International Journal of Marketing and Business Communication
8 (2 & 3) 2019, 01-07
http://publishingindia.com/ijmbc/

E-Buying of Medicines: Trends and Factors Influencing Online Pharmacy

Sadiya Fatima*, Rashi Malpani*, Savita Sodhi*, Anupam Ghosh*

Abstract

Pharmacies have hit the internet and received a warm response. Against the traditional way of buying medicines from pharmacy stores after seeking a medical advice, people are getting adapted to buying medicines online. A common practice among the druggists is to provide a substitute medicine. Customers are highly concerned and sensitive about their health. People are well aware of the fact that medicines though cure, are accompanied with major or minor side effects. Online availability of medicines has brought revolution in the health sector. Online pharmacies in India are in a nascent stage right now but have immense potential for growth. Online medicine market is growing at an exponential rate. Indian consumers are welcoming the trend of online buying of medicines. Online pharmacies provide facilities like home delivery, easy access and reminders to customers along with pocket-friendly offers. For marketers, it becomes all the more important to cater to the mindset of customers. Existing literature in the Indian context is limited to online buying of drugs by consumers without being specific to generic or non-generic. This brings forward a research gap to explore the online buying behaviour of consumers with respect to generic as well as non-generic medicines.

Keywords: Online Pharmacy, Buying Behaviour, E-Buying, Generic Medicine, Non-Generic Medicine

Objective

This paper aims to highlight the online buying behaviour of medicines. Firstly, the paper aimed at finding the factors which influence the e-buying of medicines. Secondly, it proceeded with investigating the most crucial factors about the same. The paper focuses on finding how the buying patterns differ among consumers with respect to generic and non-generic medicines. This research is conducted to get a superior comprehension of inspirations driving purchaser choices on acquiring professionally prescribed medicines on the web. The paper gives new bits of knowledge into Indian consumer behaviour and their viewpoints for online pharmacies. The paper also includes a theoretical framework that explicit the relationship between influencing factors of online medicine buying among Indian consumers.

Introduction

Pharmacy is one of the most eminent industries in any country. In India, it stands in the third position with respect to the volume of sales and seventeenth as far as an incentive is concerned as per equity master (Basu and Shenbagaraman, 2016). Web-based business is booming in India. In this era of globalisation, when there are no boundaries, people often buy online. People were first purchasing clothes, accessories and other durable products; but now, pharmacies have also entered this arena.

Online pharmacy is a platform where vendors are selling both generic and non-generic medicines via an online portal and mail delivery. “These online portals establish internet-based pharmacies providing an easy opportunity to purchase a large variety of medicines, such as generic Over The Counter (OTC) medications, complementary medicines and prescription-only medicines. Internet-based pharmacies are also known as online pharmacies or e-pharmacies or cyber pharmacies” (Orizio et al., 2011; Henney, 2000). It is yet an evolving concept in India. It is at a very nascent stage but has immense potential to grow. As per a report by CRISIL, this industry is anticipated to grow at 55% CAGR (Basu and Shenbagaraman, 2016).

* *Birla Institute of Technology, MESRA, Ranchi, Jharkhand, India. Email:sadiya.fatima4@gmail.com; rashi.kbr@gmail.com; savitakaur_sodhi@yahoo.com; iitanupam@gmail.com*

Against the traditional way of buying medicines from pharmacy stores after seeking a medical advice, people are getting adapted to buying medicines online. Change in lifestyle and the use of smartphones has led to an increase in the growth of this sector. Maintained by the astounding achievement accomplished by the durables industry in the online space, the pharmaceutical industry in India is also targeting purchaser on the web. The development in the business has led to the formation of an online model for this business. India has now observed pharma players taking the web-based business course to offer an answer for various issues tormenting the retail drug store industry. Online pharmacies provide facilities like home delivery, easy access and reminders to customers along with pocket-friendly offers. Companies encourage uploading prescriptions in order to avoid serious health hazards. Despite the fact that online drugs resemble a promising pattern today, the business is tested by administrative issues. Some of the laws related to pharmacy industries are the Information Technology Act, 2000; the Indian Medical Act, 1956; Pharmacy Act, 1948; the Drug and Cosmetics Act, 1940. But still, there are no laws passed for online pharmacy in India. As per the Indian laws, medicines can be sold only by a registered pharmacy that has a retail license and a registered pharmacist on the payroll.

The government is supporting a lot to start-ups by various schemes and subsidies in India. Online pharmacies currently account for only 1% of the Rs 1-lakh crore medicine retail industry in India, say, industry executives (Raghavan and Vignesh, 2018). The Government of India is also taking initiatives to boost and organise the health sector. *Jan Aushadhi* scheme is launched by the Department of Pharmaceuticals in association with the Central Pharmaceutical Public Sector Undertakings. This aims to make medicines accessible and affordable to the masses (FICCI, 2016).

Literature Review

With time, consumers have become information-based shoppers (Ante, 2009). The trend of online pharmacies begun in the late 1990s. The Indian e-commerce market of online medicines is growing significantly (Sah et al., 2018). The major reason behind e-buying is convenience (Oppenheim and Ward, 2006). Online pharmacies have great opportunities in the Asia-Pacific market. Currently, NetMeds, 1mg, Pharmeasy, MedLife, chemist are leading the online medicine market. It is observed that the growth of e-commerce and retail industry goes hand in hand (FICCI, 2016). Department of Pharmaceuticals (under the Digital India program) has incorporated E-Governance to deliver information and services over the internet. One of its major concern is to make medicines easily available at affordable prices (Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers, 2017). Online pharmacies could be legitimate (verified) or non-legitimate (non-verified) (Prashanti, Sravani and Noorie, 2017). Some online pharmacies ask for valid prescription while some do not mandate the criterion (Chaturvedi, Singh and Kumar, 2011). Many doctors argue that the authenticity of medicines is questionable not only at online pharmacies but also at the medical shops. Adoption of e-prescriptions can help eradicate errors of illegibility (FICCI, 2016). Dr Arvind Kasaragod, Director of Medical Service, Cloudnine Group of Hospitals, Bengaluru, states that "It's not about how the medicine is sold, but about how the regulatory bodies have to behave" (Reddy, 2017). Online pharmacies host a bundle of benefits along with providing medicines to customers. Medicine buying in India is still very distorted. 50% of people confessed that they buy medication without a prescription, 36% of them never ask for any bill from the chemists (Dey, 2016).

There are various drivers which help to understand and thereby promote online pharmacies in India. The formation of IIPA (Indian Internet Pharmacy Association) (Basu and Shenbagaraman, 2016), changing disease patterns and growing population of the country (Basu and Shenbagaraman, 2016), changing lifestyles (Basu N. and Shenbagaraman V.N., 2016), initiatives taken by the Government (Basu and Shenbagaraman, 2016), rise in the level of education in the country (Basu and Shenbagaraman, 2016), rising health insurance in the country (Basu and Shenbagaraman, 2016), price (Prashanti, Sravani and Noorie, 2017; Chaturvedi, Singh and Kumar, 2011; Desai, 2016), convenience (Prashanti, Sravani and Noorie, 2017; Chaturvedi, Singh, and Kumar, 2011; FICCI; Desai, 2016) relative privacy, which may encourage patients to ask questions about embarrassing issues, affordable prices (Prashanti, Sravani and Noorie, 2017; Desai, 2016), access to drugs for the disabled or housebound (Prashanti, Sravani and Noorie, 2017), time saving (Chaturvedi, Singh and Kumar, 2011), offers dis-

counts, perks, overnight shipping (Chaturvedi, Singh and Kumar, 2011; FICCI, 2016) and easy access (FICCI, 2016) are few vital factors affecting online pharmacy in India.

Theoretical Model

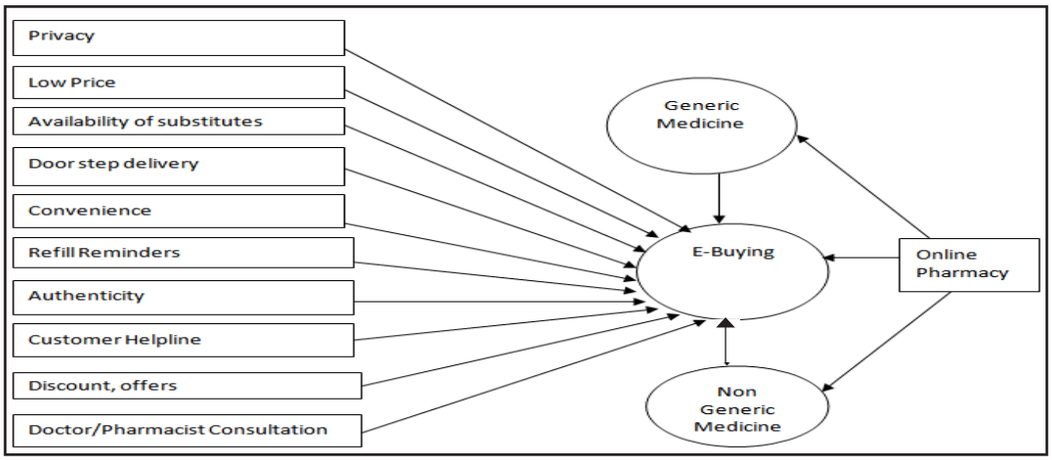

Fig. 1

The above theoretical framework demonstrates the various factors influencing the e-buying of medicines. This study also attempts to find the most influencing factors affecting e-buying of non-generic medicines and generic medicines.

Research Gap

Research on e-buying of medicines is very limited in the Indian context. Factors and trends related to online buying of generic and non-generic medicines have not been explored.

Hypotheses

Two hypotheses were framed to find whether online buying behaviour of customers is dependent on generic or non-generic medicines.

H0: Consumer behaviour is independent of e-buying of generic medicines.

H1: Consumer behaviour is dependent on the e-buying of generic medicines.

H0: Consumer behaviour is independent of e-buying of non-generic medicines.

H2: Consumer behaviour is dependent on the e-buying of non-generic medicines.

Methodology

Secondary sources of existing literature were studied. Web portals were also analysed before the development of a structured questionnaire. The web portals were selected based on the user base (app downloads) of more than or equal to 1 million. Accordingly, Netmeds, 1mg, Pharmeasy, Medlife and MedPlus were found suitable to derive variables for consideration. Primary data was collected from 128 respondents through a questionnaire. There were 28 incomplete responses which were not considered for further analysis. The respondents majorly comprised of the postgraduate college students and professionals of different age groups. Non-probabilistic, convenience sampling method was used, as not necessarily all e-buyers could be buyers of online medicines. Chi-square was used as a statistical tool to derive the conclusions of the study. It differentiated how the influencing factors of e-buying vary with respect to generic and non-generic medicines.

Results

Table 1: Are You Familiar with Online Pharmacies

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	No	6	5.9	5.9	5.9
	Yes	96	94.1	94.1	100.0
	Total	102	100.0	100.0	

Table 2: Gender

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	Female	67	65.7	65.7	65.7
	Male	35	34.3	34.3	100.0
	Total	102	100.0	100.0	

Table 3: Do You Consider Online Pharmacy Safe

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	No	25	24.5	24.5	24.5
	Yes	77	75.5	75.5	100.0
	Total	102	100.0	100.0	

Table 4: Discounts Provided by Online Pharmacies are Fair

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	No	18	17.6	17.6	17.6
	Yes	84	82.4	82.4	100.0
	Total	102	100.0	100.0	

Table 5: Are You Familiar with Online Pharmacies * Do You Consider Online Pharmacy Safe Cross Tabulation

% of Total				
		Do You Consider Online Pharmacy Safe		*Total*
		No	*Yes*	
Are You Familiar with Online Pharmacies	No	4.9%	1.0%	5.9%
	Yes	19.6%	74.5%	94.1%
Total		24.5%	75.5%	100.0%

Table 6: Are You Familiar with Online Pharmacies * Discounts Provided by Online Pharmacies are a Fair Cross Tabulation

% of Total				
		Discounts Provided by Online Pharmacies Are Fair		*Total*
		No	*Yes*	
Are you familiar with online pharmacies	No	3.9%	2.0%	5.9%
	Yes	13.7%	80.4%	94.1%
Total		17.6%	82.4%	100.0%

Table 7: Gender * Do You Consider Online Pharmacy Safe Cross Tabulation

% of Total				
		Do You Consider Online Pharmacy Safe		*Total*
		No	*Yes*	
Gender	Female	15.7%	50.0%	65.7%
	Male	8.8%	25.5%	34.3%
Total		24.5%	75.5%	100.0%

Table 8: Gender * Discounts Provided by Online Pharmacies are a Fair Cross Tabulation

% of Total				
		Discounts Provided by Online Pharmacies are Fair		*Total*
		No	*Yes*	
Gender	Female	11.8%	53.9%	65.7%
	Male	5.9%	28.4%	34.3%
Total		17.6%	82.4%	100.0%

Table 9: Purchase Medicine Online * Cheaper Online Than Offline Cross Tabulation

% of Total				
		Cheaper Online Than Offline		*Total*
		No	*Yes*	
Purchase Medicine Online	No	12.7%	25.5%	38.2%
	Yes	4.9%	56.9%	61.8%
Total		17.6%	82.4%	100.0%

Table 10: Buy Prescribed Online * Cheaper Online than Offline Cross Tabulation

% of Total				
		Cheaper Online Than Offline		*Total*
		No	*Yes*	
Buy Prescribed Online	No	12.7%	35.3%	48.0%
	Yes	4.9%	47.1%	52.0%
Total		17.6%	82.4%	100.0%

Testing of Hypothesis

Table 11: Purchase Medicine Online * Buy Medicine Online Cross Tabulation

% of Total				
		Buy Medicine Online		*Total*
		Neither Agree Nor Disagree	*Generic*	
Purchase medicine online	No	16.7%	70.5%	87.2%
	Yes	4.17%	8.63%	12.8%
Total		20.87%	79.13%	100.0%

Table 12: Chi-Square Tests

	Value	*Df*	*Asymp. Sig. (2-sided)*	*Exact Sig. (2-sided)*	*Exact Sig. (1-sided)*
Pearson Chi-Square	.714[a]	1	.398		
Continuity Correction[b]	.347	1	.556		
Likelihood Ratio	.733	1	.392		
Fisher's Exact Test				.452	.281
N of Valid Cases	102				

Table 13: Purchase Medicine Online * Buying Non-Generic Medicine Cross Tabulation

% of Total				
		Buying Non-Generic Medicine		*Total*
		Neither Agree Nor Disagree	*Non-Generic (Branded)*	
Purchase medicine online	No	16.7%	0.73%	17.43%
	Yes	4.17%	78.4%	82.57%
Total		20.87%	20.87%	100.0%

Table 14: Chi-Square Tests

	Value	*Df*	*Asymp. Sig. (2-sided)*	*Exact Sig. (2-sided)*	*Exact Sig. (1-sided)*
Pearson Chi-Square	5.687[a]	1	.017		
Continuity Correction[b]	4.529	1	.033		
Likelihood Ratio	6.340	1	.012		
Fisher's Exact Test				.021	.014
N of Valid Cases	102				

Table 15: Factors Influencing E-Buying of Non-Generic Medicines

	Mean
Low price	4.421569
Discount/Offers	3.960784
Availability of substitute medicines	3.72549
Convenience	4.107843
Authenticity	3.686275
Door step delivery	3.676471
Privacy	3.764706
Refill reminders	3.245098
Doctors'/ Pharmacist consultation	3.303922
Customer support	3.578431

Table 16

Barriers to E-Buying of Generic Medicines	*Mean*
Authenticity	3.294118
Unreliable delivery	3.784314
Outdated medicines	2.872549
Lack of faith	3.656863
Payment terms	3.254902
Lack of detailed information	3.470588

Findings

94% of the respondents are familiar with online pharmacies. 66% of the respondents were females, and 34% were males. 62% of respondents have purchased medicines online. NetMeds and 1mg are the most preferred online pharmacies among the respondent groups. 82% of the respondents consider the discounts provided by online pharmacies to be fair. 75% of the respondents who are familiar with the online pharmacies consider them safe. While 25% of the respondents, whether familiar or not, do not consider online pharmacies to be safe. 80% of the respondents who are familiar with the online pharmacies consider the discounts provided by them are fair. While 14% of the respondents who are familiar with the online pharmacies do not consider the discounts provided by them to be fair. 50% of the female respondents (out of 66%) consider online pharmacies to be safe. While only 26% of the male respondents (out of 34%) consider online pharmacies to be safe. 54% of the female respondents (out of 66%) consider discounts provided by the online pharmacies to be fair. While only 28% of the male respondents (out of 34%) consider the discounts to be fair.

Results reveal that 71% of the respondents do not buy generic medicines online. Moreover, the statistical analysis shows that the cut off value is 0.281, which is greater than the significance level (0.05). Therefore, the null hypothesis is accepted. The results show that 78.4% of the respondents buy non-generic medicines online. Moreover, the statistical analysis shows that the cut off value is 0.014, which is less than the significance level (0.05). Therefore, we reject the null hypothesis and accept the alternative hypothesis.

Low price, discount/offers and convenience were found to be the most influencing factors for e-buying of non-generic medicines. Different online pharmacy start-ups like Netmeds, 1mg, Pharmeasy, MedLife and Medplus offer different facilities to their customers. Unreliable delivery, lack of faith and lack of detailed information were found to be the major reasons among the respondents for not buying medicines online.

Conclusion and Discussion

Online pharmacies should take initiatives to improve their delivery system as medicines can be a matter of emergency. Many respondents had faced bad experience with online pharmacies related to late delivery. When people search for medicines, suggestions for generic medicines should be provided in order to serve customers better. Payment terms and conditions could be revised with facilities like 15-day credit to make it hassle-free for people in case of urgency. Selling medicine over the net also adds to a lot of responsibilities on the part of the seller. Incomplete information can lead to major problems. Warnings regarding consumption should also be stated clearly. Detail of every medicine, including dosage as per age group and probable side effects, should also be reflected to educate the customers. Mishandling of drugs can lead to serious health hazards; hence, online pharmacies should not just sell rather spread awareness and educate their customers as well, as medicine consumption is no fun. Uploading scanned prescriptions should be made mandatory for certain drugs (Schedule H and Schedule X drugs according to the Drugs and Cosmetics Act, 1940) (Prashanti, Sravani and Noorie, 2017).

To sum up, both the buyer and seller of online medicines should be made aware of the pros and cons. To develop the e-pharmacy system, sound e-health and telemedicine laws should be incorporated in India. Online pharmacy could encourage self-medication, which can lead to irrational use of medicines. Not many people are aware of the availability of medicines online and the offers are given by online pharmacists, care should be taken for effective communication among the masses. Online pharmacy gives access to a wider range of medicines 24 × 7 along with information and offers. It also gives the customers privacy. It is bringing in the trend of self-medication.

Moreover, it is difficult for customers to find if the online pharmacy is legitimate or not. The Government of India should define policies and guidelines for e-pharmacies and establish a model that could be beneficial for the customers (FICCI, 2016).

Research Agenda for Future

Research can be done to study the impact of pricing strategies on the online sale of medicines. Also, other influencing factors of e-buying of medicines can be explored. A relevant and interesting study could research how e-buying of generic medicines can be induced among Indian consumers.

References

Ante, S. E. (2009). Amazon: Turning consumer opinions into gold. *Business Week*, 15.

Basu, N., & Shenbagarman, V. M. (2016). Online pharmaceutical industry: Presentday situation and future prospects. *International Journal of Pharmaceutical Sciences Review and Research, 40*(1), 202–205.

Chaturvedi, A. K., Singh, U. K., & Kumar, A. (2011). Online pharmacy: An e-strategy for medication. *International Journal of Pharmaceutical Frontier Research, 1*(1), 146–158.

Desai, C. (2016). Online pharmacies: A boon or bane?. *Indian Journal of Pharmacology, 48*(6), 615–616.

Dey, S. (2016, July 7). 61% of people prefer buying drugs online. *The Time of India*. Retrieved from https://timesofindia.indiatimes.com/india/61-of-people-prefer-buying-drugs-online/articleshow/53090765.cms

Federation of Indian Chambers of Commerce and Industry. (2016). E-pharmacy in India: Last-mile access to medicines. Retrieved from http://ficci.in/spdocument/20746/E-Pharmacy-in-India-Last-Mile-Access-to-Medicines_v5.pdf

Henney, J. (2000). Online pharmacies - Maintaining the safety net. *Medscape Pharmacists, 1*(1).

Ministry of Chemicals and Fertilizers. (2017). Annual report 2017–18. Retrieved from http://pharmaceuticals.gov.in/sites/default/files/Annual%20Report%202017–18%20%28E%29_3.pdf

Oppenheim, C., & Ward, L. (2006, May). Evaluation of web sites for B2C e-commerce. *Aslib Proceedings, 58*(3), 237–260. Emerald Group Publishing Limited.

Orizio, G., Merla, A., Schulz, P. J., & Gelatti, U. (2011). Quality of online pharmacies and websites selling prescription drugs: A systematic review. *Journal of Medical Internet Research, 13*(3).

Prashanti, G., Sravani, S., & Noorie, S. (2017). A review on online pharmacy. *IOSR Journal of Pharmacy and Biological Sciences, 12*(3), 32–34.

Raghavan, P., &Vignesh, J. (2018, April 10). Why government's new draft rule could make or break e- pharmacies like NetMeds, PharmEasy. *The Economic Times*. Retrieved from https://economictimes.indiatimes.com/industry/healthcare/biotech/pharmaceuticals/why-governments-new-draft-rule-could-make-or-break-e-pharmacies-like-netmeds-pharmeasy/articleshow/63690489.cms

Reddy, M. (2017, June 14). Do you buy medicines online? Know these risks [Panache]. *The Economic Times*. Retrieved from https://economictimes.indiatimes.com/magazines/panache/do-you-buy-medicines-online-know-these-risks/articleshow/59119019.cms

Sah, R. K., Chandani, R. D., Suranagi, U., Manocha, S., Kapur, A., & Hotha, P. (2018). Awareness and behavioural outlook towards online pharmacy Services among consumers in Delhi, India: A pilot survey. *European Journal of Pharmaceutical and Medical Research, 5*(3), 552–557.