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A SURVEY-BASED STUDY ON THE PERSPECTIVE OF CONSUMERS TOWARDS E-PHARMACY IN RURAL AND URBAN AREAS OF GUJARAT STATE

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Abstract: The advent of e-pharmacy services has transformed the landscape of healthcare delivery, offering convenience and accessibility to consumers. However, the acceptance and utilization of e-pharmacy platforms vary across different demographic segments and geographic regions. This study aims to investigate the perspectives of consumers towards e-pharmacy services in both rural and urban areas of Gujarat State, India.

The research methodology employs a survey-based approach, gathering data from a representative sample of consumers residing in rural and urban regions of Gujarat. The survey instrument includes questions designed to assess various aspects of consumer perception, including trust, convenience, affordability, privacy concerns, and overall satisfaction with e-pharmacy services.

Through statistical analysis, the study aims to identify significant differences in consumer attitudes towards e-pharmacy between rural and urban populations. Additionally, factors influencing the adoption or rejection of e-pharmacy platforms will be explored, providing insights into the key drivers and barriers shaping consumer behavior in each demographic segment.

The findings of this study are expected to contribute to the understanding of consumer preferences and concerns regarding e-pharmacy services in Gujarat State. Furthermore, the results can inform policymakers, healthcare providers, and e-pharmacy operators about strategies to enhance the acceptance and effectiveness of e-pharmacy platforms, particularly in rural areas where access to traditional pharmacies may be limited**.**

Index Terms **-** E-Pharmacy, Consumer Perspective, Rural Area, Urban Areas Gujarat StateSurvey-based Study, Demographic Segments

I. INTRODUCTION

The US Food and Drug Administration (FDA) has dedicated a section on its official website to "Buying medicines over the internet." Online pharmacies, also known as e-pharmacies, Internet Pharmacy, Web Pharmacy, or Cyber Pharmacy are becoming increasingly popular as customers find it more convenient to purchase drugs and medicines online and deliver them straight to their homes. The ease and accessibility of online platforms have led to the widespread popularity of e-pharmacies, drawing in an increasing number of users. (1)

As per the India Brand Equity Foundation (IBEF), Department of Commerce, Ministry of Commerce and Industry, Government of India. “A web-based pharmacy is an online system that allows customers to purchase medicinal medications and E-services online, allowing them to obtain medicines/services in the comfort of their own homes on time.” E-pharmacies are gradually encroaching on the role traditionally played by local

chemists, by providing over-the-counter medicines for common ailments, chatbots for instantaneous first aid, reviews of local doctors/assistance in finding doctors, suggestions for labs for taking tests, home delivery of medicines, explaining details about the medicines, etc.(2)

The application of the Internet to access drugs and diagnostics, which was first initiated in the United States in 1999, has matured into portals or virtual drugstores, popularly known as "Internet pharmacies." The advent of internet pharmacy and access to drugs and diagnostics is gaining popularity due to cost-effectiveness and high-speed delivery to patient's doorstep. (3)

Online shopping is becoming more popular because online stores use computers to sell things better and determine why people like buying stuff online. Buying things online is also cheaper than going to stores, and it's quicker, gives you more choices, and the prices are fair. (4)

1.1 Types of E-Pharmacies:

1.1.1.Inventory-based Model of E-Pharmacy :

There are two types of e-pharmacies, one of which is the inventory-based model. In this model, the e-pharmacy owns the inventory of drugs, which are stored in warehouses across various geographic areas. Orders placed on the pharmacy's website or app are reviewed by registered pharmacists. If a prescription is required, the pharmacist verifies its authenticity before proceeding. The e-pharmacy does not distribute any medications without a valid prescription. Once the prescription is confirmed, registered pharmacists package the medicines in tamperproof packaging and deliver them to customers through a courier service. (5)

1.1.2 Marketplace-based Model of E-Pharmacy

The marketplace-based model of e-pharmacy involves technology companies acting as facilitators between buyers and sellers, with the e-pharmacy playing the role of an aggregator. Essentially, this means that the e-pharmacy provides a technology platform that connects buyers of drugs or medicines with licensed pharmacies that list their products on the website. Customers can select the required medicines or drugs from the app or website and upload their e-prescription or scanned prescription. Once the order is placed, it is forwarded to the authorized pharmacy for processing. The pharmacy checks the order against the prescription and prepares the order accordingly. It's important to note that orders without a valid prescription will be canceled. Finally, the medicines are delivered to the customers by courier service. (5)

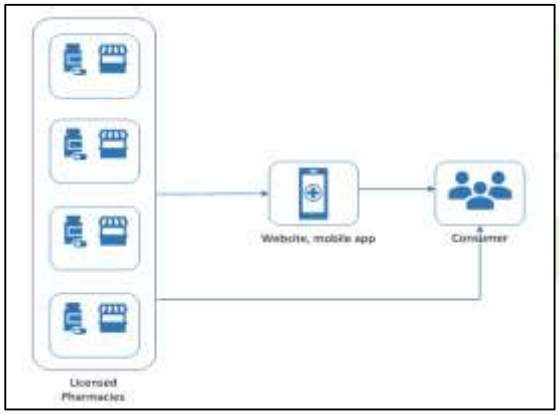


Figure:1.1 inventory-based model of e-pharmacy

Figure :1.1 (6)

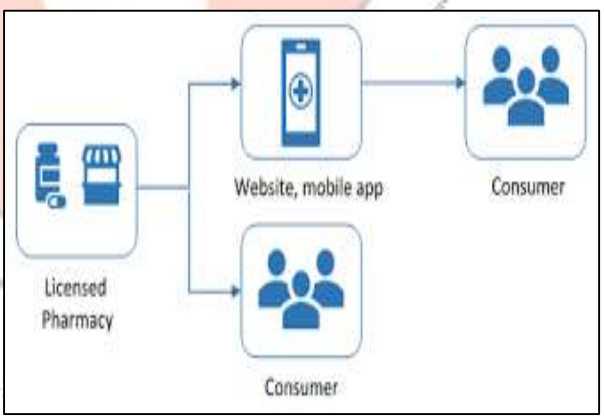


Figure:1.2 marketplace-based model of e-pharmacy

Figure:1.2 (7)

II. REVIEW LITERATURE :

Despite the many benefits that e-pharmacies offer, the World Health Organization (WHO) has raised security concerns. The WHO estimates that over 50% of the pharmaceuticals advertised on the internet come from counterfeit websites, which adds to the problem's complexity and seriousness. Unregulated online pharmacies pose a serious risk to public health by selling fake medications, which can have disastrous effects on customers. (4) According to a study conducted in Western Europe on 14,000 individuals, one out of every five people is obtaining medication from the Internet without a prescription. This study highlights that Western Europeans spend around 10.5 million Euros annually on non-prescription medicines from illegal sources. (8) In Romania, a survey was conducted to gauge patients' and customers' opinions on purchasing drugs online. The results revealed that many individuals lacked awareness regarding the distinctions between medications bought from

the Internet and those obtained from traditional pharmacies. These findings emphasize the importance of considering online drug purchasing in routine patient care(9).

As technology continues to advance, there has been a noticeable shift in people's purchasing habits. Online shopping has become increasingly popular across various categories such as goods, clothing, electronics, furniture, and groceries. With this change in trend, the pharmaceutical industry is also adopting the online purchasing system. In India, the number of online pharmacies is rising to meet the growing demand from patients and consumers who increasingly turn to online platforms to buy drugs and medicines. (10)

As per the India Brand Equity Foundation (IBEF), Department of Commerce, Ministry of Commerce and Industry, Government of India, The growth of the Indian e-pharmacy market is propelled by a surgeon on the internet by the Government initiative of the Digital Indian campaign and the competition among various data providers which has brought down the cost of internet use and made it affordable for everyone, which was once considered a luxury(2)

According to EY's research titled "E-pharmacy: providing better results," the projected target medication market for E-pharmacies is forecasted to reach US$18.1 billion by 2023, showing significant growth from US$9.3 billion in 2019, with a robust compound annual growth rate (CAGR) of 18.1%. Factors such as population growth, rising prevalence of chronic diseases, increasing internet access, and widespread smartphone ownership are driving this expansion in the E-pharmacy sector. A key driver of demand is the accessibility of the Internet and web-based services. The E-pharmacy industry is anticipated to sustain a CAGR of 15.2 percent between 2019 and 2024. (11)

While e-pharmacies offer significant advantages in terms of convenience and accessibility, addressing challenges related to cost, quality, legality, and consumer trust will be essential for their sustained success in India's healthcare landscape.

This study aims to analyze consumer behavior, preferences, and buying patterns regarding the purchase of medicines through e-pharmacy platforms to provide insights into factors influencing adoption and satisfaction levels.

III. OBJECTIVES OF THE STUDY:

- Identifying the factors influencing the choice of purchasing medicines from online e-pharmacy platforms.
- Understanding the purchasing patterns exhibited by customers of e-pharmacy services.
- Exploring the current trends within the pharmacy business, particularly in the context of e-commerce and digital platforms.
- To identify the relation between demographic factors and usage of E-pharmacy Services.

IV. MATERIALS AND METHODS

4.1 Study design

The study used a quantitative analysis approach to investigate perceptions of online medicine purchases. The questionnaire consisted of four parts, where the first part collected demographic data such as residency, age, gender, education level, and occupation, while the remaining sections focused on consumer preferences and purchasing behaviors regarding e-pharmacies were 21 questions in all The version of the survey was developed

4.2 Validation of questionnaire

Before distribution, the questionnaire content underwent a screening process to ensure its appropriateness. The validity of the questionnaire was assessed through pretesting on a sample of participants at Anand Pharmacy College, conducted by experts from various departments. Based on the pretest results, indefinite and incompatible questions were modified, and the questionnaire was finalized.

V. RESEARCH METHODOLOGY

The research has been done with a quantitative analysis method to seek out answers to the research questionnaire. An analysis feedback form consisting of 21 numbers of questions was developed, validated, and circulated among 614 numbers of customers (through random sampling) with the help of a direct filling form or by using an online platform like- e-mail, Google form, WhatsApp, etc. to know the consumer preferences and buying pattern towards e-pharmacy.

5.1 Data collection

A survey was conducted using a pretested questionnaire distributed via Google Forms to streamline the data collection process. Participants were reached out to through personalized messages containing a URL link to the survey. They were requested to fill out the form, which consisted of multiple-choice questions. Additionally, to accommodate participants without internet access or preferring offline methods, a printed version of the questionnaire mirroring the Form was provided for completion. This ensured inclusivity and allowed all participants to contribute their responses effectively.

5.2 Statistical analysis

Using GraphPad and Excel Pivot versions, the data analysis encompassed descriptive statistics, comparative analysis, correlation analysis, regression analysis, and visualization techniques to examine consumer perspectives on e-pharmacy services in rural and urban areas of Gujarat State. Descriptive statistics were computed to summarize key variables, while comparative analysis identified significant differences between rural and urban populations. Correlation analysis explored relationships between variables, and regression analysis identified factors influencing e-pharmacy adoption. Visualizations such as bar charts and scatter plots were generated to illustrate findings. The interpretation of results informed conclusions and recommendations for policymakers, healthcare providers, and e-pharmacy operators, aiming to enhance service delivery and consumer satisfaction in Gujarat State's healthcare landscape.

VI: RESULT

Baseline characteristics of the participants We reached out to 614 potential participants for the survey (354 online and 260 offline).

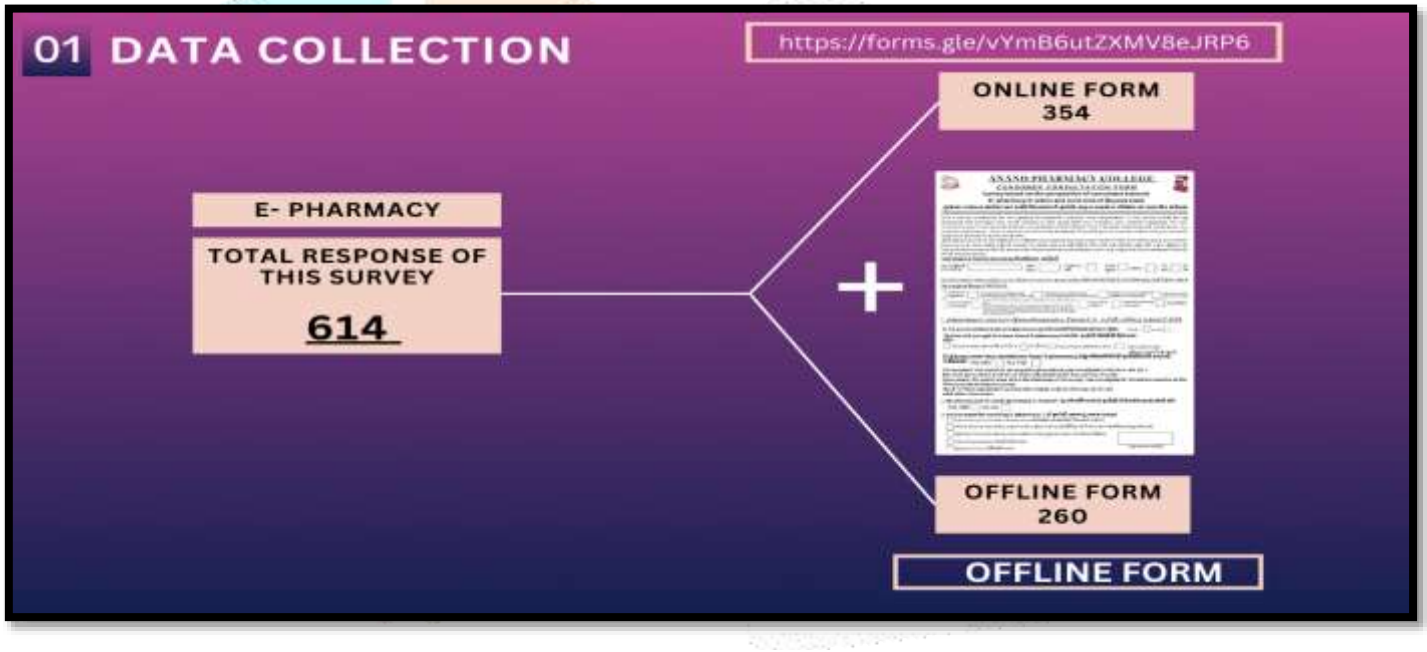


Figure:1.3: Data Collection Diagram

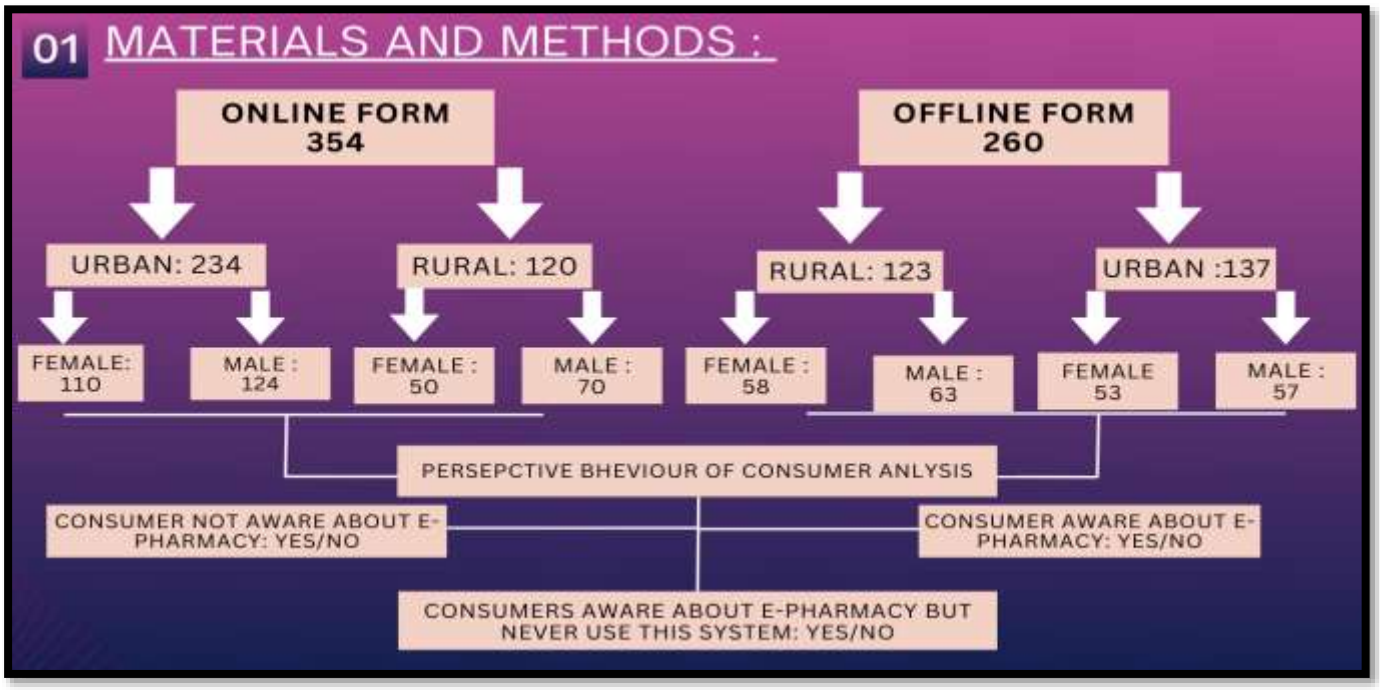


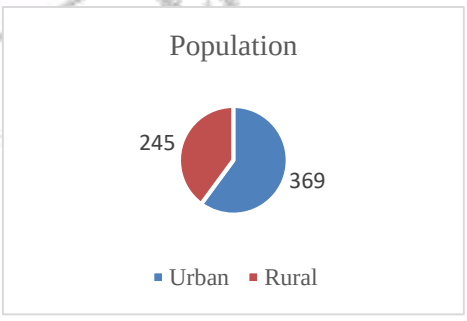
Figure :1.4:Method of data collection

V-1

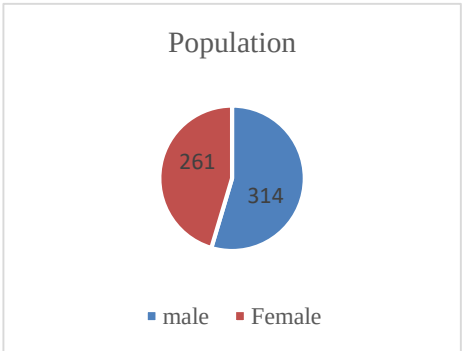
6.1 Demographic Profile:

The demographic composition of a given sample population is its distinguishing feature, and ascertaining this information is essential to effectively conducting surveys. This is because a comprehensive understanding of the unique characteristics of the sample population is necessary to accurately classify the data. With this objective in mind, the first section of the questionnaire comprises a series of questions that cover aspects such as Residency, gender, age, education, and occupation. The data collected from these questions enables the creation of a summary table, which proves to be an invaluable resource for further analysis. Factors influencing their motive to buy medicine from online e-pharmacy differ from person to person, their residency area, and occupation.

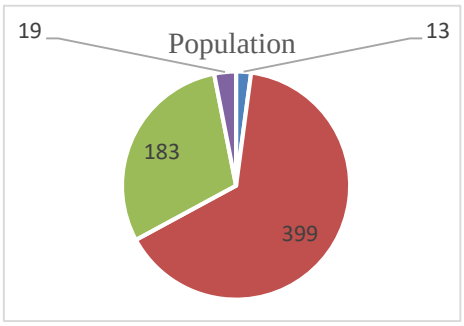
SR .NO		RESPONSE POPULATION
1.	Residency • Urban • Rural	 369 245
	TOTAL	**614**



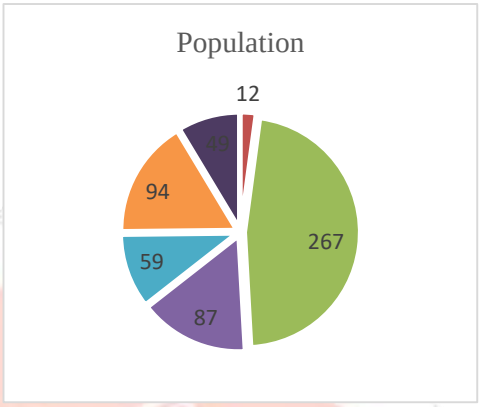
SR.NO	DEMOGRAPHIC FACTOR	RESPONSE POPULATION
2.	Gender: male & female Urban: Male Female Rural: Male Female	 181 163 133 108

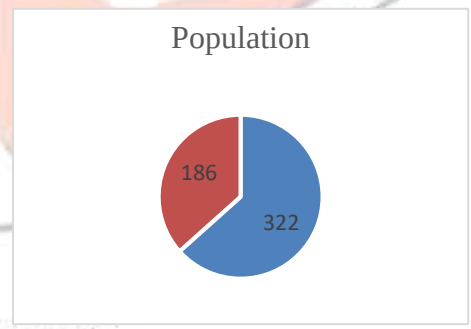


SR .NO	DEMOGRAPHIC FACTOR	RESPONSE POPULATION
3.	Age:	
	10-17Years	13
	18-25Years	399
	26 -60 Years	183
	Above60	19
	TOTAL	**614**



SR .NO	DEMOGRAPHIC FACTOR	RESPONSE POPULATION
4.	Educational Qualification Occupation : • School level • Undergraduate college student • Post graduate college • Academic and teaching field • Industrial Personality / Field, Job Social commercial, banking system, • House Work	 12 267 87 59 94 49
	TOTAL	**614**
5.	Occupation : • Pharmacy Field • Any Other	322 186
	BLANK **TOTAL**	**106** **614**





6.2 Baseline Characteristics of the Population-Based Awareness and Usage of E-Pharmacy, including demographic parameters

Awareness and Usage of E-Pharmacy

- Among the total population of 614 individuals, 208 are aware of e-pharmacy and actively using e-pharmacy systems.
- 266 individuals are aware of e-pharmacy but have not utilized e-pharmacy systems.
- This indicates a total awareness rate of 474 out of 614 individuals

Location Comparison

- In urban areas, out of 472 individuals, 169 are aware and using e-pharmacy systems, while 116 are aware but not using them.
- In rural areas, out of 142 individuals, 91 are aware and using e-pharmacy systems, while 105 are aware but not using them.
- Urban areas show higher awareness and usage rates compared to rural areas.

Age Groups

- Among rural individuals aged 18-25, 60 are using e-pharmacy systems, and 71 are aware but not using them.
- In the same age group in urban areas, 109 are using e-pharmacy systems, and 90 are aware but not using them.
- Similar patterns are observed in other age groups, with higher usage rates in urban areas across all age groups.

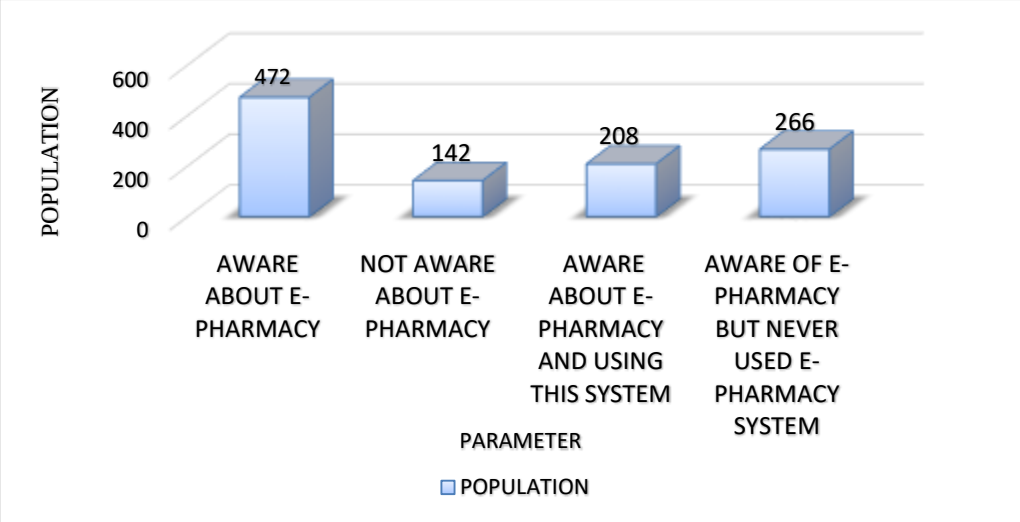
Occupation

- In the pharmacy field, out of 344 individuals, 180 are using e-pharmacy systems, and 164 are aware but not using them.
- Among individuals in other fields, out of 197 individuals, 139 are using e-pharmacy systems, and 58 are aware but not using them.
- Individuals in the pharmacy field demonstrate a higher engagement with e-pharmacy services compared to those in other fields.

Overall Summary

- The data indicates varying levels of awareness and usage of e-pharmacy services among different demographic groups.
- Urban areas generally exhibit higher awareness and usage rates compared to rural areas.
- Younger age groups, especially those aged 18-25, show a higher propensity for using e-pharmacy services.
- Individuals in the pharmacy field are more actively engaged with e-pharmacy services compared to those in other occupations.

Table:1.1:baseline characteristics of the population-based awareness and usage of e-pharmacy, including demographic parameters



Graph:1.1:Baseline characteristics of the population-based awareness and usage of e-pharmacy, including demographic parameters

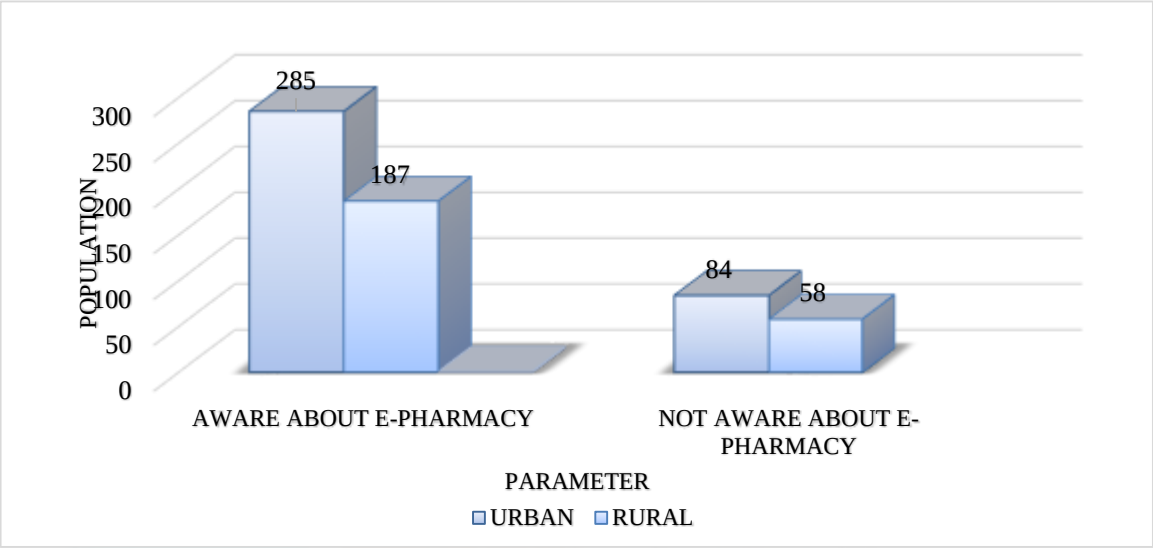
The survey on e-pharmacy awareness and usage covers 614 individuals. Out of these, 472 are aware of e-pharmacy, with 285 residing in urban areas and 187 in rural areas. Among those aware, 208 individuals actively use e-pharmacy systems, with 169 in urban areas and 91 in rural areas. Additionally, 142 individuals are not aware of e-pharmacy, with 84 in urban areas and 58 in rural areas.

6.2.1 To Identify The Relation Between Demographic Factors Influencing The Awareness Of E-Pharmacy Services

SR NO	Parameter			Aware about E-pharmacy Total population N=(472)	Not aware of E-pharmacy total population (N=142)	Total population N=614)	Aware of e-pharmacy and using E-pharmacy system Total: (n= 208)	Aware of E-pharmacy but never used E-pharmacy system Total (n=266)	Total population Total N=(472)
1	• Urban			285	84	369	169	116	285
	• Rural			187	58	244	91	105	196
3	Age	Rural	18-25	126	23	149	60	71	149
			26-60	48	35	84	21	33	84
			Above 60	9	0	9	10	1	11
			15-17	2	0	2	0	0	2
			TOTAL	187	58	244	91	105	244
		Urban	18-25	199	51	250	109	90	250
			26-60	68	31	99	44	24	99
			Above 60	8	0	8	7	1	8
			15-17	10	2	12	7	1	8
			TOTAL	285	84	369	169	116	369
			TOTAL	472	142	614	260	221	614
4	occupation	Pharmacy field		336	92	428	180	164	344
		Any field		136	50	185	139	58	197

6.2.1.1The Population aware of E-pharmacy and not aware of E-pharmacy concerning urban and rural areas

In the given dataset chart, out of a total population of 614 individuals, 472 are aware of e-pharmacy, with 285 residing in urban areas and 187 in rural areas, while 142 individuals are not aware of e-pharmacy, with 84 in urban areas and 58 in rural areas.

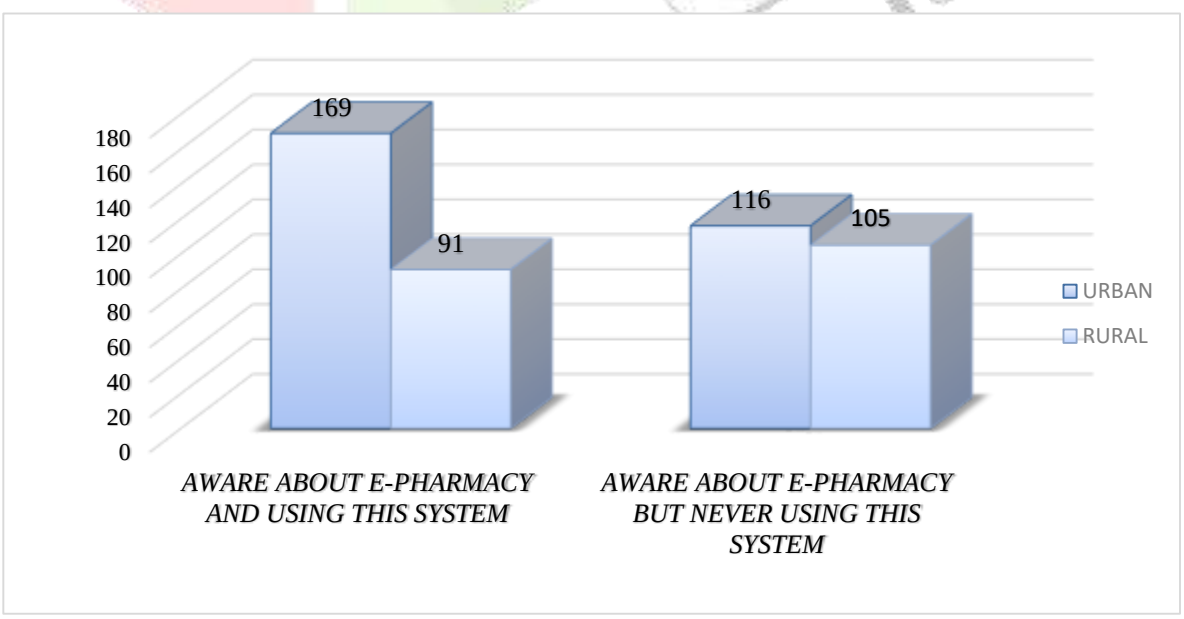


Graph:1.2: Awareness of E-Pharmacy in Urban vs. Rural Areas: A Comparative Study

6.2.1.2 Population Aware Of E-Pharmacy And Using This System And The Population Aware Of E-Pharmacy But Never Use This System Concerning Urban And Rural Areas

In the chart database of urban areas, there are a total of 169 individuals who are aware of e-pharmacy and actively using the system, while 116 individuals are aware of e-pharmacy but have never used the system.

In the chart database of rural areas, 91 individuals are aware of e-pharmacy and actively using the system, while 105 individuals are aware of e-pharmacy but have never used the system



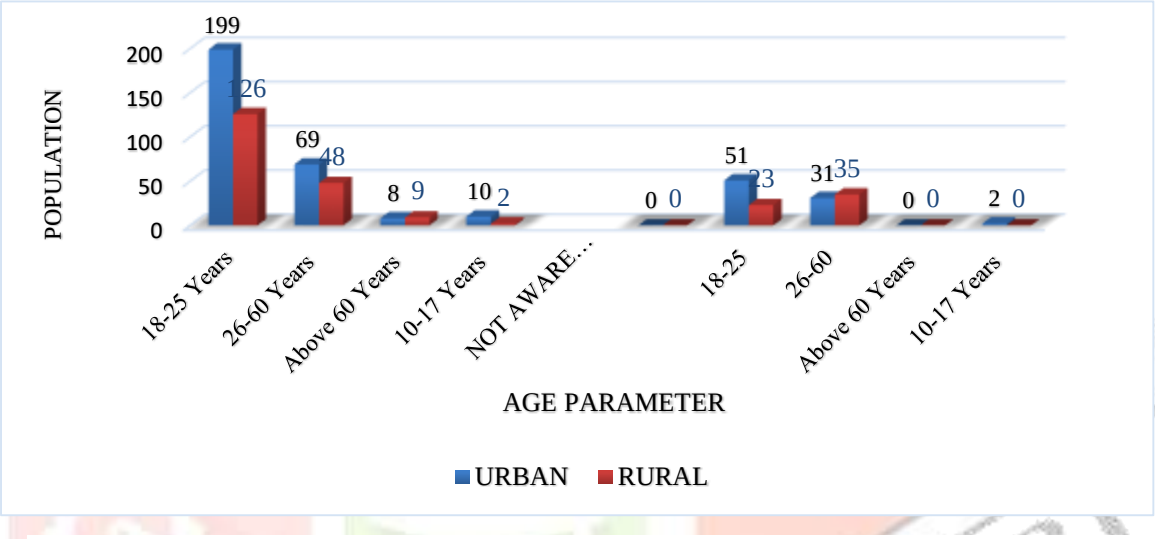
Graph :1.3: Population aware of e-pharmacy and using this system and the population aware of e-pharmacy but never use this system concerning urban and rural areas

6.2.2 To Identify The Relation Between Demographic Factors And Usage Of E-Pharmacy Services

Demographic factors have an impact on how consumers utilize e-pharmacy platforms :

6.2.2.1 Awareness Of E-Pharmacy Varies Across Different Age Groups Within The Population

In the rural region, there are 187 individuals aged 18-25 who are aware of e-pharmacy, out of which 126 are using the system. Additionally, there are 48 individuals aged 26-60, with 23 of them using e-pharmacy. Moreover, 9 individuals above 60 years old are aware of e-pharmacy, and all of them are using it. There are also 2 individuals aged 15-17 who are aware of e-pharmacy but not using it. In the urban region, there are 285 individuals aged 18-25 who are aware of e-pharmacy, out of which 199 are using it. Additionally, there are 68 individuals aged 26-60, with 51 of them using e-pharmacy. There are 8 individuals above 60 years old who are aware of e-pharmacy, and all of them are using it. Lastly, there are 10 individuals aged 15-17 who are aware of e-pharmacy but not using it.



Graph :1.4: awareness of e-pharmacy varies across different age groups within the population

In the chart database chart rural regions, out of 187 individuals aged 18-25 aware of e-pharmacy, 126 are using the system. For the age group 26-60, out of 48 individuals aware, 21 are using e-pharmacy. There are 9 individuals above 60 years old aware of e-pharmacy, all of whom are using it. No individuals aged 15-17 in rural areas are using e-pharmacy.

In the chart database urban areas, out of 285 individuals aged 18-25 aware of e-pharmacy, 199 are using the system. For the age group 26-60, out of 68 individuals aware, 44 are using e-pharmacy. There are 8 individuals above 60 years old aware of e-pharmacy, all of whom are using it. Among 15-17-year-olds, 10 individuals are aware but not using e-pharmacy.

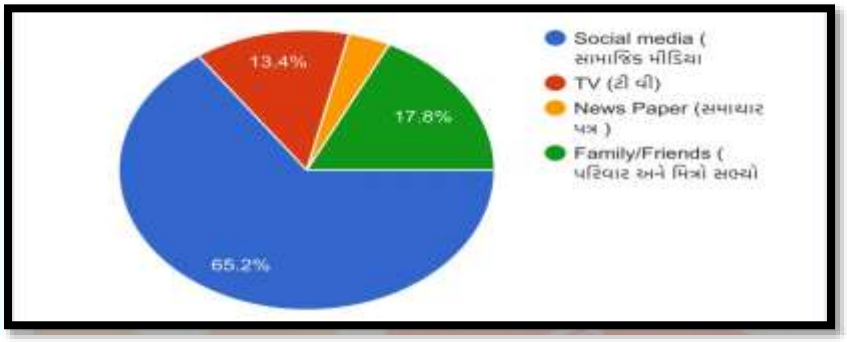
6.2.3 Understanding The Purchasing Patterns Exhibited By Customers Of E-Pharmacy Services

6.2.3.1 How did you get to know about E pharmacy?

According to the pie chart, social media accounted for the largest proportion of information sources at 65.2%, followed by family and friends at 17.8%. TV comprised 13.4% of respondents' sources, while newspapers represented only 3.6%.

Table:1.2: Sources of information and percentage of respondents

STATEMENT	NO. OF RESPONDENTS (%)
Net meds	6.7%
Tata 1 Mg	12.4%
Med kart	9.5%
PharmEasy	16.2%
Apollo Pharmacy	50.5%
Other	4.8%
Total	100%



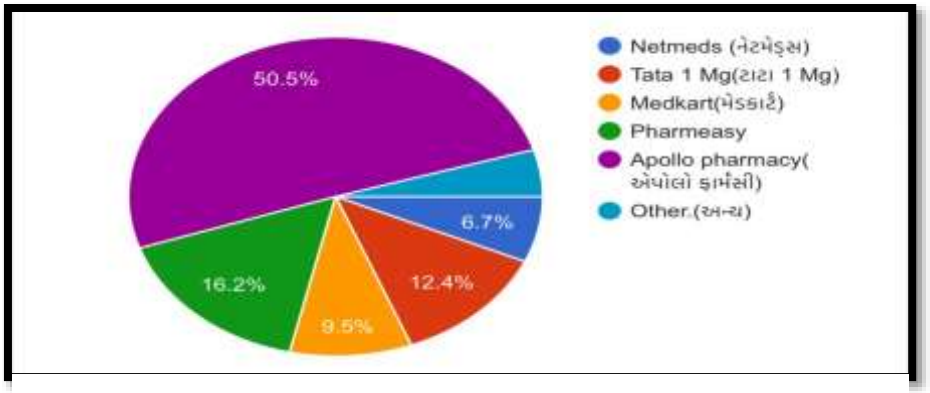
Pie chart: 1.1 Sources of information and percentage respondents

6.2.3.2Which E-Pharmacy Site/ App Do You Use?

According to the survey results, Apollo Pharmacy was the most favored choice among respondents, with 50.5% indicating it as their preferred pharmacy. Following Apollo Pharmacy, PharmEasy was chosen by 16.2% of respondents, while Tata 1 Mg, Medkart, and Netmeds accounted for 12.4%, 9.5%, and 6.7% respectively. The remaining 4.8% of respondents opted for other pharmacies.

Table:1.3:Percentage of respondent using various online paltfrom system

STATEMENT	NO. OF RESPONDENTS (%)
Social Media	65.2 %
Tv	13.4%
Newspaper	3.6%
Family Friends	17.8%



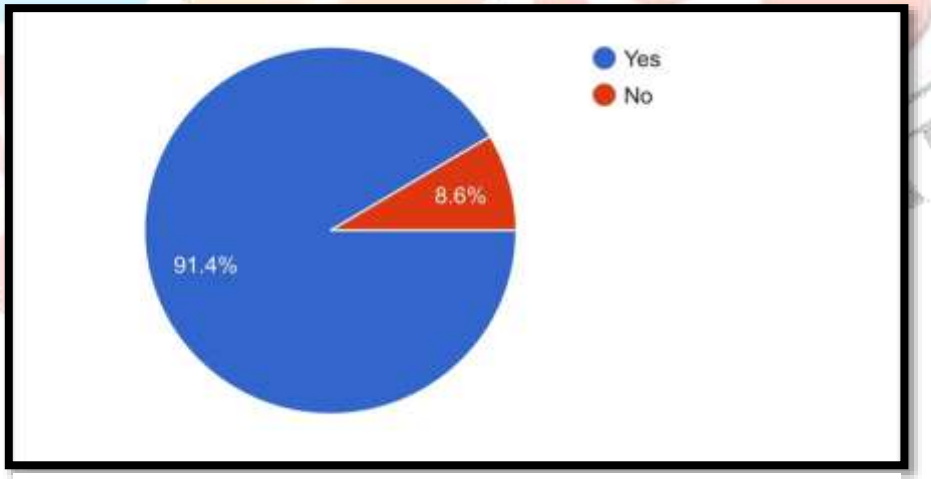
Pie chart:1.2: Percentage of respondents using various online palttform system

6.2.3.3 Were you able to find the medicines you were looking for easily?

The majority of respondents (91.4%) reported finding the medicines they were looking for easily, while a minority (8.6%) indicated difficulty, resulting in a total response rate of 100%.

Table:1.4:finding medicines: respondents' responses

STATEMENT	NO. OF RESPONDENTS (%)
Yes	91.4 %
No	8.6%
Total	100%



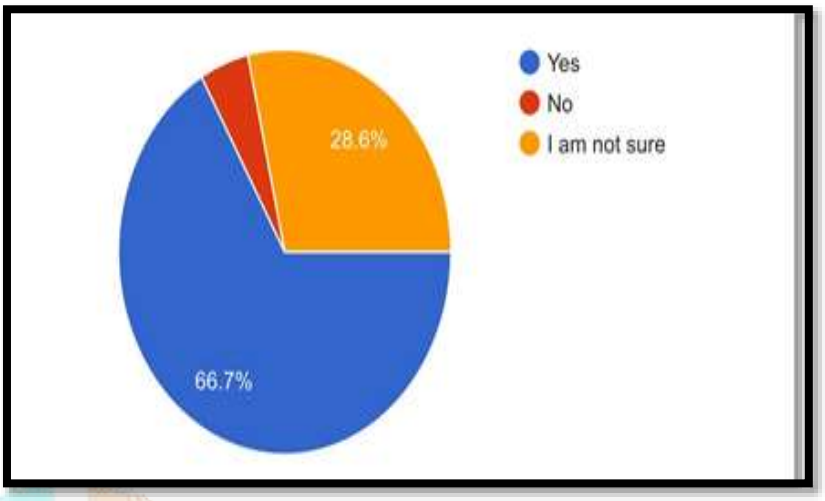
Pie chart:1.3: Finding medicines: respondents' responseS

6.2.3.4 Did you find any discounts or promotions on the e-pharmacy platform compared to what you typically find at retail pharmacies?

A majority of respondents (66.7%) reported finding discounts or promotions on the e-pharmacy platform compared to retail pharmacies, while a small percentage (4.8%) did not find any, and a notable portion (28.6%) were unsure, yielding a total response rate of 100%.

Table 1.5: Comparison of discounts or promotions between e-pharmacy and retail pharmacies

STATEMENT	NO. OF RESPONDENTS (%)
Yes	66.7 %
No	4.8%
I am not sure	28.6%
Total	100%



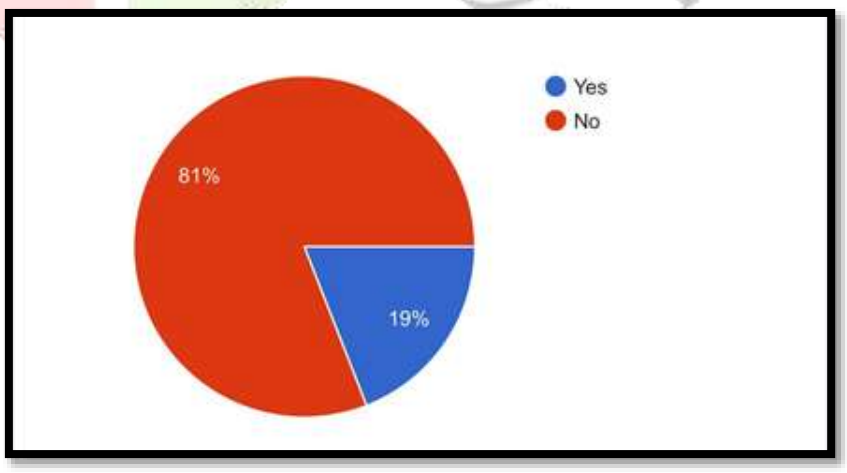
Pie chart: 1.4:Comparison of discounts or promotions between e-pharmacy and retail pharmacies.

6.2.3.4 Were there any issues with the packaging or condition of the medication upon delivery?

The majority of respondents (81%) reported experiencing issues with the packaging or condition of the medication upon delivery, while a minority (19%) did not encounter any issues, resulting in a total response rate of 100%.

Table:1.6:packaging and medication condition satisfaction: respondents responses

STATEMENT	NO. OF RESPONDENTS (%)
Yes	81%
No	19%
Total	100%



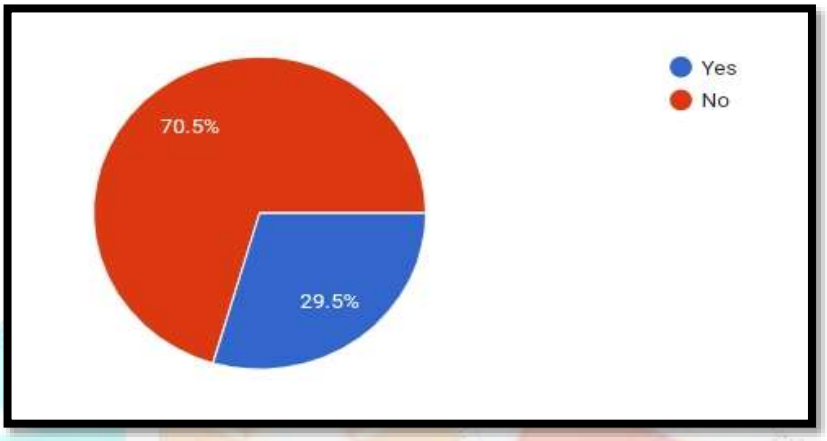
Pie chart:1.5:Packaging and medication condition satisfaction: respondents' responses

6.2.3.4 Did you encounter any concerns regarding privacy or security and unlawful while using the e-pharmacy platform?

Among respondents, 41% reported encountering concerns regarding privacy or security and unlawful activities while using the e-pharmacy platform, while 31.1% did not have any such concerns, and 21.9% were unsure, resulting in a total response rate of 100%.

Table:1.7: Privacy and security concerns: e-pharmacy platform usage

STATEMENT	NO. OF RESPONDENTS (%)
Yes	29.5%
No	70.5%
Total	100%



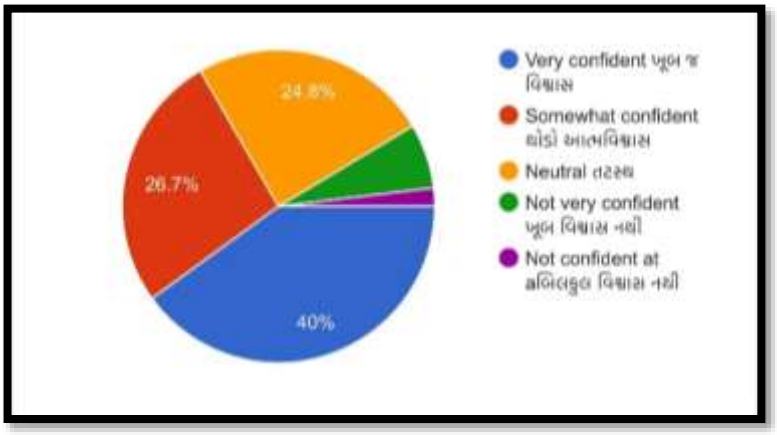
Pie chart:1.6 Pprivacy and security concerns: e-pharmacy platform usage.

6.2.3.5 How confident are you, without pharmacist oversight, in the reliability of medication information provided on the e-pharmacy website for your understanding?

The table illustrates respondents' confidence levels in the reliability of medication information provided on e-pharmacy websites without pharmacist oversight. The majority (40%) expressed being very confident, followed by 26.7% who were somewhat confident. Additionally, 24.8% felt neutral about the reliability, while only 6.7% were not very confident, and 1.9% were not confident at all, resulting in a total response rate of 100%.

Table:1.8: Confidence in e-pharmacy medication information without pharmacist oversight.

STATEMENT	NO. OF RESPONDENTS (%)
Very confident	40%
Somewhat confident	26.7%
Neutral	24.8%
Not very confident	6.7%
Not confident	1.9%
Total	100%



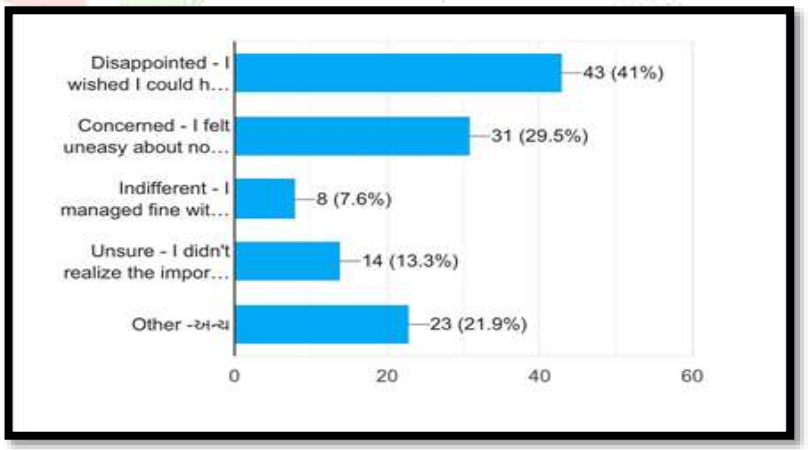
Pie chart1.6.Confidence in e-pharmacy medication information without pharmacist oversight.

6.2.3.6 If no pharmacist interaction was available, how did you feel about the lack of direct access to a healthcare professional for medication-related questions or concerns?

Based on the data, the majority of respondents, accounting for 41%, expressed disappointment. This was followed by 29.5% of respondents who indicated they were concerned. A smaller segment, making up 7.6%, felt indifferent,13.3% of the respondents were unsure of their feelings, while 21.9% had varied reactions that were categorized as "Other.", the responses sum up to 100%, highlighting a range of emotions with disappointment being the most prevalent and indifference the least common.

Table:1.9:Feelings about lack of direct access to healthcare professionals on e-pharmacy platforms.

STATEMENT	NO. OF RESPONDENTS (%)
Disappointed	41%
Concerned	29.5%
Indifferent	7.6%
Unsure	13.3%
Other	21.9%
Total	100%



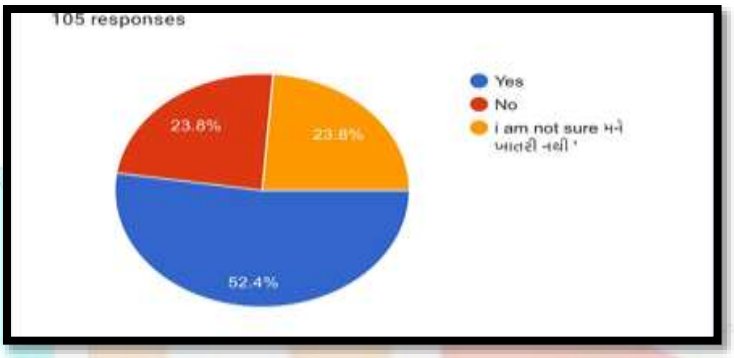
Pie chart:1.7:feelings about lack of direct access to healthcare professionals on e-pharmacy platforms

6.2.3.7 Did you feel adequately supported in managing your medications without direct pharmacist involvement?

The table illustrates respondents' perceptions of support in managing their medications without direct pharmacist involvement. A majority (52.4%) felt adequately supported, while 23.8% did not, and an equal percentage (23.8%) were unsure, resulting in a total response rate of 100%.

Table:2:Perceived support in managing medications without direct pharmacist involvement.

STATEMENT	NO. OF RESPONDENTS (%)
Yes	52.4%
No	23.8%
I am not sure	23.8%
Total	100%



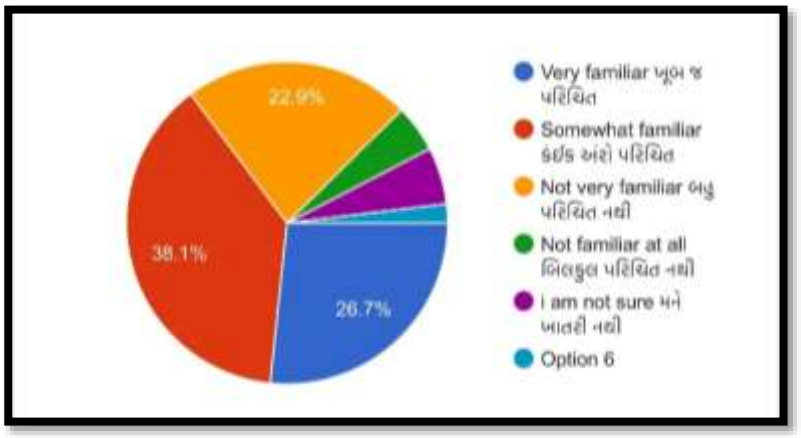
Pie chart:1.8:Perceived support in managing medications without direct pharmacist involvement

6.2.3.8 How familiar are you with the laws and regulations governing e-pharmacies, particularly regarding consumer rights and protections?

The table presents respondents' levels of familiarity with laws and regulations governing e-pharmacies, particularly concerning consumer rights and protections. The majority of respondents indicated varying degrees of familiarity, with 26.7% being very familiar, 38.1% somewhat familiar, 22.9% not very familiar, 4.8% not familiar at all, and 6.7% unsure, resulting in a total response rate of 100%.

Table:2.1:Familiarity with e-pharmacy laws and regulations (%)

Familiarity with E-Pharmacy Laws and Regulations (%)	NO. OF RESPONDENTS
Very familiar	26.7%
Somewhat familiar	38.1%
Not very familiar	22.9%
Not familiar at all	4.8%
I am not sure	6.7%
Total	100%



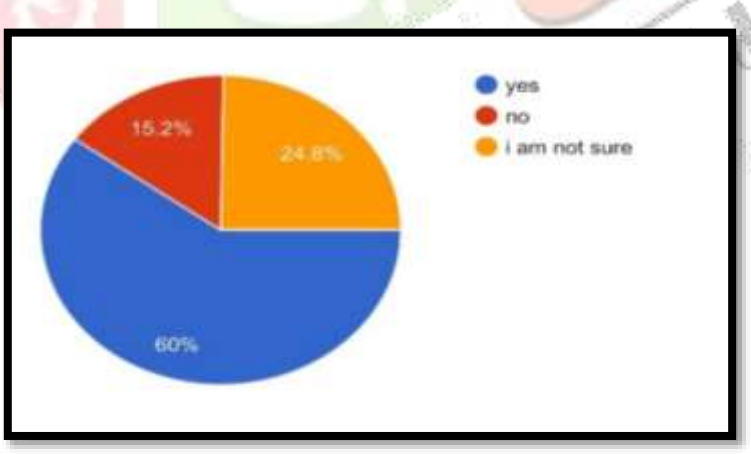
Piechart:1.8:familiarity with e-pharmacy laws and regulations (%)

6.2.3.9 Do you find e-pharmacies transparent about the company manufacturing the medicine and its content?

According to the data, 60% of respondents believe that e-pharmacies are transparent about the manufacturing and content of medicines, 15.2% of respondents do not think that e-pharmacies are transparent in this regard, 24.8% of respondents are unsure about the transparency of e-pharmacies concerning medicine manufacturing and content,the responses total 100%, indicating a majority perception of transparency, with a significant portion of uncertainty among the respondents.

Table:2.2: Transparency of e-pharmacies regarding medicine manufacturing and content

TRANSPARENCY OF E-PHARMACIES REGARDING MEDICINE MANUFACTURING AND CONTENT	NO. OF RESPONDENTS (%)
Yes	60%
No	15.2%
I am not sure	24.8%
Total	100%



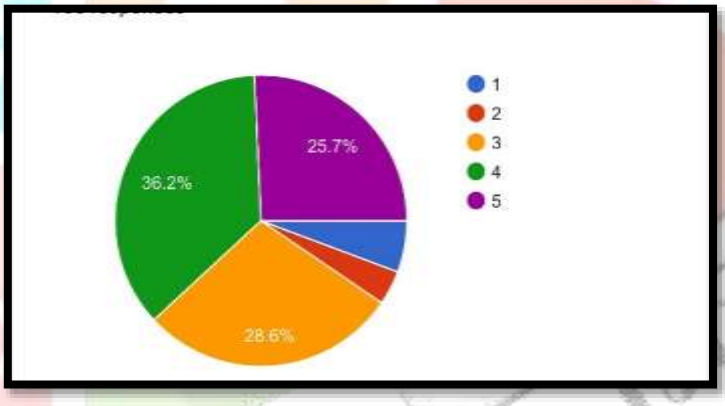
Pie chart:1.9: Transparency of e-pharmacies regarding medicine manufacturing and content

6.2.3.10 On a scale of 1 to 5, how satisfied are you with your experience using the e-pharmacy? 1(unsatisfied) to 5 = (satisfied)

The survey on satisfaction levels with e-pharmacy experiences, rated on a scale of 1 to 5, reveals a generally positive sentiment among users. A significant 36.2% of respondents rated their experience at 4, indicating high satisfaction, while 25.7% gave the highest possible rating of 5, reflecting very high satisfaction. Mid-level satisfaction was expressed by 28.6% of respondents who rated their experience at 3. On the lower end, 5.7% of respondents rated their satisfaction at 1, showing significant dissatisfaction, and 3.8% rated it at 2, indicating low satisfaction. In total, the responses sum up to 100%, illustrating that the majority of users are satisfied with their e-pharmacy experiences, with a smaller portion expressing varying degrees of dissatisfaction

Table:2.3; Satisfaction levels with e-pharmacy experience on a scale of 1 to 5

SATISFACTION LEVELS WITH E-PHARMACY EXPERIENCE ON A SCALE OF 1 TO 5	NO. OF RESPONDENTS (%)
1	5.7%
2	3.8%
3	28.6%
4	36.2%
5	25.7%
Total	100%



Pie chart:2.0:satisfaction levels with e-pharmacy experience on a scale of 1 to 5.

6.2.3.11 How frequently you have bought medicine through E-pharmacy?

The table presents the frequency at which respondents buy medicine through e-pharmacies, with 8.6% doing so daily, 9.5% weekly, 21.6% monthly, and the majority, 60%, purchasing medicine occasionally, resulting in a total response rate of 100%.

Table:2.4:Frequency of purchasing medicine through e-pharmacy

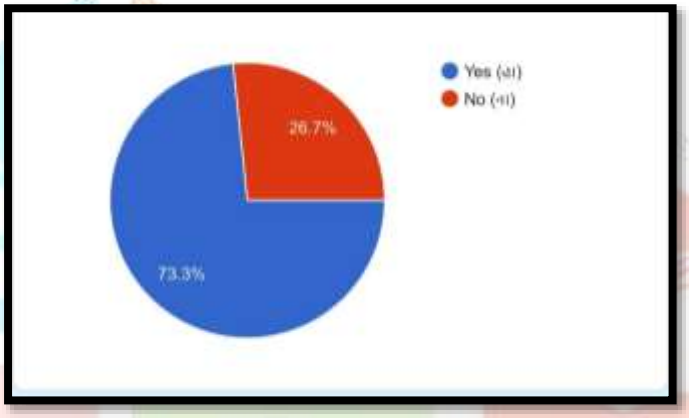
FREQUENCY OF PURCHASING MEDICINE THROUGH E-PHARMACY	NO. OF RESPONDENTS (%)
Daily	8.6%
Weekly	9.5%
Monthly	21.6%
Occasionally	60%
Total	100%

6.2.3.12 Would you find it convenient to upload a prescription on the website for online pharmacy?

The survey responses regarding the convenience of uploading prescriptions on online pharmacy websites show a clear preference for ease of use. A substantial 73.3% of respondents found the process convenient, while 26.7% did not share this sentiment. Overall, the responses sum to 100%, indicating that a significant majority of users consider the prescription upload process on online pharmacy websites to be convenient.

Table:2.5:Responses regarding the convenience of uploading prescriptions on the online pharmacy website

RESPONSES REGARDING THE CONVENIENCE OF UPLOADING PRESCRIPTIONS ON THE ONLINE PHARMACY WEBSITE	NO. OF RESPONDENTS (%)
Yes	73.3%
No	26.7%
Total	100%



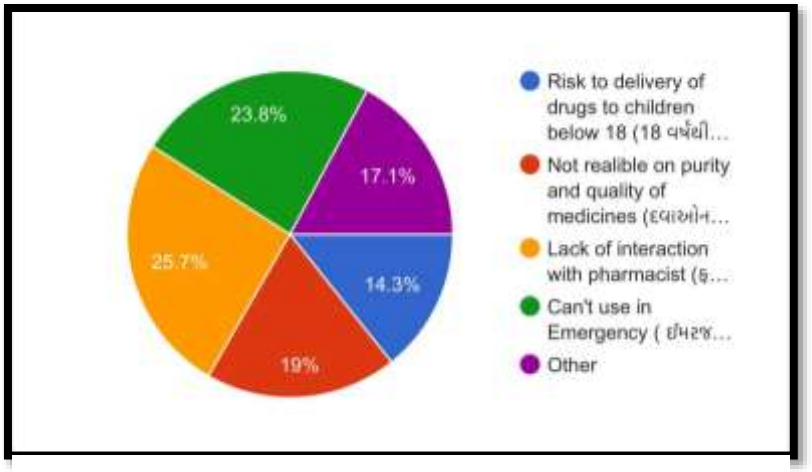
Pie chart:2.1:responses regarding the convenience of uploading prescriptions on the online pharmacy website

6.2.3.13 What are the difficulties you face during the use of E-pharmacy?

Among respondents facing difficulties using E-pharmacy, 14.3% reported concerns about the risk of delivering drugs to children below 18, 19% expressed doubts about the reliability of the purity and quality of medicines, and 25% indicated a lack of interaction with pharmacists.

Table:2.6:Lack of interaction with pharmacist

DIFFICULTIES FACED DURING USE OF E-PHARMACY DIFFICULTIES FACED DURING USE OF E-PHARMACY	NO. OF RESPONDENTS (%)
Risk to delivery of drugs to children 18	14.3%
Not reliable on purity and quality of medicines	19%
Lack of interaction with a pharmacist	2507%
Can't be used in emergency	23.8%
Total	100%



Pie chart:2.2:Lack of pie chart interaction with pharmacist

6.3 Future Intentions Regarding The Use Of E-Pharmacy Among Consumer

The data reflects a significant proportion of the population, particularly in the urban areas, are not yet aware of E-pharmacy services but express an interest in utilizing them in the future, totaling 221 individuals. This signals a potential market growth opportunity for E-pharmacy providers, especially through targeted awareness campaigns and service expansion in urban regions.

There is a segment of the population, totaling 39 individuals, who are both not aware of E-pharmacy services and do not express an intention to use them in the future. This suggests potential barriers to adoption or a lack of interest in certain demographic segments, which requires further investigation and tailored strategies to address.the data underscores the importance of raising awareness and addressing barriers to adoption to maximize the potential of E-pharmacy services, particularly in expanding access and improving healthcare outcomes for the broader population.

Table:2.7:Future intentions regarding the use of e-pharmacy among consumer:

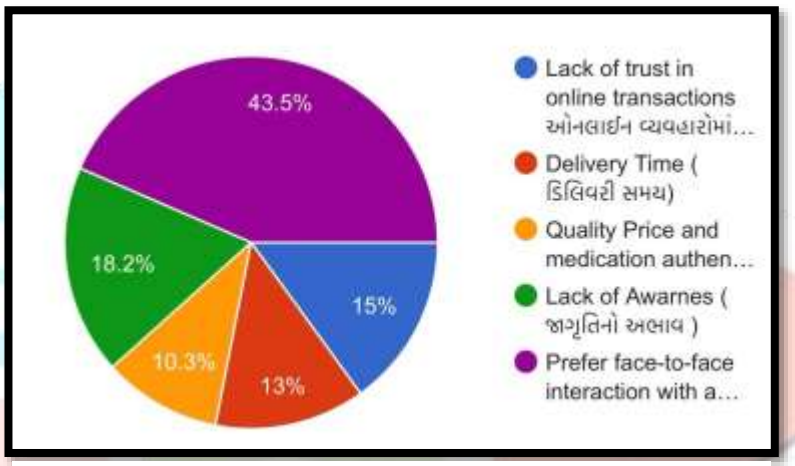
SR. NO	Parameter			The population is not Aware of E-pharmacy but going to use it in the future	The population is not Aware of E-pharmacy and not going to use it in the future.	TOTAL POPULATION
1			Urban	142	27	169
			Rural	79	12	91
3	Age	Rural	18-25	49	11	60
			26-60	20	01	21
			Above 60	10	01	11
			15-17	00	00	00
			TOTAL	79	12	91
		Urban	18-25	95	14	109
			26-60	32	12	44
			Above 60	07	00	07
			15-17	08	01	09
			TOTAL	142	27	169
			TOTAL	221	39	260

6.4 Percentage Of The Population's Reason For Avoiding E-Pharmacy

The table provides a summary of the reasons for avoiding E-pharmacy, including concerns about lack of trust in online transactions (43.5%), delivery time (13%), issues related to quality, price, and medication authenticity (10.3%),lack of awareness (18.2%), and a preference for face-to-face interaction with a pharmacist (14.5%).

Table:2.8; Reasons for avoiding e-pharmacy

REASONS FOR AVOIDING E-PHARMACY	NO. OF RESPONDENTS (%)
Lack of trust in online transactions	43.5%
Delivery Time	13%
Quality Price and medication authenticity	10.3%
Lack of Awareness	18.2%
Prefer face-to-face interaction with a pharmacist	43.5%
Total	100%



Pie chart :2.3: Reasons for avoiding e-pharmacy

DISCUSSION :

- Awareness and Usage: Out of 614 participants, 208 are aware of e-pharmacy and actively using it, while 266 are aware but haven't utilized it. Urban areas generally show higher awareness and usage rates compared to rural areas, with younger age groups, especially those aged 18-25, exhibiting a higher propensity for using e-pharmacy services.
- Occupational Engagement: Individuals in the pharmacy field demonstrate higher engagement with e-pharmacy services compared to those in other occupations.
- Sources of Information: Social media is the primary source of information about e-pharmacies, followed by family and friends, TV, and newspapers.
- Preferred Platforms: Apollo Pharmacy emerges as the most favored choice among respondents, followed by PharmEasy, Tata 1 Mg, Medkart, and Netmeds.
- Ease of Finding Medicines: A majority of respondents reported finding the medicines they were looking for easily.
- Discounts and Promotions: 66.7% of respondents found discounts or promotions on e-pharmacy platforms compared to retail pharmacies.
- Packaging and Medication Condition: 81% of respondents experienced issues with the packaging or condition of the medication upon delivery.
- Privacy and Security Concerns: 41% reported encountering concerns regarding privacy or security and unlawful activities while using e-pharmacy platforms.

- Confidence in Medication Information: 40% of respondents were very confident, and 26.7% were somewhat confident in the reliability of medication information provided on e-pharmacy websites without pharmacist oversight.
- Access to Healthcare Professionals: 41% of respondents were disappointed, and 29.5% were concerned about the lack of direct access to healthcare professionals for medication-related questions or concerns.
- Perceived Support in Medication Management: 52.4% felt adequately supported in managing their medications without direct pharmacist involvement.
- Familiarity with Laws and Regulations: Respondents showed varying degrees of familiarity with laws and regulations governing e-pharmacies.
- Transparency of E-Pharmacies: 60% found e-pharmacies transparent about the company manufacturing the medicine and its content.
- Satisfaction Levels: The majority expressed satisfaction with their e-pharmacy experience, with 36.2% rating it as 4 and 25.7% as 5 on a scale of 1 to 5.
- Frequency of Purchasing Medicines: The majority purchased medicine occasionally through e-pharmacies.
- The convenience of Prescription Upload:73.3% found it convenient to upload prescriptions on e-pharmacy websites.
- Challenges Faced: Common difficulties included concerns about the risk of delivering drugs to children, doubts about the reliability of the purity and quality of medicines, and lack of interaction with pharmacists.

CONCLUSION:

The study on e-pharmacies sheds light on various aspects of consumer behavior and preferences in this emerging trend. Despite the growing awareness and usage, there are notable challenges and concerns among consumers. While urban areas and younger age groups demonstrate higher adoption rates, issues such as packaging, privacy, and access to healthcare professionals remain prevalent. The majority of respondents express satisfaction with their e-pharmacy experience, highlighting the convenience and ease of accessing medication online. Efforts to address concerns about medication quality, privacy, and regulatory compliance could further enhance consumer trust and promote the continued growth of e-pharmacies in the healthcare landscape. Increased efforts in education and awareness campaigns may help bridge the gap for those who are aware but have yet to utilize e-pharmacy services.

The noted challenges, the study underscores the importance of addressing consumer concerns and enhancing regulatory oversight to ensure the safety and reliability of e-pharmacy services. While social media plays a significant role in disseminating information about e-pharmacies, there's a need for comprehensive educational initiatives to improve understanding and trust among potential users. The convenience of uploading prescriptions and the availability of discounts are notable advantages that e-pharmacies offer. By addressing issues related to medication packaging, privacy, and access to healthcare professionals, stakeholders can further improve the overall consumer experience and foster greater confidence in e-pharmacy platforms. Overall, the findings suggest a promising trajectory for e-pharmacies, provided that efforts are made to address consumer concerns and promote transparency and accountability within the industry.

Urban areas exhibit higher awareness and usage rates of e-pharmacy services compared to rural areas, highlighting the need for targeted initiatives to bridge this gap and ensure equitable access to healthcare resources across diverse geographic regions.

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