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Research Article

Factors of E-Consumer Behavior for E-Pharmacy Adoption in India: A Literature Review

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ABSTRACT

The study explores the factors of E-consumer Behaviour for E-pharmacy adoption in India. With a focus on discerning various factors like consumer trust, usefulness of buying online pharmacies, convenience, patients' data and security issue with regards to online purchase of medication, is all medicines are available in online pharmacy and how easily it is available to online consumer. India 's pharmaceutical industry has huge potential in the near future.

Objective: This study attempts to understand how e-pharmacy industry is very sensitive and projected to expand significantly in the next years due to a combination of favourable government policies, evolving consumer tastes, and technology advancements. However, it is important for the industry to address regulatory concerns and ensure the safety and authenticity of medicines sold online. This paper attempts to review literatures related to E pharmacy adoption, online consumer behavior and listing out factors influencing the consumer behavior for E-pharmacy adoption.

Methodology: It's a conceptual research paper in which different research papers are reviewed to find out the different categories of variables that influence the study the E-pharmacy adoption in India and also provides a suggestive research methodology based on the relationship of different identified variables.

Findings: It examines literature review to identify different variables which influence the

e-pharmacy adoption in India which helps for further research study with primary data collection and for statistical analysis.

Implications/Limitations: The study is limited to literature review to identify the variables which influence the consumer behaviour towards adoption of online pharmacies in India. The Study provides a theoretical knowledge on different aspects which influence in consumer behaviour. Further research needs to be done in terms of identification of geographical area for data collection and analysing the data in statistical tools.

Originality/Value: It contributes the insight theoretical knowledge on how different factors can influence the consumer behaviour in adopting various e-pharmacy industries in India.

E-Pharmacy industry has seen a huge boom post Covid-19 like any other e-commerce industry and which contributes to the economic development of the country.

Keywords: E-pharmacy adoption, online consumer behaviour, perceived risk, Perceived usefulness, Trust, Convenience, Security and privacy, CAGR.

1. Introduction:

E-commerce has surged in all economies as more and more people have access to smartphones and the internet. As a result of this significant change in customer behaviour, e-pharmacies have grown as a promising industry because they have effectively offered the convenience of purchasing at the comfort of their house.

Prescription pharmaceuticals made for 68% of sales in the global e-Pharmacy market in 2020, while over-the-counter drugs accounted for 32%. This suggests that the industry is valued at US$ 0.8 billion. Despite having only about 50 online pharmacies in 2020, India's e-pharmacy sector contributed 14% of the industry's total revenue in the Asia-Pacific area.

Over the projected period of 2022-2027, the online pharmacy industry is anticipated to grow at a CAGR of 13.8%. The COVID-19 pandemic is expected to cause the sector to grow dramatically. Due of the quarantine and travel limitations, combined with the widespread dread of contracting the SARS-CoV2[1] virus, many people turned to internet pharmacies to stock up on both over-the-counter and prescription medications. Another trend toward digital prescriptions is the replacement of in-person medical appointments with teleconsultations conducted over the internet. In a same vein, influential people are developing a wide range of responses to the epidemic.

E-pharmacy refers to an internet-based pharmacy that dispenses medication to customers via courier services or the mail. The e-pharmacy breaks down the long chain of wholesalers and directly supplies medicine to the end consumer at a reduced price. Over the period of projection, 2022-2027, the market for online pharmacies is anticipated to grow at a CAGR of 13.8%. Drug kinds (prescription and OTC), product types (skin care, dentistry, cold and flu, vitamins, weight reduction, and others), and geographic regions all play a role in the online pharmacy market's segmentation (North America, Europe, Asia-Pacific, Middle-East and Africa, and South America).

The ease of obtaining medications online, greater internet penetration, and growing healthcare awareness have all contributed to India's e-pharmacy market's recent rapid growth. In order to lower their risk of infection, people in India are choosing to visit online pharmacies more frequently as a result of the pandemic.

According to a report by RedSeer Management Consulting, the e-pharmacy market in India is expected to reach $3.7 billion by 2022, growing at a compound annual growth rate (CAGR) of 63% from 2018 to 2022. The report also estimated that the e-pharmacy market in India could potentially reach $18.1 billion by 2023, with a CAGR of 73% from 2020 to 2023.

The major players in the Indian e-pharmacy market include PharmEasy, Medlife, 1mg, Netmeds, and Apollo Pharmacy. These companies have been actively expanding their reach and offerings through acquisitions, partnerships, and strategic investments.

Nonetheless, there have been regulatory issues with the e-pharmacy business in India, especially with relation to the online selling of prescription drugs. The Indian government released a draught plan in 2018 to regulate online pharmacies. The proposal contained conditions like licencing, guaranteeing the legitimacy of medications, and restricting the selling of specific drug types. The industry continues to function in a regulatory state of uncertainty while the regulations are still being established. With all factors considered, the Indian e-pharmacy business is expected to grow significantly over the next several years due to shifting consumer tastes, advances in technology, and supportive government regulations. However, it is critical that the sector handle regulatory issues and guarantee the security and authenticity of medications offered for sale online.

REVIEW OF LITERATURE

2. E-Consumer behavioral factors for E-pharmacy adoption

The determinants of e-consumer behavior towards e-pharmacy adoption can vary based on different factors such as cultural, social, technological and individual aspects.

However, some of the basic determinants are identified for review of literature:

2.1. Perceived usefulness:

One significant factor in the uptake of e-pharmacy services is perceived utility. It is an indicator of how well customer requirements are met by e-pharmacy services, and it impacts both the customers' attitude and intention of using these services. The following literature review provides an overview of studies that have explored the concept of perceived usefulness.

[Alghamdi and Sreedharan (2021)] The goal of e-pharmacy was to look at the variables affecting Saudi Arabian healthcare professionals' use of e-pharmacy services. According to the study, among healthcare professionals, perceived usefulness was a strong predictor of their desire to use e-pharmacy services. The study also found that consumer convenience and opinions regarding compatibility, security, and privacy had a big influence on how rapidly e-pharmacy services were adopted. Price and affordability of e-pharmacy services play a significant role in e-consumer behavior.

Consumers often compare prices of medication between e-pharmacies and traditional pharmacies. E-pharmacies that offer competitive prices and discounts are likely to attract more consumers. Studies have shown that price is a critical factor in consumer decision-making when purchasing medication online (Dolinsky et al., 2018).

It is examined that variables influencing Jordan's adoption of e-pharmacy services. According to the study, among Jordanian healthcare professionals, perceived utility was a strong predictor of their desire to use e-pharmacy services. Perceived compatibility, ease of use, risk, and trust were all found to be major factors of e-pharmacy service adoption Alomari et al. (2020).

The aim was to look at the variables influencing Saudi Arabia's adoption of e-pharmacy services. The study found that perceived usefulness was a significant predictor of the intention to use e-pharmacy services among the general public in Saudi Arabia. The study also found that perceived ease of use, perceived trust, and perceived risk were important factors that influenced the adoption of e-pharmacy services [Khoja et al.(2017)].

It is aimed to explore the factors that influence the adoption of e-pharmacy services among healthcare professionals in Kuwait. The study found that perceived usefulness was a significant predictor of the intention to use e-pharmacy services among healthcare professionals in Kuwait. The study also found that perceived ease of use, perceived compatibility, and perceived security were important factors that influenced the adoption of e-pharmacy services Alshammari et al. (2018).

Perceived usefulness is a critical factor that influences the adoption of e-pharmacy services. The literature review shows that perceived usefulness is a significant predictor of the intention to use e-pharmacy services among healthcare professionals and the general public. The review also highlights the importance of other factors such as perceived ease of use, perceived compatibility, perceived trust, and perceived security in influencing the adoption of e-pharmacy services.

2.2. Perceived ease of use:

The degree to which an individual believes e-pharmacy is easy to use and navigate.

According to a study by Martínez-Pérez et al. (2012), perceived usefulness and ease of use are positively associated with e-pharmacy adoption. Perceived ease of use is a critical factor that influences the adoption of e-pharmacy services. It refers to the user's perception of the degree of effort required to use the service effectively. Several studies have explored the relationship between perceived ease of use and e-pharmacy adoption. The usability and design of e-pharmacy websites also impact e-consumer behavior. Websites that are easy to navigate, have clear product descriptions, and offer a hassle-free checkout process are more likely to attract consumers.

A study [Yang and Yan (2019)] found that website design and usability significantly influence consumer behavior on e-pharmacy adoption [Alghamdi and Sreedharan (2021)] found that perceived ease of use was an important factor that influenced the adoption of e-pharmacy services among healthcare professionals in Saudi Arabia. The study found that healthcare professionals were more likely to adopt e-pharmacy services if they perceived them to be easy to use. The study also found that perceived ease of use had a significant positive effect on the intention to use e-pharmacy services.

Similarly, a study by Alomari et al. (2020) found that perceived ease of use was a significant predictor of the intention to use e-pharmacy services among healthcare professionals in Jordan. The study discovered that e-pharmacy services were more likely to be adopted by healthcare professionals if they considered they were user-friendly.

According to a different study by Khoja et al. (2017), the general Saudi Arabian public's adoption of e-pharmacy services was greatly influenced by perceived ease of use.

According to the study, if people thought e-pharmacy services were effortless to use, they were more likely to be adopted by the general public.

In addition, according to a study [Alshammari et al. (2018)], healthcare professionals in Kuwait adopted e-pharmacy services primarily due to perceived ease of use.

According to the study, healthcare professionals who believed e-pharmacy services were simple were more likely to use them. Overall, these studies highlight the importance of perceived ease of use in the adoption of e-pharmacy services. Healthcare professionals and the general public are more likely to adopt e-pharmacy services if they perceive them to be easy to use. E-pharmacy service providers should consider the user's perception of ease of use when designing and implementing their services to increase adoption rates.

2.3. Trust:

The extent to which an individual believes e-pharmacy is a trustworthy platform for purchasing medications and health products. A further important factor influencing e-consumer behavior toward the adoption of e-pharmacies is trust. According to a study by Raza et al. (2016), adoption of e-pharmacies is positively correlated with user confidence in e-pharmacy platforms.

An essential component of the uptake of e-pharmacy services is trust. It affects the user's attitude and intention to use these services. It is an estimate of the user's trust and confidence in the system. The idea of trust in connection to the adoption of e-pharmacies has been the subject of many research studies.

The study investigated into the variables influencing Jordan's adoption of e-pharmacy services. It was found that among healthcare professionals, the adoption of e-pharmacy services was significantly influenced by perceived trust. Perceived utility, a perception of ease of use, perceived compatibility, and actual risk were also revealed to be significant determinants of e-pharmacy service acceptance [Alomari et al.'s (2020)]

Explored the variables influencing the use of e-pharmacy services in Saudi Arabia in another study. According to the study, the general public's acceptance of e-pharmacy services was significantly influenced by perceived trust. Perceived risk, perceived simplicity of use, and a sense of effectiveness were also revealed to be significant determinants of adoption of e-pharmacy service [Khoja et al. (2017)].

The factors influencing Kuwaiti healthcare professionals' acceptance of e-pharmacy services were examined by [Alshammari et al. (2018)]. According to the study, a significant element influencing healthcare professionals' use of

e-pharmacy services was perceived trust. Perceived compatibility, a sense of ease of use, and perceived utility were also revealed to be significant determinants of e-pharmacy service consent.

In their 2017 study, Choi and Lee examined the variables influencing South Korea's uptake of mobile health applications, particularly those for e-pharmacies. According to the study, trust had a significant impact on how widely mobile health apps were adopted. Perceived danger, perceived ease of use, and overall usefulness were also revealed to be significant determinants of mobile health app adoption.

In conclusion, a key element influencing the use of e-pharmacy services is trust. The analysis of the literature demonstrates that among healthcare professionals and the general public, perceived trust plays a significant role in determining their propensity to utilise e-pharmacy services. The review also emphasises the significance of other elements in affecting the uptake of e-pharmacy services, including perceived risk, perceived compatibility, perceived utility, and perceived simplicity of use.

2.4. Convenience:

One major element influencing the uptake of e-pharmacy services is convenience. Convenience's influence in the adoption and use of e-pharmacy services in India and around the world has been the subject of numerous studies.

A study conducted in India by Das et al. (2020) investigated into the variables influencing Kolkata's adoption of e-pharmacy services. According to the survey, a significant factor influencing the uptake of e-pharmacy services was perceived convenience. Kaur et al. (2021) studied on the acceptance and use of e-pharmacy services in Punjab, India. According to the survey, a significant factor influencing the uptake of e-pharmacy services was perceived convenience. Particularly, it was discovered that elements like cost-effectiveness, home delivery, and simplicity of buying medications were significant in raising the uptake of e-pharmacy services in Punjab.

Another study by Jain et al. (2019) investigated the adoption and usage of e-pharmacy services in Delhi-NCR region of India. The study found that convenience was the most important factor that influenced the adoption of e-pharmacy services among the study participants. The study highlighted that factors such as ease of ordering medicines, time-saving, and availability of medicine information were important in increasing the adoption of e-pharmacy services in Delhi-NCR

The purpose of Wang et al. (2020)'s study was to take a peek at the variables influencing China's adoption of e-pharmacy services. The adoption of e-pharmacy services was found to be significantly impacted by convenience, according to the study. The survey also discovered that the ability to conveniently order from home, make payments easily, and receive speedy delivery were significant factors in the uptake of e-pharmacy services.

Hussain et al. (2021) investigated the variables influencing Pakistani consumers' adoption of e-pharmacy services in a different study. The adoption of e-pharmacy services was found to be strongly influenced by convenience, according to the study. The survey also discovered that providing a large selection of products available, ordering conveniently from home, and quick delivery were crucial elements to uptake e-pharmacies services.

A study by Simsek et al. (2020) aimed to investigate the factors that influence the adoption of e-pharmacy services in Turkey. The study found that convenience was a significant factor that influenced the adoption of e-pharmacy services. The study also found that the convenience of ordering from home, availability of a wide range of products, and fast delivery were important factors that influenced the adoption of e-pharmacy services.

Another study by Jadhav et al. (2020) explored the factors that affect the adoption of e-pharmacy services among consumers in Maharashtra, India. The study found that convenience was a significant factor that influenced the adoption of e-pharmacy services. The study also found that the convenience of ordering from home, availability of a wide range of products, and fast delivery were important factors that influenced the adoption of e-pharmacy services.

In a 2014 study, Rho et al. investigated at what factors affect the US market's use of e-pharmacy services. Perceived convenience was revealed to be a significant factor influencing older individuals' use of e-pharmacy services. Westerlund et al. (2016) looked into the uptake and application of e-pharmacy services in Sweden in another study. According to the survey, a significant factor impacting the use of e-pharmacy services was perceived convenience.
The purpose of Wang et al. (2020)'s study was to look at the variables influencing China's adoption of e-pharmacy services. The acceptance of e-pharmacy services was found to be significantly impacted by convenience, compared to

the study. The survey also discovered that the ability to conveniently order from home, make payments easily, and receive speedy delivery were significant factors in the uptake of e-pharmacy services.

Hussain et al. (2021) investigated the variables influencing Pakistani consumers' willingness to use e-pharmacy services in a different study. The widespread use of e-pharmacy services was found to be significantly impacted by convenience, according to the study. The survey additionally found that the ease of ordering products online, the availability of a large selection, and quick delivery were important variables influencing the uptake of e-pharmacy services.

The goal of a Simsek et al. (2020) study was to look at the variables influencing Turkey's adoption of e-pharmacy services. The adoption of e-pharmacy services was found to be significantly impacted by convenience, in accordance to the study. The survey also discovered that the ease of ordering products online, the availability of a large selection, and quick delivery were significant factors influencing the uptake of e-pharmacy services.

Another study by Jadhav et al. (2020) explored the factors that affect the adoption of e-pharmacy services among consumers in Maharashtra, India. The study found that convenience was a significant factor that influenced the adoption of e-pharmacy services. The study also found that the convenience of ordering from home, availability of a wide range of products, and fast delivery were important factors that influenced the adoption of e-pharmacy services.

Overall, these studies suggest that convenience is a key factor that impact the adoption of e-pharmacy services, regardless of the location or culture. The convenience of ordering from home, availability of a wide range of products, and fast delivery are important factors that can encourage consumers to adopt e-pharmacy services. In conclusion, convenience plays a significant role in the global and Indian acceptance of e-pharmacy services. Cost-effectiveness, accessibility, and ease of use are a few examples of perceived convenience. The research study highlights how essential convenience is to boosting e-pharmacy service adoption and usage, particularly among older persons and in rural locations.

2.5 Security and privacy:

The acceptance of e-pharmacy services is influenced by a number of issues, including security and privacy. When using these services, users need to feel confident that their personal and health-related information is safe and secure. An overview of studies that have looked into the idea of security and privacy for the adoption of e-pharmacies can be found in the literature review that followed.

The purpose of a study by Alghamdi and Sreedharan (2021) was to look at the variables affecting Saudi Arabian healthcare professionals' acceptance of e-pharmacy services. Perceived security and privacy were revealed to be significant determinants of e-pharmacy service uptake. The study also discovered that among healthcare professionals, the desire to use e-pharmacy services was significantly predicted by perceptions of perceived utility, compatibility, and simplicity of use.

Another study by Alomari et al. (2020) explored the factors that influence the adoption of e-pharmacy services in Jordan. The study found that perceived security and privacy were important factors that influenced the adoption of e-pharmacy services among healthcare professionals in Jordan. The study also found that perceived ease of use, perceived usefulness, perceived risk, and perceived trust were significant predictors of the intention to use e-pharmacy services.

A study by Khoja et al. (2017) aimed to investigate the factors that influence the adoption of e-pharmacy services in Saudi Arabia. The study found that perceived security and privacy were important factors that influenced the adoption of e-pharmacy services among the general public in Saudi Arabia. The study also found that perceived ease of use, perceived usefulness, and perceived trust were significant predictors of the intention to use e-pharmacy services.

Another study by Alshammari et al. (2018) aimed to explore the factors that influence the adoption of e-pharmacy services among healthcare professionals in Kuwait. The study found that perceived security and privacy were important factors that influenced the adoption of e-pharmacy services among healthcare professionals in Kuwait. The study also found that perceived ease of use, perceived usefulness, and perceived compatibility were significant predictors of the intention to use e-pharmacy services.

In conclusion, security and privacy are important factors that influence the adoption of e-pharmacy services. The literature review shows that perceived security and privacy are significant predictors of the intention to use e-pharmacy services among healthcare professionals and the general public. The review also highlights the importance of other factors such as perceived ease of use, perceived usefulness, perceived compatibility, and perceived trust in influencing the adoption of e-pharmacy services.

2.6. Availability and accessibility:

It is the extent to which an individual has access to e-pharmacy platforms and the availability of medications and health products on these platforms. Availability and accessibility are important factors influencing the adoption of e-pharmacy services. The following literature review provides an overview of studies that have explored these concepts for e-pharmacy adoption. A study by Gareeb and El Mahalli (2021) aimed to explore the factors influencing the adoption of e-pharmacy services among consumers in Saudi Arabia. The study found that availability and accessibility were important factors that influenced the adoption of e-pharmacy services. The study also found that the availability of a wide range of medicines and the accessibility of the service through mobile applications were important factors that influenced the adoption of e-pharmacy services.

Another study by Islam et al. (2020) explored the factors that influence the adoption of e-pharmacy services in Bangladesh. The study found that availability and accessibility were important factors that influenced the adoption of e-pharmacy services. The study also found that the availability of a wide range of medicines, the accessibility of the service through mobile applications, and the availability of home delivery services were important factors that influenced the adoption of e-pharmacy services.

A study by Mohanty et al. (2021) aimed to investigate the factors that influence the adoption of e-pharmacy services in India. The study found that availability and accessibility were important factors that influenced the adoption of e-pharmacy services. The study also found that the availability of a wide range of medicines, the accessibility of the service through mobile applications, and the availability of home delivery services were important factors that influenced the adoption of e-pharmacy services.

Another study by Mehta et al. (2019) aimed to explore the factors that influence the adoption of e-pharmacy services in India. The study found that availability and accessibility were important factors that influenced the adoption of e-pharmacy services. The study also found that the availability of a wide range of medicines, the accessibility of the service through mobile applications, and the availability of discounts and offers were important factors that influenced the adoption of e-pharmacy services.

In conclusion, availability and accessibility are important factors that influence the adoption of e-pharmacy services. The literature review shows that the availability of a wide range of medicines, the accessibility of the service through mobile applications, and the availability of home delivery services were important factors that influenced the adoption of e-pharmacy services. The review also highlights the importance of other factors such as discounts and offers in influencing the adoption of e-pharmacy services.

2.7. Demographic factors:

A consumer's behaviour with regard to the adoption of e-pharmacies can also be influenced by variables such as age, gender, income, education level, and health problems. A adoption of e-pharmacy services is also known to be influenced by demographic factors, like age, gender, income, education level, and past technological experience. This is a review of the relevant literature: Chen and Yuan's (2019) study sought to determine the variables influencing older Chinese adults' willingness to use e-pharmacy services. According to the study, older individuals' intentions to use e-pharmacy services were significantly predicted by factors such as age, education level, and earlier technological experience.

Another study by Goyal and Rahman (2019) explored the factors that influence the adoption of e-pharmacy services in India. The study found that age, education level, and income were significant predictors of the intention to use e-pharmacy services among consumers in India.

A study by Al-Sharafi and Al-Hujran (2019) aimed to investigate the factors that influence the adoption of e-pharmacy services in Oman. The study found that age and education level were significant predictors of the willingness to use e-pharmacy services among consumers in Oman.

A study by Ghezzi et al. (2017) explored the factors that influence the adoption of e-pharmacy services in Italy. The study found that age and gender were important predictors of the intention to use e-pharmacy services among consumers in Italy.

In conclusion, demographic factors such as age, gender, income, and education level are important factors that influence the adoption of e-pharmacy services. Older adults, those with lower education levels, and those with lower income may be less likely to adopt e-pharmacy services. Previous experience with technology may also be an important factor to consider.

2.8. Social influence:

The way in which to which an individual's adoption of e-pharmacies is impacted by the beliefs and actions of others. One significant aspect influencing the uptake of e-pharmacy services is social influence. The views and advice of close friends, relatives, and other influential individuals can have a big impact on a person's mindset and decision about using online pharmacies. An overview of studies that have looked into the idea of social influence for e-pharmacy adoption can be discovered in the literature review that provides.

One study by Khechine et al. (2020) aimed to investigate the impact of social influence on the adoption of e-pharmacy services in Tunisia. The study found that social influence had a significant positive effect on the intention to use e-pharmacy services among users. The study also found that the opinion of family and friends played a significant role in the decision-making process of users.

Bani-Melhem et al. (2019) investigated the impact of social factors on the usage of e-pharmacy services in Jordan in a different study. The intention to use e-pharmacy services was found to be significantly positively impacted by social influence, including family and friend opinions. Additionally, the study discovered that intention to utilise e-pharmacy services was more influenced by social influence than by perceived usefulness or convenience of use.

Chen et al.'s (2019) study sought to determine how social norms affected China's adoption of e-pharmacy services. The study showed that consumers' intentions to use e-pharmacy services were significantly positively impacted by social norms. The study also discovered that the intention of using e-pharmacy services was significantly influenced by subjective norms, which reflect the perceived social pressure to use these services.

To sum up, social influence plays a significant role in determining the extent to which e-pharmacy services are adopted. The study of the literature demonstrates that social impact significantly increases users' intentions to take advantage of e-pharmacy services. The review further emphasises how important subjective standards and the opinions of family and friends are in determining whether or not e-pharmacy services are accepted.

2.9. Perceived risk:

The meta-analysis could investigate the relationship between consumers' perceived risk and their likelihood of adopting e-pharmacy services. It could also investigate how different types of risk, such as security and quality, affect e-consumer behavior. Perceived risk are another important factor that influences the adoption of e-pharmacy services. It refers to the perception of potential harm or loss that may result from using these services. A summary of studies that have focused into the idea of perceived risk for the adoption of e-pharmacies can be accessed in the literature review that follows.

In one study, Alomari et al. (2020) investigated the variables influencing Jordan's adoption of e-pharmacy services. According to the study, among Jordanian healthcare professionals, perceived risk significantly predicted their desire to use e-pharmacy services. Perceived trustworthiness, perceived compatibility, perceived simplicity of use, and perceived utility were also revealed to be significant determinants of e-pharmacy service acceptance.

[Khoja et al. (2017)] conducted another study with the goal of determining what factors affect Saudi Arabia's e-pharmacy services' acceptance.

According to the study, among Saudi Arabia's overall population, perceived risk significantly predicted their desire to use e-pharmacy services. A study by Ahmad et al. (2021) sought to investigate the factors that influence the adoption of e-pharmacy services in Pakistan. The study also indicated that perceived utility, perceived ease of use, and perceived trust were significant factors that influenced the adoption of e-pharmacy services. According to the study, customers in Pakistan's tendency to make use of e-pharmacy services was significantly predicted by their

perception of risk. Perceived trustworthiness, perceived simplicity of use, and perceived utility have all been shown to be significant determinants of e-pharmacy service acceptance.

In conclusion, perceived risk is an important factor that influences the adoption of e-pharmacy services. The literature review shows that perceived risk is a significant predictor of the intention to use e-pharmacy services among healthcare professionals and the general public. The review also highlights the importance of other factors such as perceived usefulness, perceived ease of use, and perceived trust in influencing the adoption of e-pharmacy services.

2.10. Health literacy:

Adoption of e-pharmacy services requires careful consideration of health literacy. Online or mobile app-based pharmacy services are referred to as e-pharmacy. It covers services including digitised prescription management, online pharmacy consultations, and medicine purchase and delivery. Health literacy is a willingness to obtain, understand, and apply medical knowledge to make informed decisions about one's own health. In order for patients to make successful use of e-pharmacy services, they must possess sufficient health literacy.

The ability to access, absorb, and understand fundamental health information and services to enable people to make informed health decisions is known as health literacy. Understanding the connection between health literacy and e-pharmacy usage is becoming more and more crucial as e-pharmacy adoption rises. We will look at studies that investigate the effect of health literacy on the uptake of

e-pharmacies in this review of the literature.

Understanding medication information: Patients need to understand the information provided about their medications, including dosage, administration instructions, and potential side effects. This information is typically provided through e-pharmacy services, so patients must have sufficient health literacy to understand it.

Navigating e-pharmacy platforms: Patients need to be able to navigate e-pharmacy platforms, which can be complex and may require some technical knowledge. Patients with inadequate health literacy may find it difficult to use these platforms, which may make it more difficult for them to obtain prescription drugs.

Communicating with pharmacists: E-pharmacy services may include online consultation with pharmacists, which requires patients to be able to communicate effectively about their health concerns and medication needs. Patients with low health literacy may have difficulty communicating with pharmacists, which could impact the quality of care they receive.

People with limited health literacy were less likely to utilise the internet to get health information, according to a study by Kutner et al. (2006). A study by Diviani et al. (2015), which discovered that low health literacy was connected to lower e-health literacy, which was associated to lower e-pharmacy adoption, confirms this conclusion.

Marra et al. (2018) discovered in another study that e-pharmacy services were less likely to be employed by people with low health literacy. The authors speculate that this might be the result of a lack of faith in the security and effectiveness of online pharmacies or a lack of confidence in implementing online pharmacy services. Some research indicates that those with greater health literacy could encounter obstacles when attempting to utilise e-pharmacies. Higher health literacy has been associated to anticipates about the security and privacy of personal information when using online pharmacies, according to the study[Zhang et al. (2014)]

Overall, the literature suggests that health literacy plays an important role in e-pharmacy adoption. While those with greater health literacy levels could worry about security and privacy, those with lower health literacy levels might have trouble obtaining and using e-pharmacy services. These results indicate that e-pharmacy providers had to think about strategies to overcome these obstacles, like supplying unambiguous and simple-to-read information about their offerings and establishing in place strong privacy and security safeguards. In order to understand more about the variables influencing e-pharmacy adoption across various demographics and the link between health literacy and e-pharmacy adoption, further research is required.

2.11. Regulatory framework:

E-pharmacy refers to the sale of pharmaceutical products and medical devices over the internet. The regulatory framework for e-pharmacy varies from country to country. In this literature review, we will examine studies that explore the regulatory framework related to e-pharmacy adoption in India and abroad. In India, the regulatory

framework for e-pharmacy has been evolving over the years. In 2015, the Drugs and Cosmetics Rules were amended to allow for the sale of drugs through e-pharmacy. However, concerns about the safety and authenticity of medicines sold online led to a ban on e-pharmacy by the Delhi High Court in 2018. The ban was later lifted in 2019, subject to certain conditions. A study by Dhiman et al. (2021) found that the regulatory framework for e-pharmacy in India is still evolving and lacks clarity. The authors suggest that there is a need for clear guidelines to ensure the safety and efficacy of e-pharmacy services. The Drugs and Cosmetics Act of 1940 and the Drugs and Cosmetics Rules of 1945 govern the sale and distribution of drugs in India. In 2015, the Drugs and Cosmetics Rules were amended to allow for the sale of drugs through e-pharmacy. However, concerns about the safety and authenticity of medicines sold online led to a ban on e-pharmacy by the Delhi High Court in 2018.

A study by Kumar and Kumar (2018) found that the regulatory framework for e-pharmacy in India is still evolving and lacks clarity. The authors contend that in order to guarantee the effectiveness and safety of e-pharmacy services, certain rules and regulations are required.

In 2019, the ban on e-pharmacy was lifted by the Madras High Court, subject to certain conditions. The conditions include obtaining a license from the state government, maintaining a record of all sales, and complying with the Drugs and Cosmetics Act and Rules. A study by Dubey et al. (2018) found that the regulatory framework for e-pharmacy in India needs to be strengthened to ensure the safety and authenticity of drugs sold online. The authors suggest that the government should take measures to regulate the e-pharmacy sector, including establishing a regulatory body to oversee e-pharmacy operations and setting up a centralized database of licensed e-pharmacies.

In the United States, the regulatory framework for e-pharmacy is governed by the Food and Drug Administration (FDA). The FDA requires e-pharmacies to comply with the same regulations as traditional brick-and-mortar pharmacies, including obtaining a valid prescription from a healthcare provider and ensuring the safety and authenticity of drugs sold online.

The European Union, e-pharmacy is regulated by the European Medicines Agency (EMA). The EMA requires e-pharmacies to comply with the same regulations as traditional pharmacies, including obtaining a valid prescription from a healthcare provider and ensuring the safety and authenticity of drugs sold online.

A study by Peirce et al. (2018) found that the regulatory framework for e-pharmacy in different countries varies in terms of the level of regulation, the requirements for obtaining a prescription, and the standards for ensuring the safety and authenticity of drugs sold online.

Overall, the literature suggests that the regulatory framework for e-pharmacy in India is still evolving and needs to be strengthened to ensure the safety and efficacy of e-pharmacy services. Clear guidelines and regulations are needed to regulate the e-pharmacy sector and ensure the safety and authenticity of drugs sold online.

3. Research Gap:

Recent years have seen a notable expansion in the e-pharmacy sector, especially in reference to the COVID-19 pandemic. However, there is still a research gap in understanding e-consumer behavior towards e-pharmacy adoption. Here are some potential researches identified by many scholars also (Kumar and Meena (2019); Palaian et.al (2018); Bajaj and Goyal (2019),

Satpathy and Pattnaik (2018); Prakash et.al., (2021); Manjunath and Raghavendra (2019); Nair and Kumar (2020); Kshirsagar et.al.,(2015)) Limited research on the adoption of E-pharmacy in India: While there has been some research on the adoption of E-pharmacy in other countries, there is limited research on the adoption of E-pharmacy in India, especially in rural area.

Consumer Trust: One of the key challenges facing e-pharmacies is establishing consumer trust in the safety and reliability of the services they offer. Research could investigate how e-consumers perceive the safety and reliability of e-pharmacy services, and how these perceptions impact their adoption of these services.

Privacy and Security: Customers might be reluctant to reveal sensitive health information online due to growing concerns about security and privacy. How e-pharmacies may strengthen their privacy and security protocols to increase customer confidence and adoption could be an aspect of a research gap.

Consumer Demographics: E-pharmacy adoption may differ across different age groups, gender, and income levels. Research could investigate how demographic factors influence e-consumer behavior towards e-pharmacy adoption.

Website Design and Usability: The usability of e-pharmacy websites may also impact consumer behavior towards adoption. A research gap could investigate how website design, functionality, and ease of use impact e-consumer adoption behavior.

Marketing Strategies: E-pharmacies need to develop effective marketing strategies to attract and retain customers. A research gap could investigate how e-pharmacies can optimize their marketing strategies to increase e-consumer adoption behavior.

Lack of knowledge about the elements influencing the adoption of e-pharmacies: It is important to comprehend the factors influencing the adoption of e-pharmacies among the various demographic groups in India, such age, income, education level, and geographic location.

There is limited information on how e-pharmacies affect medical outcomes. Further research is necessary to determine how e-pharmacy affects healthcare outcomes in India, even if some studies on this topic have been conducted in other nations.

Limited study on the moral and legal concerns surrounding e-pharmacies: Further investigation is required into the moral and legal problems surrounding e-pharmacies in India, including issues with regulation, patient privacy, and the avoidance of fake medications.

Minimal study on social media's role in encouraging the use of e-pharmacies: Though social media may be a significant factor in encouraging the adoption of e-pharmacies in India, not much is known about the impact of social media efforts in doing so.

Consumer Behaviour During the COVID-19 epidemic: The adoption of e-pharmacies has been greatly affected by the COVID-19 epidemic. A study gap may look into how the pandemic has affected e-consumer behaviour towards e-pharmacy adoption and how these changes could influence e-pharmacy services moving forward.

Overall, these research gaps highlight the need for more research on the adoption of E-pharmacy in India, as well as the factors that influence E-pharmacy adoption and the impact of E-pharmacy on healthcare outcomes. Additionally, there is a need for more research on the ethical and legal issues surrounding E-pharmacy in India, as well as the role of social media in promoting

E-pharmacy adoption.

4. Proposed research methodology

To study e-pharmacy adoption, a research methodology can be proposed that takes into account various factors that influence the adoption of e-pharmacy by customers. The following is a suggested research model:

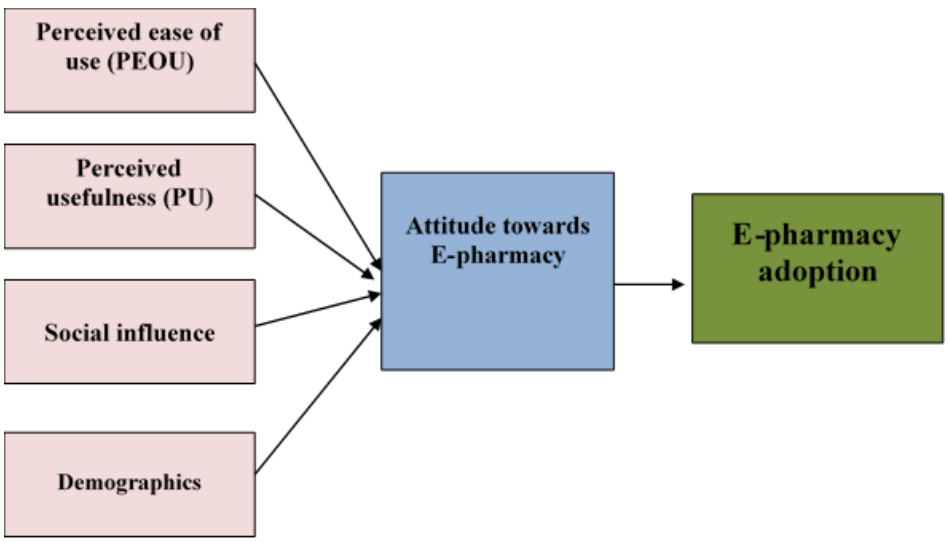

Figure 1 : Suggestive research methodology

Sources: (Davis (1989); Gefen *et al.*,(2003); Fishbein and Ajzen (1975); Venkatesh *et al.,* (2003); Chen and Xie (2008); Huang and Chen (2017); Bélanger *et al.*,(2002);
Hsieh and Cho (2016))

Independent Variables:

• Perceived ease of use (PEOU): This measures how comfortable people believe using online pharmacies to be.
• Perceived usefulness (PU): This is an indicator of how beneficial people believe making use of e-pharmacies is in fulfilling their needs.
• Trust: It evaluates people's level of confidence in E-pharmacy's security and privacy.
• Social influence: This is the extent to which people's adoption of e-pharmacy is impacted by others, including friends and family.

Dependent Variable:

- E-pharmacy adoption: This refers to the degree to which individuals intend to adopt E-pharmacy for their healthcare needs.

Mediating Variable:

• Attitude towards e-pharmacy: This describes how people feel about e-pharmacy, whether it be positively or negatively.

Moderating Variables:

- Age: This refers to t`he age of the individuals using E-pharmacy, which may affect their perception and adoption of the technology.
- Education level: This refers to the education level of the individuals using E-pharmacy, which may affect their perception and adoption of the technology.
- Income level: This refers to the income level of the individuals using E-pharmacy, which may affect their perception and adoption of the technology.

Conclusion:

From the above Review of Literature (ROL) we are able to take up further research study using the above proposed research methodology and identified hypothesis in the field of e-pharmacy.

The research hypothesis may be that attitudes on e-pharmacy are positively impacted by perceived benefits, ease of use, trust, and social influence, all of which have a positive impact on e-pharmacy uptake. The extent to which the independent and dependent variables are related may be influenced by the moderating variables. The research methodology could involve collecting data through a survey questionnaire, using a Likert scale to measure the different variables. Proposed statistical analysis techniques such as structural equation modelling (SEM) or regression analysis could be used to analyze the data and test the research hypothesis.

Limitations And Scope Of Study

The study is limited to literature review to identify the variables which influence the consumer behaviour towards adoption of online pharmacies in India. The Study provides a theoretical knowledge on different aspects which influence in consumer behaviour. Further research needs to be done in terms of identification of geographical area for data collection and analysing the data in statistical tools. Additionally, the study's scope is restricted to factors influencing the consumer behaviour leaving room for similar investigations in various unidentified various in the e-pharmacy industry. The study's conclusions should be interpreted with these limitations in mind, recognizing the potential variations in consumer behavior across diverse geographic locations and e-pharmacy experience. Future studies could adopt for primary data samples,

e-pharmacy product and services for a more comprehensive understanding of consumer preferences and behaviors.

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