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Will Mobile Marketing in Communicating Medical Products to Doctors be Appreciated as a Service in Pharmaceutical Industry? An Exploratory Study

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ABSTRACT

The use of the mobile Internet has been increasing rapidly. Pharmaceutical industry is beginning to leverage digital to build brand awareness. Pharmaceutical companies can now deliver product message through the usage of mobile directly to doctors. Research was conducted in Mumbai-financial capital in India with large doctor's population. Doctors selected were general practitioners and consultants. They were selected at random basis. Objective was to find out the usage among busy doctors and how this tool can be useful to Pharmaceutical companies. Application of mobile marketing can be used as a tool to reach busy doctors. Gender, education, ease of application, type of practice, class of physicians and experience does influence its acceptance and utility of mobile. This study is a first attempt at testing the importance of mobile marketing in healthcare in improving communication between patients and doctors and how Pharmaceutical companies can bridge the gap.

Key words: Mobile marketing, physicians service, promotion, communication

INTRODUCTION

The current development of mobile marketing is to utilize image recognition option in advertisements that provide consumers a way to express interest in a product or promotion. Eventhough, studies about image recognition option are limited, studies about interactive advertising and cross-media integration support the concept of using image recognition option to enhance mobile marketing engagement and consumer response, such as attitude toward the advertisement, brand attitude and behavioral intention etc. Innovative capacity and strategic flexibility shape the digital environment (Jehangir *et al.*, 2011; Darvishan *et al.*, 2008).

Globally, the use of the Internet on mobile devices is increasing at a rapid rate. By year-end 2010 e-Marketer predicts an estimated 296.8 million mobile phone subscribers in the US, reaching 95.4% of the population (Blackburn and Delarge, 2010). A lot of research has been conducted in the areas of mobile telephony and traditional Internet. Interactive communication is vital in marketing enabling the need of consumers/users to be met successfully (Jehangir *et al.*, 2011). During the past decade, the preferred medium for advertising has seen a dramatic shift away from print media and other traditional means of distribution. In 2009 alone, it is estimated that advertising spending dropped between 10 and 20% for newspapers, consumer magazines, radio and television while increasing an estimated 9.2 and 18.1% in Internet and mobile advertising, respectively (Wray and Plante, 2011). Mobile could be used to bring the company closer to consumer. Hutter and Hoffman (2011) in their study says that marketing techniques can be used to identify satisfy and keep the customers. However, as the increase in mobile internet use is a

recent developing and global phenomenon, there are many aspects that are not fully understood. Mobile service providers and mobile manufacturers increasing more customized strategies to launch new internet based services or mobile marketing campaigns. Mobile marketing provides opportunities for consumers and businesses to provide new and innovative services and applications. Hong and Tam (2006) defined the mobile Internet as a collection of mobile data services accessed only through a mobile communication network. The use of the mobile Internet has been increasing rapidly (Francis, 1997; Davidson *et al.*, 2000). It is also generally believed that we are at the 'digital revolution' and that the Internet will have a pervasive influence on almost every aspect of our lives (US Internet Council and ITTA, 2000). This scenario has profound implications across the pharmaceutical value chain.

ROLE OF MOBILE IN PHARMACEUTICAL MARKETING

Mobile marketing has arrived as a channel for reaching medical professionals, as a vast majority of them now carry mobile devices. Pharmaceutical is beginning to leverage digital to build brand awareness. Pharmaceutical companies can now deliver product information to the pint size device as consumers rely mostly on their cell phones. The strategy is the use of cellular technology to deliver targeted healthcare information and sample coupons to portable devices. Much like e-mail campaigns, mobile marketing is a permission-based tool that allows users to opt in (or out) to receive promotions via their mobile phone. This approach is paperless and scalable and allows companies to build one-to-one relationships with customers. Novartis offered pollen-count text alerts to promote the launch of a new allergy nasal spray for hay fever on Allereze, during National Allergy Week in England. The alert service enabled patients to receive personalized, up-to-date, pollen-count information by Short Message Service (SMS), with special alerts on days when the pollen counts were particularly high in their geographic location. Mehta (2007) mentions, adopter of mobile marketing which ran an ad campaign on encouraging allergy sufferers to text their zip code to ALLRGY (255749) to receive local pollen count alerts and an m-Coupon for a free sample. Mobile marketing offers more than just direct-to-consumer advertising opportunities. The technology also can benefit clinical trials. Trial participants can text their medical team with the exact time they took the medication. Pharmaceutical will be better off, if it stops thinking about social media as a promotional channel and more of a customer service and research opportunity. Information exchange between doctors and their device-wielding patients could drive consumer adoption of mobile as a serious channel. The key to a successful mobile marketing campaign is to integrate the text options so that it will be more effective in communication.

Mobile computers have redefined the meaning of captive audience. M-marketing programs utilize many of the same activity metrics that online programs track, such as e-mail request rates and CME program completions. Doc Alert message offers a headline, short body and a button to message and phone number in all related advertising material much like to list a website or traditional phone number. Mobile education also helps reduce the time and in some cases, the costs associated with traveling to conferences, attending dinner sessions or completing online course. And for pharmaceutical companies, mobile medical education can extend the reach of traditional meeting and Web-based programs to an audience seeking more convenient education request that more information be sent to the physician's e-mail. This message can be targeted by specialty, prescriber detail, geography or other variables. However, marketing programs must be able to target individualized preferences and behaviors and be able to measure the Return on Investment (ROI). The purpose of this study is to expand upon existing research regarding consumers' opinions on this specific solution. This study also describes study of individual SMS interaction concerning a health marketing message.

LITERATURE REVIEW

Over the last decade, there have been dramatic advances in technologies of mobile devices and networks. As a result, mobile technologies have the potential to create new markets, change the competitive landscape of business, create new opportunities and change existing community and market structures (Stewart and Pavlou, 2002). Devices and systems based on mobile technologies have become commonplace in our everyday lives (Balasubramanian *et al.*, 2002), increasing the accessibility, frequency and speed of communication. Therefore, successful integration of technological and marketing capabilities is important for product (Mahmod *et al.*, 2010).

Mobile Internet services are more intended for personal and individual needs and expectations. (Hong and Tam, 2006; Kim *et al.*, 2007; Kim and Lee, 2001; Lee *et al.*, 2005). Previous research on the mobile Internet predominantly focused on technological developments, usability issues and mobile telecommunication policies (Kristoffersen and Ljungberg, 1999; Gruber, 2001; Gruber and Verboven, 2001).

Rapid proliferation in the business potential of mobile marketing attracts researchers from various fields to contribute to the growing body of knowledge on the phenomena. Although, the literature on mobile marketing is accumulating, the stream of research is still in the development stage, hence is highly inconsistent and fragmented. Potential benefits include boosting customer acquisition and brand loyalty and increasing customer compliance and retention (Mehta, 2007).

To assess Mobile Internet usage, a robust and reliable framework is required. The Technology Acceptance Model (TAM) is well suited for this requirement. Many empirical studies have tested the TAM model and have confirmed its efficacy. The Technology Acceptance Model (Davis *et al.*, 1989) was initially designed to predict a user's acceptance of information technology and usage on the job. Its use has changed with time. TAM has become a well-established, robust, powerful and parsimonious model for predicting user acceptance (Venkatesh and Davis, 2000) and become the most broadly applied model of user acceptance and usage (Ma and Liu, 2004).

ROLE IN PHARMACEUTICAL INDUSTRY

Many physicians have developed dependency on mobile computers. Accustomed to double-checking drug interactions for every patient within seconds, it can be difficult to return to the more time consuming process of looking up drugs in a text book (Peter, 2005). Mobile have lower costs and significantly better measurability than running the same program with paper coupons (Mehta, 2007). Because mobile devices are a convenient source of breaking headlines and other news snippets, many physicians have adopted mobile news services to stay abreast of speciality journals and clinical news (Peter, 2005). Same author reports about ZS Associates study which tested the impact of the Epocrates-DocAlert m-marketing program on a test group of 300 cardiologists across two cardiovascular brands in highly competitive markets. It demonstrated statistically significant ($p < 0.01$) shifts in market share relative to a pre-selected control group.

THEORETICAL BACKGROUND

Seyal *et al.* (2007) have found that the perceive ease-of-use and perceived usefulness constructs fully mediate the influence of external variables on usage behaviors. Mehta (2007) confirmed in their study that prior experience with the Internet has a strong impact with the utilization of the Internet.

Analyses revealed that perceived ease of use and usefulness (increase the job performance) influence their acceptance and usage behaviors. Lerer (2001) reports results that support TAM, in the context of studying an increase in the probability of a user's repeated usage of the mobile

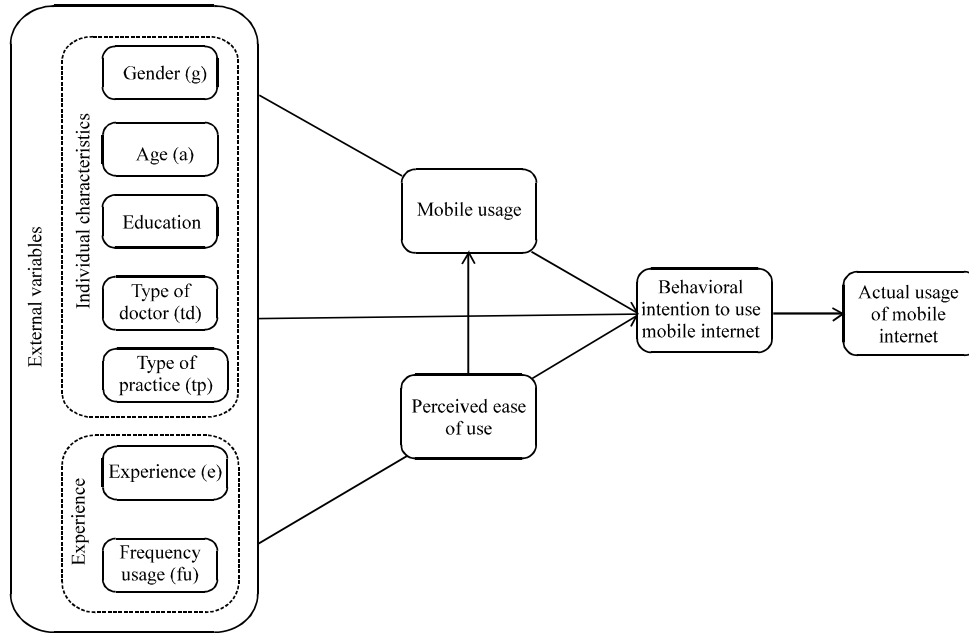


Fig. 1: Proposed theoretical construct

Internet. Morris and Turner (2001) explored the role of experience in changing relationships among TAM variables in the Internet usage context.

Numerous studies analyzed the impact of experience to computer usage behaviors. Levin and Gordon (1989) reported that those who owned computers were more motivated to become familiar with computers and had more favorable attitudes toward computers, than those who did not own computers. There have been many studies in the past showing a positive relation between actual usage and personal computer ownership (Rahim *et al.*, 2000), personal computer know how (Igbaria and Iivari, 1995), frequency of personal computer use (Igbaria *et al.*, 1997; Igbaria and Chakrabarti, 1990) and personal computer experience (Igbaria and Chakrabarti, 1990; Igbaria, 1992). Experience has been demonstrated to have a large effect on performance with a specific system (Egan and Gomez, 1985; Singley and Anderson, 1985). Within the Internet, research supports that inexperienced people tend to simultaneously depend on subjective norm and social pressure as well as self-experience. Venkatesh and Davis (2000) supported a moderating effect of experiences on the perceived usefulness, as they found out that experience tends to increase the intention to use the technology. The studies of Ozhan-Dedeoglu (2004) have revealed that men and women perceive the mobile phone's usage differently. Young generations are more interested in mobile technologies and services (Dickinger *et al.*, 2004a, b). It has been observed that mobile devices, more than being a means of communication, are used as fashion accessories (Robins, 2003).

Medical doctors are highly educated and intelligent. Higher education may influence the attitude towards mobile usage. Similarly other demographic profile like gender, culture, religion, age and frequency of usage could influence acceptance of Mobile Communication Marketing (MCM). Type of practice may influence doctors on usage pattern as busy doctors may not get time to use mobile extensively, will there be variance between general practitioner and consultant? Consultant may like to project his image as tech say among patients compared to general practitioner. Therefore, the following theoretical construct can be made which is given in Fig. 1.

It means $g + a + e + c + d + p < \text{usage of mobile} + \text{usage of mobile} + fu + e$. Experience and frequency of usage could influence mobile usage. Mobile usage will get affected by gender, age, education as studied earlier by many researchers.

RESEARCH METHODOLOGY

It was conducted in Mumbai-financial capital in India with large doctor's population. MBA students participated in the study. Doctors selected were general practitioners and consultants. They were selected at random basis. Objective was to find out the usage among busy doctors and how this tool can be useful to Pharmaceutical companies.

Type of research: It was an exploratory study which was conducted among doctors in Mumbai since, usage of mobile in emerging market is growing but its usage in pharmaceutical selling may be limited. This study was to investigate, its usage among physicians.

Sampling: The populations we are studying are users of the mobile by doctors who have used mobile phones at least once. We consider this population to be relevant to our study. One to one surveys were conducted in India using a questionnaire as a tool 60 doctors participated in this study. Eighty three percent were GP and consultant were 17%. This samples size differs from the normal strata of doctor which is 70 and 30%, respectively. Total sample size was sixty. As it was exploratory study, a more detailed study will be required.

RESULTS

The mobile channel offers an exciting opportunity for marketers-one that most have yet to fully embrace. IT development, including the internet and mobile telephony, has opened new and interesting opportunities for communication to promote health. The use of the Internet as a source of health information and connectivity between providers and payers has increased interest in e-health as a channel for the marketing of health-related products and services. While competitive considerations have increased interest and activity in the e-health arena by large pharmaceutical, insurance and retail companies, we are yet to discern clear winning strategies and best-practice.

Doctors who were interviewed were further classified in to 3 types based on number of patients he sees per day. General practitioner were classified as A class doctor who is seeing 75 or more patient per day and B class were based on 50-75 patient day and C class were classified based on less than 50 patients per day (Srivastava, 2005). This was also pharmaceutical industry classification as a thumb rule as an overall classification which takes only patients as a main criteria. Similarly consultants were classified as A ($>25 \text{ pt day}^{-1}$) B ($10-25 \text{ pt day}^{-1}$) and C ($<10 \text{ pt day}^{-1}$). The profile of the doctor selected for this study is given in Table 1.

More busy doctors may not get time to go through the message due to time constrains. Frequency of usage will be less if doctor is busy. This was the main reason for taking this factor for study. A general question on utility of cell phone in medical communication reported 73% in affirmation. However, in A class doctor it was only 56% (N = 25) among GP category but 78% with consultant category.

It could mean GP with A class practice ($>75 \text{ pts day}^{-1}$) do not get enough time to use cell phone for medical communication to patient compared to consultant. It also means higher the education the greater is the use of cell phone on medical communication to patients. This is given in Table 2 frequency of usage will lead to greater ease of cell phone in medical communication. Experience of usage could lead to better perceived usefulness as was confirmed by Seyal *et al.* (2007). Experience due to frequency of usage too develop attitude toward usage. This was not reported

Table 1: Classification of doctor based on patients, N = 60, he sees per day

Class of practice	GP	CP	Total
A	25	9	34
B	18	1	19
C	7	0	7
Total	50	10	60

GP: General practitioner; CP: Consultant practitioner

Table 2: A class doctor analysis on cell phone medical communication usages

	Using extensively (%)	Not using extensively (%)	Total (%)
GP	14 (56)	11 (44)	25 (73.5)
Consultant	7 (78)	2 (22)	9 (26.5)
Total	21 (62)	13 (38)	34 (100.0)

Table 3: Doctors expectation from mobile usage by pharma companies

Data type	Percentage	Rank
Product alert	100.0	1
Emergency in hospital	92.5	2
Birthday, anniversary and festival greetings	76.0	3
Product reminder	72.5	4
Clinical data abstract	70.8	5

earlier though the role of intention as a predictor of behavior (usage) has been well established in IT services (Ajzen, 1991; Taylor and Todd, 1995; Carlsson *et al.*, 2006). Nysveen *et al.* (2005) too confirmed that attitude toward the use is direct determinant of mobile usage. According to Venkatesh and Davis (2000) behavior intention (attitude) has a direct affect on actual behavior. Will it get affected by gender and age? A gender analysis of doctors who are using the mobile revealed no difference on the application but the usage among females was 92% (N = 12) compared to 69% (N = 48) males ($t = 0.070907$). It could be possible as female may like to use technology based gadget on ease of using the same (Taylor and Todd, 1995).

The question asked was usage of cell phone by doctors to patients. 63.3% were using the same for change in consulting timing, follow up with patients (60%) and change in clinic address (43%). It means cell phone usage among 73% existing users, three major usage patterns emerged. Pharmaceutical industry can see mobile marketing as a tool to reach busy doctors. Physicians remain as the main customers of the Pharmaceutical critical industry. Pharmaceutical companies can help to improve the quality of life of patient in remote areas through mobile phone.

Female doctors (67%) are more agreeable to receive communication from Pharmaceutical companies compared to male which was 48%. It could be due to gender.

Thus, this study confirms that usage of mobile will be affected by gender education, education, type of practice and type of doctors. Usage will also be affected by frequency of use. In Pharmaceutical industry similar study was not undertaken, though other study involving doctors have mentioned the use of mobile in customer acquisition and customer compliance (Mehta, 2007). In general, where doctors were not involved studies did mentioned that ease of use (Seyal *et al.*, 2007), experience in using (Levin and Gordon, 1989), age (Dickinger *et al.*, 2004a) do play role in acceptance of mobile marketing media.

Doctors were asked on their expectation in communication using mobile for marketing. They showed the following in Table 3.

The above research data can be extremely useful for Pharmaceutical companies. Mehta (2007) did report the success of alert, service and m-coupon for free samples but other usage were not reported. The new suggestion will be useful to Pharmaceutical companies in improving their brand recalls.

CONCLUSION

Mobile marketing campaigns are relatively low cost and cost-effective (Kavassalis *et al.*, 2003; Michael and Salter, 2006). The internet, in particular has been the preferred medium for numerous health promotion initiatives including smoking cessation and optimized drug therapy for asthma, diabetes, cardiovascular diseases, prophylaxis, vaccine program and exercise. Mobile telephony has also been used as a health promotion tool in many contexts, such as vaccine program, asthma compliance program and smoking cessation program. Short Message Service (SMS) technology has shown to be particularly effective and in some cases, more useful than the internet in promoting health.

Pharmaceutical companies are certainly articulating a commitment to the Internet as an important component of their marketing strategy and some companies have openly stated their intention to use the Internet as their primary channel for reaching consumers. However, current metrics of expenditure on on-line marketing remain minuscule when compared to 'conventional' (including media, print and detailing) physician and consumer marketing spend. It is also generally believed that we are at the beginning of the 'digital revolution' and that the Internet will have a pervasive influence on almost every aspect of our lives. This scenario has profound implications across the pharmaceutical value chain. Application of mobile marketing can be used as a tool to reach busy doctors. Gender, education, ease of application, type of practice, class of doctors and experience does influence its acceptance.

RESEARCH LIMITATION / IMPLICATIONS

The study has limitations and we suggest that our results should be interpreted with caution. Mobile service providers might want to provide services to the entire population, including people who do not use the stationary Internet or mobile phones already. Pharmaceutical companies do not sell prescription medications directly to consumers and are under strict regulatory scrutiny in countries where direct-to-consumer advertising is permitted (Lerer, 2001). Lack of clear Return on Investment metrics makes it difficult to justify substantial expenditure on Internet-based marketing.

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