	112	8	120
		eDeatiling	6	307	313
	%	Trditional	93.3	6.7	100.0
		eDeatiling	1.9	98.1	100.0

a. 96.8% of original grouped cases correctly classified.

V CONCLUSION

The involvement of technology in health care sector has made patients as active participants in delivery process. To Further gain superior results with minimalistic costs, innovators are finding newer implementation ways to address e-detailing techniques. Also Building confidence and convenience into the physician's relationship may bring effectiveness in e-detailing Nalini et al., [14]. As per Jayakumar [29] many companies provide expensive gifts, foreign tours with tickets for the family along with membership for social activities for doctors. The Drug promotion actively relies on influences on prescribing behavior, and pharmaceutical companies are using all the channels to influence the prescriber. Considering the finite time companies get from the doctors, it is very

important to be focused and deliver the exact needs of the doctors in the limited time provided by them.

The use of digital channels in pharma marketing is ever increasing. Various pharma companies are working on employing these new trends. Pharmaceutical companies are adopting various digital channels like engagement portals, e-detailing apps, web conference, e-mail marketing, and social media management for marketing purposes. The use of digital channels by the industry in an economical manner is a challenge that needs to be addressed. As pharmaceuticals companies are venturing onto the digital technology there is cut-throat competition to stay ahead of each other and these companies are taking advantages of emerging technology trends. In future digital channels may gain wider acceptance over traditional channels. Nonetheless, the effectiveness of these technologies can be ascertained only if there is an

increase in business and development of trust among health care professionals Lad et.al., [30]. E-detailing will help in minimizing the sales force time, shrink costs and enhance the prescribing time of physicians

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