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“A STUDY ON BUYING DECISION BETWEEN OFFLINE AND ONLINE MEDICINES”

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ABSTRACT

E-commerce in the pharmaceutical and healthcare industries is rapidly growing, which is assisting in expanding the options for consumers to buy medications both online and offline. Ultimately, this action is assisting the Indian pharmaceutical sector in meeting the needs of customers in a more comprehensive way. Patients are shifting from offline to online ordering methods due to the convenience offered by e-medicines, particularly in light of the current surge in Internet users. Although a greater proportion of people, such as the elderly, the disabled, and those who live in distant places, have begun to use this cutting-edge procedure on a regular basis, there is still a sizable portion of the population that depends on the conventional method of obtaining medications from pharmacies. In this exploratory research we have choose the 240 respondents for their views on purchasing their pharmacy items. Various factors and the choice of customer regarding the preferred mode of purchasing is analyzed on stastical tool that reveal that these "Internet Pharmacies" and applications can offer inaccurate and partial information on the medications, which makes them unethical. Furthermore, it is evident that online prescribing cannot take the role of a doctor's in-person care because patients are still susceptible to unavoidable drug combinations and adverse effects while using this approach.

Key words: E-commerce, pharmaceutical, Internet Pharmacies

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INTRODUCTION

India is among the world's biggest distributors of generic medications. Forty percent of the world's vaccine needs are met by the Indian pharmaceutical sector. Additionally, the Indian pharmaceutical industry meets the needs of 40% of the US and 25% of the UK for generic medications (ibef, 2019). India is acknowledged as the world's largest exporter of pharmaceutical drugs. There are also many scientists, researchers, chemists, manufacturers, and technical engineers in the nation who could advance the sector a few steps beyond where it is now. The onset and spread of the retail period of globalization.

Long-term sustainability has become extremely difficult, both in the domestic and international markets. In the current global period, the pharmaceutical industry is among those that are dealing with intense rivalry. There are two distinct approaches to the drug-selling business in India: online and offline. The offline mode involves selling medications through physical counters at places like pharmacies, retail stores, hospitals, and mega malls. The online mode, on the other hand, works on the basis of websites, mobile applications, telephoning, etc. Thus, these are the two distinct methods by which we obtain the necessary medications. These days, the pharmaceutical industry has expanded and is progressively becoming a sophisticated, fast-moving consumer goods sector. Everything, including fruits, vegetables, clothing, and now medications, is available to consumers under one roof. The pharmaceutical sector serves the needs of the Indian people through domestic distribution in addition to exporting both branded and generic medications to meet the demands of the global population.

In the domestic distribution process, Sun Pharma, Medlife, Himalaya, Dabur, and other retail and institutional markets are used to accomplish this. With the assistance of unorganized pharmacies, such as neighborhood pharmacies or chemist shops, retail marketing continues. There are a lot of these unorganised stores in India. The major players in this market are Religare Pharmacy and Apollo Pharma when it comes to distribution through organised outlets. Online pharmacy is the new way of purchasing medicines online in Indian market. I.E. Medlife, Netsmed, Pharmeasy etc.

Indian Pharmaceutical Industry: The Indian pharmaceutical industry is a global leader in generic drug manufacturing, contributing significantly to the worldwide supply of affordable medicines. As of 2023, the industry was valued at approximately \$50 billion, with projections to grow to \$65 billion by 2024 and potentially reach \$130 billion by 2030. It accounts for about 20% of the global generics exports in terms of volume, and India is home to the largest number of U.S. FDA-approved facilities outside the United States. Key factors driving growth include a strong domestic demand, increased healthcare spending, advancements in biotechnology, and robust export potential. The sector plays a vital role in the global supply chain, particularly in providing vaccines, active pharmaceutical ingredients (apis), and over-the-counter drugs.

Major Contributors : The Indian pharmaceutical industry is driven by several key players that have established themselves as major contributors to its growth and global presence. These companies have excelled in manufacturing, research, and export of pharmaceuticals, including generics, vaccines, and biologics.

1. Sun Pharmaceutical Industries: As India's largest pharma company, Sun Pharma specializes in generics, branded drugs, and apis, with a strong presence in the U.S. and emerging markets.
2. Dr. Reddy's Laboratories: Known for its innovation and robust generic drug portfolio, the company is a leader in oncology, biologics, and apis, with significant operations in the U.S., Europe, and India.
3. Cipla: Renowned for affordable respiratory and antiretroviral drugs, Cipla is a pioneer in providing accessible medicines globally, especially in developing nations.
4. Lupin: With expertise in cardiovascular, diabetic, and respiratory drugs, Lupin is a major contributor to India's pharmaceutical exports and a leader in niche therapeutic areas.
5. Biocon: A leading biotech firm, Biocon is a trailblazer in biosimilars, insulin, and novel biologics, with a strong focus on global markets.
6. Zydus Lifesciences (Cadila Healthcare): Known for vaccines, biosimilars, and branded formulations, Zydus has made significant strides in research, particularly with its COVID-19 vaccine, zycov-D.

7. Torrent Pharmaceuticals: Specializing in cardiovascular, central nervous system, and gastrointestinal therapies, Torrent is a prominent player in both domestic and international markets.

8. These companies, alongside smaller firms, collectively drive innovation, exports, and healthcare accessibility, reinforcing India's position as the "Pharmacy of the World."

LITERATURE REVIEW :

1. "A Comparative Study of Online and Offline Medicine Purchase: Consumer Decision-Making Process" by Singh and Gupta (2020)

This study highlights the differences in consumer behavior between online and offline medicine purchases. The authors found that online buyers prioritize convenience, discounts, and a wider range of options, while offline buyers value trust and the ability to consult pharmacists directly. The research emphasizes the influence of demographic factors like age and education, with younger, tech-savvy consumers preferring online platforms. Singh and Gupta also noted concerns about counterfeit medicines as a major barrier to online adoption.

"Impact of Digital Platforms on Pharmaceutical Retail: An Analysis of Buying Patterns" by Sharma et al. (2021)

Sharma and colleagues explored the role of digital platforms in reshaping pharmaceutical retail. Their findings indicate that online purchases are driven by accessibility and time savings, especially in urban areas. The study also points out that online platforms are gaining trust through certifications and transparent reviews. However, offline channels remain dominant for urgent or specialized medicine needs, where immediate physical availability is critical.

3. "Consumer Perception Towards Online Pharmacies: A Behavioral Perspective" by Das and Roy (2019)

Das and Roy investigated consumer perceptions and found that while online pharmacies offer convenience and cost advantages, skepticism about data security and product authenticity persists. The study identifies trust-building strategies like quality certifications and customer service as essential for online platforms to compete effectively with traditional pharmacies.

4. "Offline vs. Online Pharmacies: Exploring the Trust Factor in Medicine Purchases" by Mehta and Verma (2022)

Mehta and Verma focused on the role of trust in consumer decisions. Their research revealed that offline pharmacies benefit from established relationships and personalized interactions, which are difficult to replicate online. The study suggests that online pharmacies need to invest in robust return policies, secure payment systems, and verified supplier networks to overcome trust deficits.

5. "The Role of Digital Health Platforms in Medicine Accessibility" by Patel and Kumar (2021)

This research examines how digital health platforms improve accessibility to medicines in remote areas. Patel and Kumar argue that online pharmacies address critical gaps in availability and affordability, especially for chronic disease management. However, they also caution about digital literacy challenges and emphasize the need for hybrid models combining online convenience with offline consultation for enhanced healthcare delivery.

6. Thomas, L. & George, R. (2020) - "Perceived Risks in E-Pharmacy Transactions":

This paper examines perceived risks associated with online medicine purchases, such as delays, incorrect medicines, and fraud. The authors suggest that transparent return policies, certifications, and clear labeling can mitigate these risks. The study also notes that offline pharmacies maintain an edge by providing immediate resolution of issues.

7. Chakraborty, S. & Das, A. (2021) - "Consumer Satisfaction in Online and Offline Pharmaceutical Services":

Chakraborty and Das focus on consumer satisfaction levels in both channels. Their research shows that online buyers value convenience and cost savings, while offline buyers appreciate personalized advice and emotional connection with pharmacists. The study underscores the importance of service quality in driving loyalty in both formats.

SIGNIFICANCE/ NEED FOR THE STUDY :

The study on "Offline and Online Medicines Buying Decision" is significant as it addresses the evolving dynamics of consumer behavior in the pharmaceutical sector, driven by advancements in technology and changing healthcare needs. With the rise of e-pharmacies offering convenience, cost-effectiveness, and 24/7 access, alongside traditional offline pharmacies providing trust, personal interaction, and immediate availability, understanding these decision-making factors is crucial. The research is vital for stakeholders, including policymakers, pharmaceutical businesses, and healthcare providers, to design strategies that cater to diverse consumer preferences, enhance trust in online platforms, ensure accessibility in rural areas, and improve overall service quality. Furthermore, it helps bridge the gap between digital innovation and consumer satisfaction, ensuring equitable and efficient healthcare delivery.

OBJECTIVES OF THE STUDY :

- To analyze the key factors influencing consumer preferences between offline and online medicine purchases.
- To identify the demographic, psychological, and economic variables that impact buying decisions.
- To examine consumer perceptions of trust, convenience, and satisfaction in both offline and online pharmacy channels.

RESEARCH METHODOLOGY :

The whole research work is based on the exploratory research. Primary data will be collected through structured questionnaires and interviews targeting consumers who purchase medicines through both offline and online channels. The sample size will consist of 178 respondents, selected using stratified random sampling to ensure representation across age, gender, income groups. Secondary data will be sourced from industry reports, academic journals, government publications, and trusted online databases to provide a theoretical foundation and contextual understanding. The data collection process will focus on key factors such as trust, convenience, price sensitivity, service quality, and consumer satisfaction. The Target audience of the Research work is People who resides in Gujarat

DATA ANALYSIS:

Table 1. Age group of respondents

Age group	Frequency	Percent
15-20	78	32.5
21-25	98	40.8
26-30	20	8.3
30 and above	44	18.3
Total	240	100

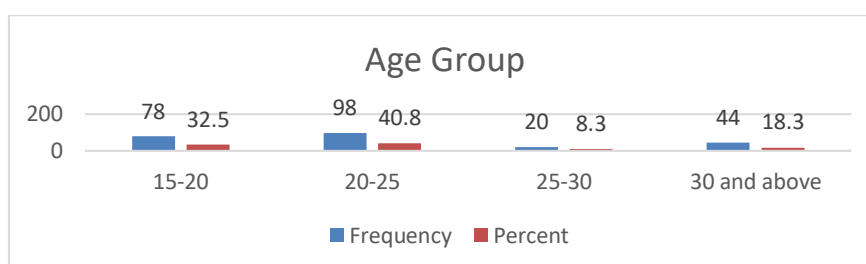


Figure 1. Age group of respondents

In this research we have categorized all respondents on various scales like 15-20, 21-25, 26-30 and 30 and above. The the majority of respondents are between the age groups 21-25 and ,15-20 , with the highest being in the 21-25 which makes almost 40% of total followed by age group of 15-20 with 32.5% and 18.3% in 30 and above age group and the lowest is in between 25-30.

Table 2. Gender of respondent

Gender	Frequency	Percent
Male	120	50
Female	120	50
Total	240	100

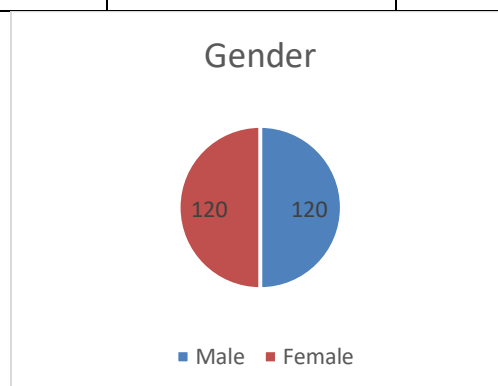


Figure 2. Gender of respondents

In this research respondents are equally divide in to two groups 120 male and 120 female.

Table 3. Occupation of the respondents

Occupation	Frequency	Percent
Student	172	71.7
Employed	30	12.5
Home -maker	20	8.3
Self Employed	18	7.5
Total	240	100

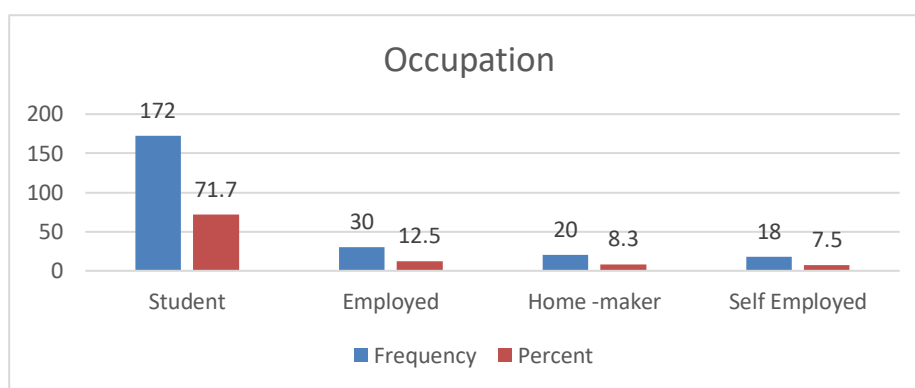


Figure 3. Occupation of the respondents

The majority of study participants are either students or employees. Together, these two groups account for 84.2% of the study's respondents. This demography can be used to identify the group of people who frequently purchase medications, whether they do it online or in-store. Homemakers and self-employed people make up the study's minority groups, accounting for only about 8% of the total. This is due to the fact that, in comparison, there are less persons in these groups than there are full-time employees and students.

Table 4. Mode of buying Medicines

Different Mode	Frequency	Percent
Online Mode	40	16.7
Offline Mode	200	83.3
Total	240	100

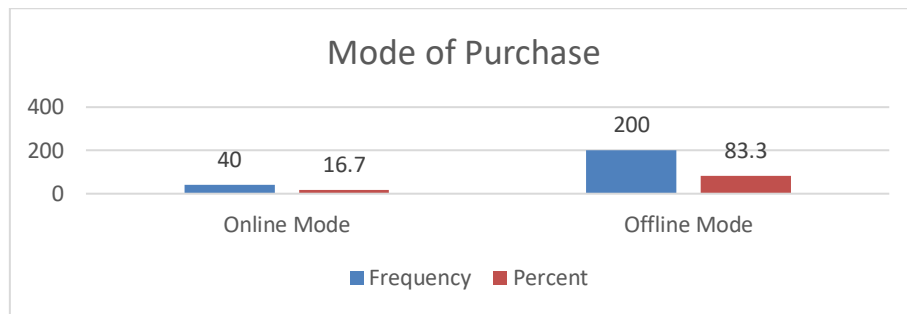


Figure 4. Mode of buying Medicines

The majority of those surveyed chose to purchase their medications offline. 200 respondents, or 83.3% of the total, prefer to purchase medications offline, indicating that they are accustomed to purchasing medications from Pharmacy stores as opposed to using the internet or any other means of e commerce platform. Out of 240 respondents, 40 chose to purchase medications online, accounting for 16.7% of the total respondents.

Table 5. Descriptive analysis of factors

Factors	N	Mean	Std. deviation
Trust Factor	240	.53	.501
Convenience	240	.33	.470
Non – availibility	240	.25	.435
Price	240	.05	.219
others	240	.11	.312
Total	240		

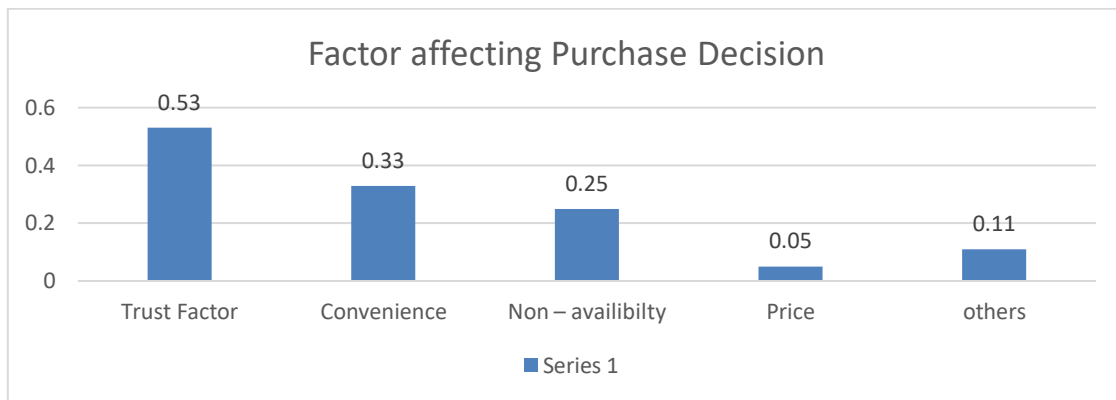


Figure 5. Descriptive analysis of factors

In this research, most respondents choose to purchase Medicine from physical stores over internet portals or applications because they believe that physical stores are reliable and trust worthy. Convenience is the second most crucial factor for them. Buying medications from local pharmacy store is much more convenient than doing it online. In physical stores, we can purchase medications whenever we need them, a practice known as "on-time availability." However, when we order online, we must wait for delivery. The price factor is the least significant element in this research. Even though internet retailers offer lower prices, they still only purchase the medications from physical locations. This suggests that people are strongly influenced by the belief that medicine from pharmacy store are more reliable and trust worthy than the online e commerce platform.

Table 6. Factors that affect the buying behavior

Factors		Mean	Std. deviation
I am very conscious towards medicines purchase	240	4.29	0.703
I look for the medicine I want to buy	240	4.22	0.75
I am aware of the e- medicine	240	4.01	0.934
I believe that buying medicine on medical store more trustworthy rather buying from online apps or websites	240	3.8	1.062
I believe that buying medicine offline make more sense over buying medicine on online websites or apps	240	3.7	1.021
I believe that buying medicine over online not trustworthy	240	3.19	0.994

Table 7. Cross-tabulation between non-preference of buying medicines online and the age groups

Age/Buying factors	15-20		21-25		26-30		above 30		Chi-square test values	
	N	Percent	N	Percent	N	Percent	N	Percent		
Convenience	26	26%	30	23.8%	10	35.7%	12	24%	1.762	0.623
Price Factor	0	0%	6	4.8%	4	14.3%	2	4%	6.929	0.074
Non-Availability	6	6%	28	22.2%	6	21.4%	20	40%	11.607	0.009
Trust Factor	60	60%	52	41.3%	8	28.6%	8	16%	20.358	0.000
Others	8	8%	10	7.9%	0	0%	8	16%	2.478	0.479
Total	100	100%	126	100%	28	100%	50	100%		

Table 8. Cross-tabulation between Occupation and the Mode of purchase

Occupation/ mode of buying	I buy Medicine more from				Toal		Chi-Square Test Value	
	Offline Mode		Online Mode		n	Percent		
	n	Percent	n	Percent				
Student	160	80%	12	30%	172	71.7%	32.054a	P=0.000
Self Employed	6	3%	12	30%	18	7.5%		
Employed	16	8%	14	35%	30	12.5%		
Home Maker	18	9%	2	5%	20	8.3%		
Total								

Table 9. Cross-tabulation between no-preference of buying medicines online and the mode

of purchase

mode of buying/ Buying Factors	Offline Mode		Online Mode		Chi-Square Test Value	
	n	Percent	n	Percent		
Convenience	70	28.5%	6	11.5%	5.236	0.073
Price Factor	6	2.4%	6	11.5%	5.072	0.079
Non-Availability	42	17.1%	18	34.6%	5.358	0.069
Trust Factor	116	47.2%	10	19.2%	8.423	0.015
Others	12	4.9%	12	23.1%	18.171	0.000
Total	246	100%	52	100%		

Convenience is the second most crucial factor in buying decision. Purchasing medications from local near by pharmacy store is much more convenient than doing it online. In physical stores, we can purchase medications along with it we can purchase other OTC products also, whenever we need them, Specially items are also on time available. However, when we order it on ecommerce platform we have to wait for the for delivery. In the above research, respondents are less concerned about the cost of medications, thus the pricing is the least significant element.

People are very cautious when purchasing medications because the highest mean score, 4.29, suggests that people prefer to acquire medications offline because they are extremely cautious when purchasing medications from pharmacies. individuals think that buying medications online is unreliable. This displays the lowest mean value, 3.19, which suggests that individuals are not being reliable when it comes to buying medications. The major reason behind the such thing is the change of medicine if its wrongly deliver. The cross-tabulation between the respondents' age groups and their preference for not purchasing medications online is displayed in the table. 60% of participants in the 15–20 age range chose the trust factor, which is a highly effective variable that shows how much people are influenced by medications from physical store are more reliable and trust worthy.

In contrast to the age group of 26–30, the 21–25 age group demonstrates that they are also heavily influenced by the trust factor. shows that 35.7% of respondents purchase their medications offline. because the medications are not available in physical stores, respondents in the age range over 30 purchase their medications online. People over 30 who have been diagnosed with various illnesses need different medications, which are typically not available at a particular store. As a result, they favour purchasing medications over internet platforms. The cross-tabulation of the respondents' occupation and manner of purchase is displayed in the above table.

Out of the 240 respondents, 80% of students said they preferred to buy their medications from physical stores rather than online. In contrast, 30% and 35% of self-employed and employed respondents, respectively, said they preferred to buy more medications from online platforms, and 5% of homemaker respondents said they preferred to buy their medications from online platforms. The cross-tabulation between the variables influencing medication purchases and the various methods of doing so, such as online and offline, is displayed in the above table. 47.2% of the 240 respondents said they preferred offline mode due of the trust element involved, although Due to its instant availability, convenience ranks as the second most preferred offline buying method. However, 34.6% of online participants purchase medications from online platforms since they may not be available in nearby physical locations, making online shopping their only choice. Finally, considering the pricing element, we can conclude that when it comes to preference for purchasing the same item, neither online nor offline buyers are impacted by the price aspect.

FINDINGS :

- Though advancement in Information technology and affordable internet service is now widely available in India, People Choose to shop over online of various FMCG items, Clothes , apparels and other accessories and footwear, cosmetics but when it comes to pharmacy they mostly prefer to choose the Pharmacy store rather than Online.
- Convenience and nearness of pharmacy store also one of major influencing factor in purchasing decision as some of pharmacy store in every city is run 24*7 and on the spot delivery will give one more advantage to the Offline mode of purchasing rather than online mode.
- Sometimes Non availability of medicine result in to the search it over internet if such needs are not on emergency basis, very few people are buying medicine online include few students, home maker and employed or self-employed.
- For Customers, whether they are student or employed or self-employed, Pricing is not a key concern, as its comes to pharmacy items, Customer always think twice or thrice or even much more in case of shopping items but in case of Pharmacy they never resist of spending any amount.
- Lower prices and discounts offered by online pharmacies emerged as a significant factor influencing decisions.
- Offline stores were often associated with the risk of non-availability of specific medicines, particularly niche or less common drugs.
- Online platforms were preferred for their wider inventory and ability to source rare medications.
- Trust in offline pharmacies remains strong due to face-to-face interactions with pharmacists and the perception of better quality control.
- While online platforms excel in convenience, delivery delays remain a drawback, especially for urgent requirements.

- Younger respondents and those with higher technological literacy were more inclined towards online purchases.

CONCLUSION:

It has been noted that despite numerous significant technological and internet-based breakthroughs as well as the widespread accessibility of e-medicines, a sizable portion of the Indian populace still prefers to buy medications and other medical supplies from physical pharmacies. It indicates a more conventional and health-conscious mindset and viewpoint of the populace (despite advancements in other areas of life), especially when choosing between online and offline pharmaceutical shopping. People favour offline over online for a number of reasons, including accessibility, trust, and ease of use. People may order medications online when they are unavailable at physical pharmacies; otherwise, they prefer to use the offline mode exclusively. In addition, the general public still prefers to buy the same medication from any retail establishment if it is offered there, even if it is available online at a lower cost. This indicates that individuals are more cautious when purchasing medications and have less faith in online pharmacies and apps that conduct patient consultations. Furthermore, the satisfaction that customers and patients receive from the advice and interactions of a chemist, druggist, or physician cannot be replaced. Qualified professionals, such as a doctor or chemist, should thoroughly explain the incomplete usage instructions, dose, side effect warnings, and drug interactions that are labelled on these medical supplies, medications.

When ordering this stuff from other web services and online market applications, this component is ignored. When choosing offline medications over e-medicines, this satisfaction and trust aspect takes precedence over the other considerations.

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