



Research Paper

## Does Online/App-Based Pharmacy Impact India To Lower Health Cost?

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**Abstract:** *It's about development, implementation, and evaluate the impact of an online or app-based pharmacy. It is the relationship between affordability, cost-effectiveness, and healthcare costs. This qualitative research includes opinions from governments, industry experts, financial professionals, digital marketers, and regular app users. Analysis of the various literatures has been performed to identify the fundamentals of the design process that should focus on the research objectives. An important part to elucidate the basics of digital traditional Pharmacy. The study also focuses on the effect of COVID in context to E-consultation and E-pharmacy and its challenges in the field of Digital platform. To specify more, this study focuses more on the pricing strategy adopted by the online pharmacy. It is asking the solution over high cost health care. The research methods used include qualitative conceptual research with semi-structured interviews as well as a multidisciplinary research. In conclusion after the specific study, it has shown the significant positive impact on reducing the health costs of the nation. Apparently, the study also found some relationship between perceived buying attitudes from conventional to modern. The research method is currently describing a complement to the existing literature in the healthcare industry, which may emerge as a solution for the middle class as often they look to reduce healthcare costs.*

**Keywords:** *Cost, online pharmacy, E- Pharmacy, Pharmacy app, COVID-19, Healthcare cost, Middle class*

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### I. INTRODUCTION:-

About 80 to 85 percent of the market is being accounted for by the conventional retail category. The consumer healthcare category in the pharma sector is presently valued at above \$3 billion. It comprises many segments. The first to discuss the Prescription to OTC segment, differentiating brands that have been constructed over the prescription route however that seems it move on to being self-medicated. Increasing the smart mobile phones and internet incorporations, online pharmacies it has become part of the healthcare culture in an India

According to global professional services firm EY,2020. that country's probable market for e-pharmacies will surge to \$18.1 bn. by 2023 compared with \$9.3b billion in the current year. Amazon September 2020 comes with an online pharmacy service in India's city such as Bangalore, offering over-the-counter and prescription medicines. With the shifts in customer performance towards online pharmacies and e-commerce, increased by the pandemic Covid-19, the online pharmacy sector has increased the demand of affluent companies.

According to the FICCI report, (June 2020), the right governing clarity and pharmacy Establishment and Practice Guidelines, this sector will attract many entrepreneurs for investment and unleash innovation across the healthcare value chain while dramatically improving access to medicines and healthcare across India.

According report of Global Economic Prospects (June 2020).Concerned with recent and futuristic the impression of the pandemic and the long-term scar of slogging growth. The research forecast predicts a 5.2 percent reduction in worldwide GDP in 2020, applying the market exchange rate weights—the most worldwide recession in decades, despite the unusual work of governments to tackle the lowering with fiscal and to make financial policy support. They also predict the deep recessions brought by the pandemic are intended to create a negative mark on the lower investment.

(SounakMitra, 2016) the patient associated with Medicines, Augmenting challenges chronic situation such as hypertension/diabetes, requires patients to consume medicines regularly for the rest of their lives. But, this also absorbed that lower compliance with treatment is one of the prime reasons for insufficient control of numerous chronic diseases such as hypertension, hyperlipidemia, and diabetes, etc. majority of all who had poor compliance with medications, eventually, leave treatments completely and, So, that does not benefit to the treatment effects. Therefore, the absence of access to continuing treatment is related to poor health result and/or premature death also, hence it is badly impacting the economic growth of the country.

**Online –pharmacies:-**

According to Mr. Rouse (2018), at beginning of online pharmacy, and admittance of medicines and diagnostics is found to be on the beneficial side, which rapidly delivered to at the site of patients. It is also known as Internet Pharmacy, Web Pharmacy or Cyber Pharmacy, E- Pharmacy, Online Pharmacy

automated prescribing or it is famously called E-prescribing is the machinery framework that allows medical practitioners to write and send a letter of prescriptions to a participating pharmacy digitally that instead of using handwritten or faxed notes.

According to Mr. Rouse (2018), electronic Business or E-commerce is the purchasing and selling of services or maybe goods, or the transmitting of data or its fund, over an electronic network, mainly the internet. This happens with business-to-business, business-to-consumer, and consumer-to-business. The footings e-business and e-commerce are often used interchangeably.

S. No	Online Startup	Website	Target
1.	M Chemist ( 2015)	www.mchemist.com/	Middle-age and elderly patients, apart from prescription drugs, also sells OTC medicines
2.	HealthKart(2011)	www.healthkart.com	Online store for health, sport and nutritional supplements service
3.	1mg (2015)	www.1mg.com	Online pharmacy marketplace with doctor listing and telephonic consultation services
4.	Medlife (2014)	www.medlife.com	Medlife offers an app for purchase medicines.
5.	PharmEasy( 2015)	www.pharmeasy.in	A mobile-first hyper-local platform for medicine ordering and diagnostic tests
6.	NetMeds(2015)	www.netmeds.com	The online platform selling prescription, over-the-counter (OTC)
7.	EMEDIX (2016)	www.emedix.in	It gives better delivery and excellent services to the consumers across India

**Table I -Some of the online pharmacy company in India**

***The ambiguity of Pharmacy business***

According to (cheetahDesai, 2016) Schedule X medicines cannot be sold to a customer without a prescription. It is very important to maintain customer records as well as the name of the patient, doctor, and address for every Schedule H and Schedule X medicines sold by the pharmacy. Promoting medicines to (below age 18) mainly minors, selling banned drugs, and selling medicines at a cost higher than the maximum retail price are not permitted. Moreover techno legal necessities related to privacy, diligence to virtual world laws with data defense, and internet advertising are required to be complied with, by these pharmacies. Retail Pharmacy:

According to Silicon India Healthcare Magazine (2018), the total pharmacy in context to retail in the Indian market has been mounting more than 18 % every year since last few years, with the present achievement obtained by consumer items in the industry, about online business. Pharmaceutical is the next larger thing However, from a regional perspective, the market is yet to gain an organized structure despite the growth at an average of 25 percent.

However, according to Silicon India Healthcare Magazine (2018), the industry is predicted to of 35-40 percent growth in the next decade. this will be in sync with the growing population that is at 1.3 percent, that himself is witnessing the occurrence of diseases such as heart ailment, cancer, and diabetics with an increase of 20 to 40 percent.

### ***Economy and COVID-19 Pandemic***

The COVID-19 pandemic, also known as the coronavirus pandemic, is caused by the transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), identified in December 2019 in Wuhan, China. The studying of the economic crisis has some biological analogies, depiction principally on the thought of 'contagion', used originally that to be used as the spread of banking failures in the 1920s. John Maynard Keynes, drawing on the earlier researcher, spar of assurance in the market as "animal spirits."

### ***E- PHARMACY:-***

**Inventory-based upon Model of online-pharmacy:** The account of drugs and services is owned way and operated by the Online Pharmacy stage itself. No third-party participation is observed here.

**Market-based Model of E-pharmacy:** In this model, several pharmaceutical retailers and stockiest contribute to a frequent digital stage, that connects them with the final user through a system and provides an edge among them.

**Generic level electronic commerce Model:** The general departmental retail store in a digitized nature sell presently about all in one platform or one roof. These include sales and its distribution of medicines and all associated pharmaceutical products.

**systematic E-pharmacy:** The marketplace is a representation that a uniform platform for the nearby collection of pharmacy retails. The current inventory model on which that based is run on online and offline pharmacy

**Unsystematic pharmacy:** Here, the sale of pharmaceuticals and drugs is rather movable. There is a smaller amount or sometimes no limit and justification over the prescription of the drugs ordered in this model. This lowers the genuineness and reliability of the drugs purchased here, thus making them a rather preventable option for buying medicine.

### ***The wonder of Smart Gadget:-***

According to Davies (2014), Healthcare is continually developing. Contemporary technologies are an effective manner of disease management. Over the last two decades, the Internet has changed the method in which information to be accessed. The major catalyst churns out in this are Mobile devices (i.e. smartphone and tablet platforms) that took many steps ahead to allows users to have remote access to the World Wide Web at just a few finger activities. The fact is such devices now outnumber private computers, very soon they become the most common way to access data.

Online marketers may attract buyers by making it blend traditional marketing with sufficient online experience or web familiarity (Constantinides, 2004) and (Jayawardhena et al. 2003).

## **II. REVIEW OF LITERATURE:**

The literature review chapter has been divided into various sections namely lowering The Cost, Conventional Pharmacy, Customer attitude toward towards buying medicines through the digital forum, COVID Impact in E- consultation and E Pharmacy; E-Pharmacy Sector's In COVID-19, The Challenges in App Base Pharmacy Business

### ***Lowering The Cost: -***

Medicine buying through an online portal intention to save money by the buyer, there are several investigations conducted by researchers which have shown that almost one-third of the price can be saved on prescribed medicines if got purchased online.

### ***Conventional Pharmacy:-***

(Chordiya&Garge, 2019) shared view respect to time, price, Inconvenience, if medicines are not available at nearby pharmacy store they may show to be time killing for the elderly and hectic scheduled peoples to see proper medicine at right time to put off the menace of the patient's health. About the price, the medicine is more than online pharmacy medicines due to in intermediate profit. The patient due to its lack may get difficulty in buying expensive and branded drugs which may lengthen its long period diseases. Inconvenience is another factor where Chronic elderly patients, they unable to go to pharmacy store, may reason intricacy in finding the stores situated at long distances or unrelated places.

### ***Costumer attitude toward towards buying medicines through the digital forum:***

According to Red Seer Consumer Surveys (April 2020), around 75% of consumers cite that their online pharmacy purchase has either increased or remained the same in the unlock phase, compared to pre-COVID-19 this especially post-June 2020.

to see the futuristic change in the Pharmaceuticals market. Positive output in e-pharmacy is even stronger among tier II and tier III cities; according to Red Seer (IP), this COVID-19 led the e- Pharmacy platforms have been able to considerably increase their get to across deeper areas in the country.

**COVID Impact in E-consultation and E Pharmacy:**

More than 50% of consumers have seen a decline the face-to-face doctor consultation in the COVID-19 period (Red Seer Consumer Surveys (July 2020)). Ministry of Health and Family Welfare, Government of India issues the guidelines that indicate the support to use of online doctor consultation for effectual patient management. As per these guidelines, the Ministry of Health and Family Welfare, Government of India classified medicines into different clusters and clear the permissible mode of e-Consultation, corresponding to each of the medical groups.

**E-Pharmacy Sector's InCOVID-19:**

According to Red Seer Consumer Surveys (July 2020). Online Pharmacy consumers and enable important impact to supply convenient access to reasonably priced medicines, in the difficult COVID-19 times. This was confirmed in the recent consumer surveys pretend around 65 % of consumers cite top-of-the-mind awareness (TOMA) about e- Pharmacy initiatives, compared to an average of 50% for other internet verticals. According to the Red Seer survey, this sector was able to achieve about 2.5 growths in households in the COVID-19 lockdown period to reach about 8.8 Million households by June e-Pharmacy.

**The Challenges in App Base Pharmacy Business**

According to Economic Times (2017), Online pharmacies also passing through intense competition with their offline counterpart. According to offline counterparts, Online pharmacy encourages irrational use of medicines and indulge in fake medicine sells. Pharmaceutical Regulation (2019) and The Drugs and Cosmetics Act, 1940, with the Drugs and Cosmetics Rules, 1945, has prescribed guidelines about the selling of Schedule H and Schedule X drugs. Such medicine can only be sold on prescription and that too has specific rules for labeling and barcoding (Sorman-Nilsson, A. 2013)

**Pricing ease in online pharmacy**

According to FCCI report 2020, Lack of Accessibility and Availability, Lack of Affordability, and Lack of Awareness proven to be key barriers in India that prevent people from accessing quality affordable medicines, by adopting technology, mainly the Internet into the healthcare system, which allows people to access quality affordable medicines in India, include. The technology which is based on the internet is a clear avenue in healthcare by improving the Access to Information / Knowledge, once logged in, a customer gets the command to make more informed decisions, such as a patient can learn about self-condition, treatment options.

**Reaching to Health Services and cost-benefit**

The Online pharmacy service, and with its parallel services, such as the consultation, the diagnosis; Now the days it is difficult to meet and those who live in report location it is like heaved to them to have a consultation without reaching physically over there, especially for those who live in remote locations. Services like E-Pharmacy, E-Diagnostics, E-Healthcare, etc., consumers can access the services at their living site through a well-tracking system. Middlemen commissions can be avoided by these routes and patients also save the physical exertion and transportation cost as well.

**III. RESEARCH DISCUSSION:**

The Qualitative study of Online / App-based Pharmacy impacting India to lower health cost. The study was carried out using the qualitative research approach to find the significant co-relations E –pharmacy and the economy of India.

SR. NO	INTERVIEWED/ GUIDELINES	COVERED ON	ELUCIDATION
1	Mr. Charu Sehgal, Partner, Head – Life Science and Healthcare, Deloitte India, 2020	“E-pharmacies are filling an important void in the current healthcare system’s reach and affordability.”	Very important for the government to encourage the sector, concern of Cost saving for a common one.
2	Mr. ShubhamSaxena, Sr. Digital Marketing Expert, Mumbai ( Interviewed, 1 <sup>st</sup> November 2020)	“Wonder of E pharmacy is reducing the cost, a burden on the customer as they are avoiding the intermediate which results in a large benefit getting a transfer to the customer “	Keeping Customer at the center all the servicing sector should think that how it should benefit to customer at large.
3	Ministry of Home Affairs, Government of India, (guidelines issued dated 24 <sup>th</sup> March 2020)	Commercial and private establishments shall be closed down, with exception of delivery of all essential goods including food, pharmaceuticals, and medical equipment through e-commerce.”	Government supports the E- Pharmacy in the starting phase of E -pharmacy. It creates a favorable political environment to grow in the country.
4	Competition Commission of India October 2018,	“Electronic trading of medicines via online platforms, with appropriate regulatory safeguards, can bring in transparency and	Making Markets Work for Affordable Healthcare, as well as the secure environment to make.

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		spur price competition among platforms and retailers, as has been witnessed in other product segments.”	
5	Mr. Shantilal Hajeri, Final Expert, Banking Expertise, former Branch Manager of Bank of Maharashtra( Interviewed, 10 <sup>th</sup> November 2020)	Indian Needs some additional activity in reducing the financial burden on people, basically for the middle level of class. I also believe E pharmacy is emerging as of the rescue of this.”	Not only financial problems but other connected crises may infest people, E pharmacy could see the one of avenues to overcome it.
6	Mr.Krishnan Akhileswaran, CFO, Apollo Hospitals. ( Vyas, J. 2020)	“Launched Apollo, India’s largest end-to-end and Omni-channel healthcare24/7 online services. “With 11 million downloads so far, this can be an important revenue provider going forward.”	Point out the importance of digitalization in the Healthcare sector
7	Mr. Ashwini Kumar Choubey, Minister of State for Health and Family Welfare ( 13 <sup>th</sup> August 2020)	"The e-pharmacy model can work effectively with the administration Common Services Centers (CSC) aimed at civilizing access to essential healthcare facilities in rural India”	Not only to urban but also rural part and tier II and III cities are also taken into consideration in continues the supply of medicine.
8	ET-Healthworld, Mr. <b>Deepak Tomar</b> , CEO. <b>Heycare</b> ( Akhter, S.,2017 )	online pharmacy is catering to the medical requirements of the retailers, wholesalers, and people in an easier and safer way	E pharmacy not only toward the customer but the intermediaries as well.
9	Mr. Ananth Narayanan, Co-founder, and CEO, Medlife.(Sinha, A., & S.,2020)	“A clear strategy will reduce the time and cost involved in filing petitions and litigation and put any kind of speculation around the operability and regulations to rest”	The shortage of policy track that stopping companies from moving ahead into their businesses due to its repetition across the country

### Conclusion and future perspective:

Online/ app-based Pharmacy is emerging as the electronic healthcare system which may have the possibility to increase demand in the future. One of the key factors in this qualitative study has looked into, is the Cost, in this study, whether it is helping to reduce it or not? Deepen interpretation of interview so have could get help to reach a logical conclusion of this research. The kind of outcome, such as government efforts of encouragement for new entities and how that could help to reduce the cost burden of people. The middle-class segment is the largest in one in India, majority of decisions are taken based on Middle-class view, however, the many beliefs; it should have right policy/strategy to execute same, in changing the attitude of conventional buying to modern and cost-effective. This short qualitative study also gave a glance at the affordable Healthcare concept with E pharmacy. Overall this reflects a positive impact in reducing the cost of healthcare in India.

### LIMITATIONS AND FUTURE RESEARCH

While attempting to generalize the findings, caution must be exercised as the study was conducted with a few limitations. First, due to the limitations of mobility and time constraints, the study was limited to specific cities and the help of some online assistance and so the results need to be looked at from this perspective. Nevertheless, organizations can use these results to design strategies by focusing on the factors that were arrived at.

### CONFLICT OF INTEREST

Authors have no conflict of interest .

**Table II- Abbreviations**

1	CMS - Central Medical Stores
2	KEMSA - Kenya Medical Supplies Agency
3	RFID - Radio Frequency
4	APIs - Active Pharmaceutical Ingredients
5	CPFR - Collaborative Planning Forecasting and Replenishment
6	EDI - Electronic Data Interchange
7	EPZ - Export Processing Zone
8	MNCs - Multinational Corporations
9	NGOs - Non Governmental Organizations
10	OTC - Over the Counter
11	POS - Point of Sale Identification
12	TMS - Transport Management System

13	UNIDO - United Nations Industrial Development Organization
14	VMS - Vertical Marketing System
15	WMS - Warehouse Management System
16	COVID-19- Corona virus disease

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