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E-Pharmacy in India: Lessons from the Pandemic and the Way Forward

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Abstract

E-Pharmacy is one of the essential services that can bring out transparency and ease of buying medicines to the customers. Though the application of internet in the areas of healthcare is intensifying and the online pharmacies serve a good cause, it has not been used as extensively in India. In this study we have focused in detail about the reasons why online pharmacy is not used - from a sample size of 100 respondents and have found that it was because of the high risk of misuse of drugs especially where there are no governing online pharmacy laws, lack of awareness and poor logistics, we have also analysed the other challenges that are faced by the society while using the existing e-pharm apps. Based on our constructs from the inferential and descriptive analysis, which was validated with a sample size of 100, we have put forth a set of suggestions that can make significant improvements in the e-pharmacy sectors and boost its usage.

Keywords: E-pharmacy, pharmacy laws, Medicine, Logistics, Awareness

1. Introduction

Since the arrival of internet, the typical lifestyle of every human being has changed. The traditional way of buying things has been

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upgraded to online mode. People are becoming used to buy things online and they are finding it comfortable due to their ease of use and accessibility. E-commerce has extended its supply not only in food and other consumer items, but also supplies medicine through online. This is called e-pharmacy. Online pharmacies are business which sell medicines through mail using internet. Some medicines require prescription, and some do not. People are attracted of buying medicines using e pharmacy because of their nonstop 24*7 service, offers, accessibility etc and thus it has become a new trend.

The Indian pharmacy has become one of the major-part of the economy, because Indian people suffer from many chronic diseases, which lead them to take medicines on a daily basis. Diabetes is one of the most common diseases found amongst majority of the population. The online pharmacy service has been in India for a long time, but only in recent times it has got its own recognition in the country. Due to heavy competition and to sustain among retail pharmacies, they provide many offers and discounts to attract customers. The government has also become aware of e-pharmacies and are trying to improve this sector in many ways. The total market value of online pharmacies in India ranged about 200 million dollars in 2019. Currently there are more than 80 starts-up which are functioning across various cities.

COVID-19 Pandemic has caused many destructions all over the world and it has affected the economy severely to a large extent. It has not spared any sector and healthcare system is one among them.

The COVID-19 has changed our lifestyle and since we are not able to do our day-to-day activities as before, people largely depend on online services. Therefore, purchase of medicine through online is also rising. “People are buying flu medicines through online pharmacies to keep them in stock, during the pandemic irrespective of them being needed” said by founder of Pharma Easy.

Home ministry of India has said that buying medicine through online has become an essential service at this adverse condition. E-pharmacy services also face many drawbacks because of their non-availability in rural areas, technical issues, their reliability etc. Many

people who are not used to this, find it difficult to trust these websites.

In this paper, we focus on the analysing the current situation of e-pharmacy in India and going to check on the factors such as customers trust on e-pharmacy, satisfaction and going to give some suggestions for the future growth of e-pharmacy.

2. Literature Review

The internet has taken over the world in all aspects. Not sparing any field, it is not surprising that even pharmacies have gone online. Ajai Kumar Jain and Stafard Anthony (2020) [1] discuss about the SWOT analysis of online pharmacy in India. This paper concludes by says to providing easy and faster access of medicine to consumer over the click of a finger. the trend of purchasing medicine through online is increasing. The factors contributing to the growth of online pharmacy is discussed by Ankit Goyal, Nirod Kumar Singh and Akshay Zanjurne(2019)[2]. And this paper also focuses on the major player of e-pharmacies in India. But some people are not aware about the online pharmacy facilities available in India. This problem is focused in Ravinder k Sah et al. (2018) [3]. This paper discusses about the consumer awareness and their behaviour towards the use of online pharmacy services in India. Prabal Chakraborty and Alok Satsangi (2019) [4] analyse the status of both online and offline pharmacy. Online pharmacy has both advantages and disadvantages. These pros and cons are discussed in the following papers: S V Chordiya and B M Garge (2018) [5] and Deepika et al. (2020) [6].

Saraswat S, Jain R K, Awasthi S. (2020) [7] discuss about the concern for people's health due to controversial online pharmacies in India. The government has imposed some rules and regulations to be followed by these online pharmacies to abolish such controversial online pharmacies. These government act, rules and regulations are Priya Nair S and Anil Middha (2019) [8], Deepika et al. (2020) [6].

There is also a detailed study about the comparison between both offline and online pharmacy in S V Chordiya and B M Garge(2018)[5], Mulani T et al(2018)[9]. Shaik Sana Perveen, Shweta Surve, Nerurkar R P (2020) [10] asses the drug related information of the apps that are used to order medicine online.

At this COVID time, pharmacy services act as a pillar for the public health. Purchase of medicine through digital platform is rising due to the current pandemic situation. Singh H, Majumdar A, Malviya N (2020) [11] focuses on the basic issues and challenges faced by the online pharmacy services during the pandemic situation. And this paper also studies about how the online service can be beneficial to the society during pandemic. And the consumer's perspective towards buying medicine through online during Covid times is also discussed in the paper N P Awar, P B Suryawanshi (2020) [12].

3. Research Methodology

An online structured survey was conducted to collect primary data. It is very easy to order prescription drugs through E-Pharmacy. Here it is easy, time saving and is a quick process. Both descriptive and inferential technique was used for analysis.

4. Analysis

Under descriptive technique, first We passed our questionnaire to find number of e-pharmacy users and got categorical data. This data is analysed using pie chart.

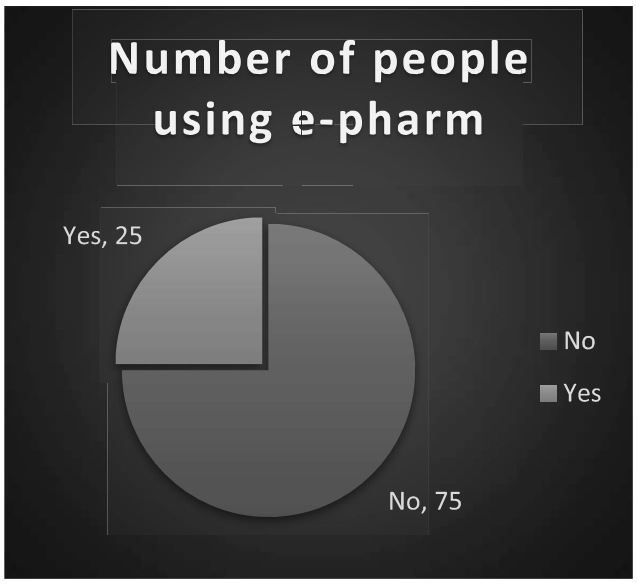


Fig No: 1

From the Fig No :1 we can clearly visualize number of people using e-pharmacy is around only 25 percent, this shows still 75 percent of people have not started to use e-pharmacy.

From the 25 percent users, we collected their location details and analysed them by using pie chart. We analysed these data to find in which kind of location e-pharmacy created an impact.

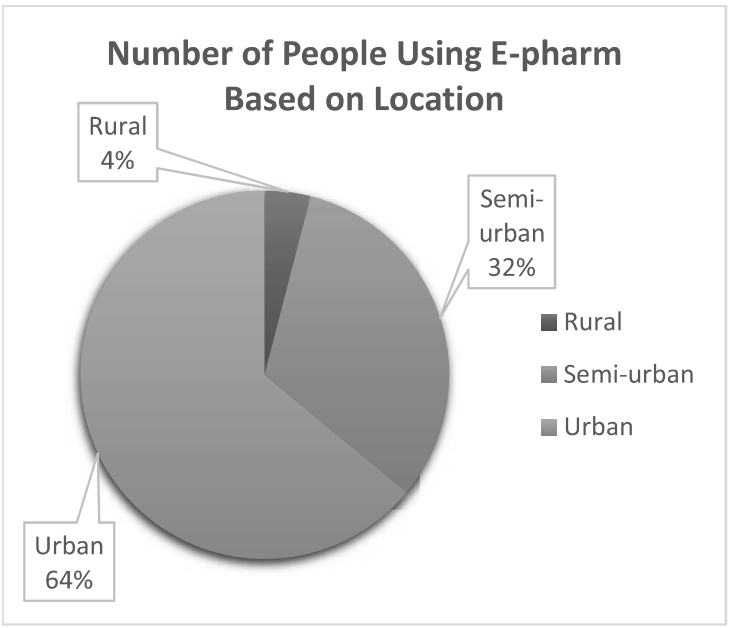


Fig No: 2

From the Fig. No: 2; we can clearly visualise the maximum users are from urban region (64%) followed by semi-urban region (32%) and least number of users are from rural (4%) region. The impact e-pharmacy created in urban is greater than any other region.

From the 75 percent users, we collected the reasons for not using e-pharmacy. We analysed these data using bar graph.

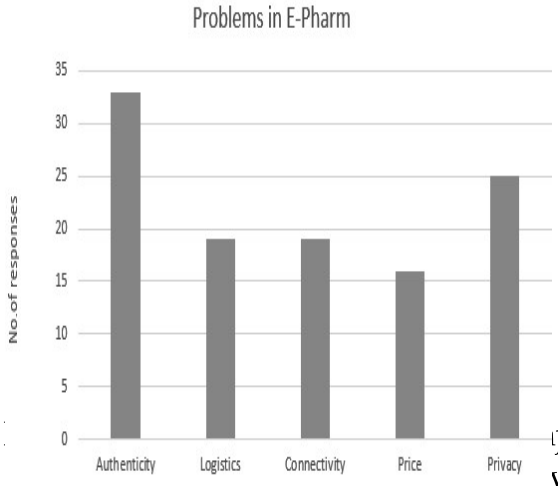
From the Fig No: 3 ,we can visualise the major reason for not using e-pharmacy is due to no prior knowledge on e-pharmacy(36%) followed by the non-availability of required medicines (23%) and delivery not available in locations and on further analysis of these data, 63% of the total people are afraid that wrong/expired medicine will be delivered ,3% people who are using e-pharm are afraid that wrong/expired medicine will be delivered, nearly 40% of people are not using e-pharm because they are afraid that wrong/expired medicine will be delivered.

We collected data to analyse other common problem in e-pharmacy and we used bar graph.

Fig. No. 3

From the Fig No :3 ,we can visualise the major reason for not using e-pharmacy is due to no prior knowledge on e-pharmacy(36%) followed by the non-availability of required medicines (23%) and delivery not available in locations and on further analysis of these data, 63% of the total people are afraid that wrong/expired medicine will be delivered ,3% people who are using e-pharm are afraid that wrong/expired medicine will be delivered, nearly 40% of people are not using e-pharm because they are afraid that wrong/expired medicine will be delivered.

We collected data to analyse other common problem in e-pharmacy and we used bar graph.



From the Fig. [illegible]jor problem in e-pharmacy is [illegible]y, logistics and connectivity. Considering this issue before starting a e-pharmacy plays a vital role in their success.

We collected data from 25 percent users to check the problems they face during ordering online and post-ordering.

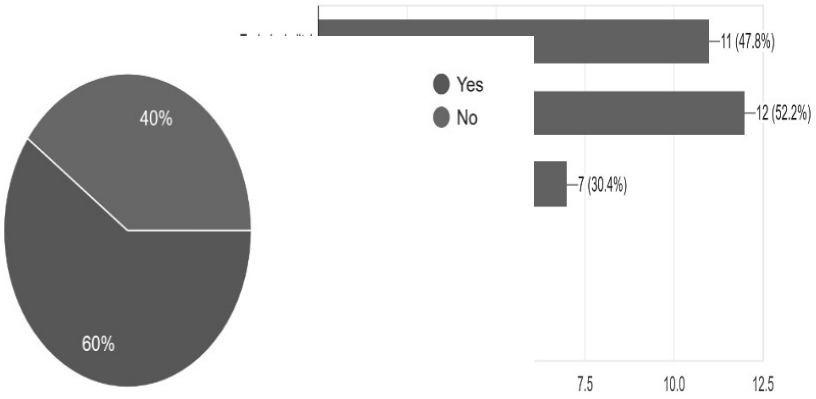


Fig. No. 5

From the Fig No:5, we can visualise major problems customer face while ordering online is Insufficient product information details (52.2%) followed by technical glitch (47.8%), No details of suppliers (30.4%).

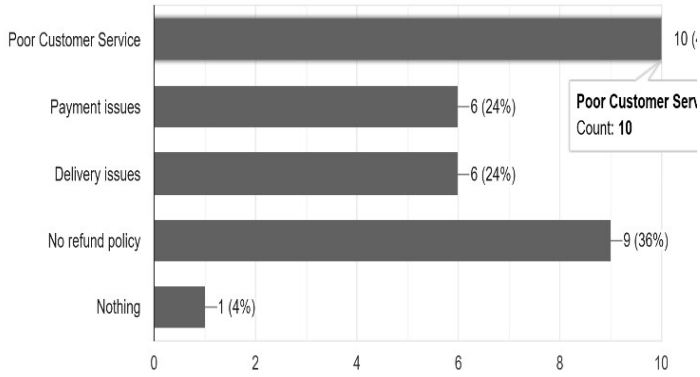


Fig No:6

From the analysis Fig No:6, we can visualise the post pandemic problems customer face. The major problem is with poor customer service (40%), no refund policy (39%), payment and delivery issues (24%).

COVID-19 pandemic was a challenging factor for all e-commerce company, and we collected data from 25 percentage people using e-pharmacy to check the number of people used pandemic.

Variable 1: The number of people used e-pharmacy before pandemic.

Variable 2: The number of people used e-pharmacy during pandemic.

The alpha value is 0.05.

Fig No:7

From the t-table (Fig No:8) we can see the value of p for two tail tests (p-value =0.0005). The p value is very much lesser than the level of significance alpha value (p<alpha), so null hypothesis Is rejected and hence we can conclude the 95 percent possibility Is for alternate hypothesis.
There is a significant difference in number of users before and during pandemic.
From above findings we can infer there is a drop in number of people who are using e-pharmacy during pandemic.

t-Test: Two-Sample Assuming Unequal Variances		
	e-pharm users before pandemic	during pandemic
Mean	1	1.4
Variance	0	0.25
Observations	25	25
Hypothesized Mean Difference	0	
df	24	
t Stat	-4	
P(T<=t) one-tail	0.000263454	
t Critical one-tail	1.71088208	
P(T<=t) two-tail	0.000526908	
t Critical two-tail	2.063898562	

Fig. No. 8

Fig. No. 9

Next, we analysed the reason for the drop in the number of users during pandemic. From the Fig No: 9, we can visualise the two main reason for not using e-pharmacy during pandemic. The main reason was due long delivery time during pandemic (66.7%), non-availability of products (40%). The company should work on these issues during pandemic.

We did a hypothesis to find the satisfaction of the users. T- test was performed.

Variable 1: the number of people using e-pharmacy.

Variable 2: The number of people suggesting e-pharmacy.

The level of significance: 0.05

From the t-table (Fig.No:10) we can see the value of p for two tail test (0.1614) is greater than the level of significance (p>alpha) ,so accept null hypothesis.

Hence, we can conclude, there is no significance difference and hence we can say maximum number of users are satisfied with the e-pharmacy, and some further improvements can take e-pharmacy to next level.

We did asked respondents to give ratings for their delivery. From the fig no :11, we can visualise most of the people gave 3-star ratings to delivery, still company should work on this

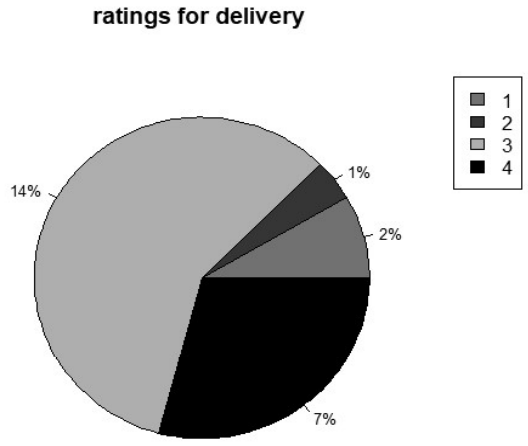


Fig. No. 10

	Users	Suggestion
Mean	1	1.08
Variance	0	0.07666667
Observations	25	25
Hypothesised Mean Difference	0	
Df	24	
t Stat	-1.444630237	
P(T<=t) one-tail	0.080745951	
t Critical one-tail	1.71088208	
P(T<=t) two-tail	0.161491902	
t Critical two-tail	2.063898562	

Fig. No. 11

5. Conclusion And Suggestions

We encountered mixed response where customers did prefer buying medications from retail store; however, we saw a raising trend of using e-pharmacy among the people . Lack of knowledge and awareness regarding the e-pharmacy among the people emerged as a thought for discussion. The customers will appreciate and welcome if they get medicine to their doorstep when they are ill; so larger marketing on advantage of E-pharmacy among the rural people can increase the market size.

However, in our analysis we found the respondents are facing some trust issues with quality as there is no detailed description on product, and there is no physical address or details of e-pharmacy like license number, certification from state drug authority mentioned. They should provide these details to eliminate the fear of mistrust among the people and there is no proper direct laws for e-pharmacy which make people more to fear on authenticity, the government should look this concern and frame separate laws and they should create more awareness program on online purchase.

Respondents felt the whole buying process through online was easy, but they faced some issues post ordering like option for tracking products, date of arrival was found missing, it should be added.

The e-pharmacy concept Is going to create a great demand in future and going to have large number of users, to satisfy the demand they need more warehouse to store products and make them available all time. Maximum respondents felt e-pharmacy have poor logistics further added they would prefer e-pharmacy when they improve their logistics; they should use a different logistic strategy to meet their future demand and for timely delivery. These changes could make usage of e-pharmacy so easy for customers.

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