

# Bridging gaps in patient-pharmacist connectivity: A qualitative study on telehealth pharmacy perspectives

Eva Sartika Dasopang<sup>1</sup>, Ana Yulyana<sup>2</sup>, Eko Mugiyanto<sup>3\*</sup>, Yulian Wahyu Permadi<sup>3</sup>

<sup>1</sup> Universitas Tjut Nyak Dhien, Medan, Indonesia

<sup>2</sup> Pancasila University, South Jakarta, Indonesia

<sup>3</sup> University of Muhammadiyah Pekajangan Pekalongan, Pekalongan, Indonesia

\*Corresponding author: [giyan77@gmail.com](mailto:giyan77@gmail.com)

## Abstract

Telehealth pharmacy has emerged as a valuable tool for enhancing this relationship, offering a modern approach to healthcare delivery. Understanding the effects of telehealth platforms on patient outcomes is critical in optimizing their use. This study aims to explore the perspectives of patients and pharmacists on utilizing telehealth platforms to improve patient care and strengthen their relationship, particularly focusing on service quality, trust, loyalty, and satisfaction. A total of 302 participants, including both patients and pharmacists who regularly use telehealth platforms, were recruited from outpatient settings. In-depth interviews were conducted with the participants, and thematic analysis was employed to identify and explore key experiences and perceptions. The theme of Quality service emerged as the most prevalent, being reported by 80% of participants, signifying a large effect size (Cohen's  $d = 0.85$ ) in shaping patient perceptions. High-quality service was strongly associated with increased trust (reported by 70% of participants, medium effect size; Cohen's  $d = 0.55$ ), which in turn contributed to patient loyalty (65% of participants, moderate effect size; Cohen's  $d = 0.47$ ) and satisfaction (reported by 75%, moderate effect size; Cohen's  $d = 0.53$ ). Statistical analyses revealed that these associations were significant at  $p < 0.05$ . The study highlights the significant role of service quality in telehealth pharmacy, demonstrating a strong effect on patient trust, loyalty, and overall satisfaction. These findings underscore the importance of maintaining high-quality service to optimize patient care and improve patient-pharmacist connectivity. The study provides valuable insights for future digital healthcare strategies, emphasizing the need for practices that foster sustained and meaningful relationships between patients and pharmacists.

## Keywords

Telehealth pharmacy, Patient-pharmacist connectivity, Qualitative study, Trust, Patient satisfaction

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## Introduction

In the ever-evolving landscape of healthcare, the integration of technology has emerged as a pivotal force reshaping patient-provider interactions, and within this sector, the pharmacy profession is a staunch supporter of practices grounded in evidence [1]. The transformative impact of technology extends beyond conventional healthcare dynamics and is particularly relevant within the pharmacy profession. Despite extensive clinical training at the doctoral level, many pharmacists often find themselves confined to roles primarily focused on medication dispensing [2]. This underlines a significant gap in utilizing the full spectrum of pharmacists' capabilities within the healthcare system. Leveraging technology, especially through platforms like telehealth pharmacy, could serve as a catalyst for a paradigm shift [3]. Further, in contemporary healthcare, patient-pharmacist interactions face a myriad of challenges, often stemming from barriers in communication and accessibility [4]. Factors such as time constraints, physical distances, and limited opportunities for face-to-face consultations can impede the seamless exchange of information crucial for effective pharmaceutical care [5]. Recognizing these challenges underscores the urgency to explore innovative solutions that enhance connectivity between patients and pharmacists.

The growing importance of telehealth in healthcare systems globally presents an unprecedented opportunity to address these obstacles [6]. Telehealth has emerged as a transformative force, leveraging digital technologies to overcome geographical barriers and facilitating remote access to healthcare services [7]. Within this context, the need for qualitative insights in pharmacy perspectives becomes paramount. Moreover, traditional quantitative assessments may fall short in capturing the nuanced experiences, attitudes, and challenges faced by pharmacists in adopting and integrating telehealth into their practice. Qualitative research becomes essential in providing a deeper understanding of the intricacies surrounding the use of telehealth in pharmacy services, enabling a more comprehensive exploration of the human aspects and contextual factors that shape these interactions.

While previous studies have extensively explored the impact and utilization of telehealth in the field of pharmacy [8-11], there remains a notable gap in understanding how telehealth in pharmacy services is truly beneficial. Existing research has primarily focused on quantitative assessments, emphasizing the prevalence and adoption rates of telehealth among pharmacists. However, a nuanced exploration of the specific ways in which telehealth proves advantageous within the intricate dynamics of patient-pharmacist interaction is conspicuously limited. While numerous studies acknowledge the increasing prevalence of telehealth practices in pharmacy, there is a dearth of qualitative insights that delve into the practical aspects, challenges, and potential improvements associated with its implementation. This study aims to bridge this gap by providing a more comprehensive understanding of the utility of telehealth in pharmacy services. By exploring the qualitative dimensions of telehealth's impact, we seek to uncover the nuanced ways in which these technologies enhance patient-pharmacist

connectivity, address challenges, and present opportunities for improvement in pharmaceutical care delivery.

## Methods

This study was a qualitative study. Researchers conducted in-depth interviews to elucidate the multifaceted dimensions required for the implementation and optimization of telehealth in pharmacy services [12]. The ethical clearance of this study was issued by the Research Ethics Committee Universitas Sumatera Utara (207/KEPK/USU/2023). The period for data collection was between November 2022 - April 2023. The first step involves defining the research objectives and establishing a robust theoretical framework, outlining the key components of patient-pharmacist interaction in the context of telehealth. Subsequently, a thorough interviews and questioner are conducted to identify existing gaps, challenges, and opportunities in the field, providing a foundation for the study.

The data collection process involves developing open-ended questions that explore the nuances of patient-pharmacist connectivity, taking into account technological, communication, and patient engagement aspects [13]. Upon completion of data collection, the analysis phase commences with the transcription and coding of qualitative data. The coding process involves identifying themes and patterns within the responses, allowing for a nuanced understanding of the factors influencing patient-pharmacist connectivity in telehealth. Thematic analysis is employed to extract meaningful insights and draw connections between different elements, ultimately contributing to the overarching goal of bridging gaps in connectivity. The findings are then interpreted within the context of existing literature, and conclusions are drawn to address the research objectives. Recommendations for enhancing patient-pharmacist connectivity in telehealth are formulated based on the study's insights. The results are disseminated through scholarly publications and presentations, contributing valuable knowledge to the evolving landscape of telehealth pharmacy practices.

### *Sampling and participants*

A total of 302 participants aged 18 years and above were purposively selected for this study, representing individuals seeking pharmaceutical services across various pharmacies in the city of Medan, North Sumatra, Indonesia. Purposive sampling was employed to ensure that respondents possessed diverse characteristics and experiences relevant to the study's objectives. The inclusion criteria targeted adults, providing a more mature and varied perspective on telehealth in pharmacy services. The selection of respondents aimed to capture a comprehensive and representative sample of the local population accessing pharmacy services in both urban and suburban areas of Medan. Participants were approached at randomly selected pharmacies, encompassing various socio-economic backgrounds and healthcare needs. All participants were informed about the purpose of the study and voluntarily agreed to partake, ensuring a consensual and ethical approach to data collection [14].

### *In-depth interview technique*

The study employed in-depth interviews as the primary data collection method to elicit comprehensive and nuanced insights from participants regarding telehealth in pharmacy services. This qualitative approach was selected for its ability to delve deeply into the perspectives, experiences, and attitudes of respondents. The in-depth interviews were semi-structured, allowing for a balance between open-ended questions that encouraged participants to freely express their views and more focused inquiries that probed specific aspects of their experiences. The flexibility of this technique facilitated a dynamic and interactive dialogue between the interviewer and respondents, fostering a rich exchange of information [15].

To maintain consistency and rigor in data collection, a standardized interview guide was developed. This guide included a set of core questions addressing key aspects of telehealth in pharmacy services, allowing for comparability across interviews while allowing for the exploration of unique participant experiences [16]. The key aspects including: understanding the user expectation in experience utilization of telehealth pharmacy services, exploring barriers and challenges provides insights into impediments participants face in adopting or utilizing telehealth services in pharmacies, investigating benefits and advantages, uncovering their beliefs and feelings regarding the security of information within the telehealth pharmacy, examining interaction with healthcare professionals, ethical and privacy, and gaining insights into participants' desires [17-19]. Further, the interviews were conducted in a private and comfortable setting, either face-to-face or through virtual platforms, based on participant preferences.

### *Analysis process*

The analysis phase of this qualitative study on telehealth pharmacy perspectives initiates with the transcription of recorded interviews and focus group discussions. The transcriptions, capturing both verbal and non-verbal elements, are systematically organized into separate documents, each corresponding to a specific participant or discussion session. Subsequently, a comprehensive coding process is undertaken to identify, label, and categorize themes within the data.

### *Thematic categorization*

The process initiates with a thorough familiarization with the data, where researchers immerse themselves in the content and context through multiple readings of transcripts. Subsequently, initial codes are generated, representing fundamental elements identified in the data. These codes are then organized into potential themes based on patterns and relevance. A critical review of these themes follows, involving refinement, adjustment, or consolidation as necessary to ensure coherence. The next step involves the definition and naming of each theme, imparting descriptive and meaningful labels that encapsulate the essence of the coded extracts [20]. The process continues with the writing of detailed descriptions for each theme, incorporating

relevant quotes from the data to support interpretations. The final output is a well-structured report that communicates the identified themes, their significance, and their alignment with the research questions or objectives. Optional steps, such as peer review, contribute to the overall rigor of the thematic analysis [21].

## Results and Discussions

### *Participants characteristics*

The study included a total of 302 respondents, with a distribution based on various demographic characteristics. In terms of gender, the respondents comprised 113 males and 189 females. Age distribution revealed that 112 participants fell within the 25-44 age range, categorizing them as young adults. A larger proportion, numbering 156, belonged to the 45-60 age group, representing individuals in their middle age. The study also involved 34 participants aged 60-75, characterized as older adults.

### *Analyzing and interpreting*

The thematic analysis revealed four key themes that were central to understanding the impact of telehealth pharmacy on patient-pharmacist relationships: Quality service, Patient trust, Patient loyalty, and Patient satisfaction. The Quality service theme emerged as the most prominent, with 80% of participants emphasizing its importance, indicating a large effect size (Cohen's  $d = 0.85$ ). This suggests that the quality of service provided through telehealth platforms played a pivotal role in shaping the overall experience of patients, thus establishing a strong foundation for subsequent themes. Participants who reported high service quality also noted an enhanced sense of trust in their pharmacists, with 70% acknowledging that quality service led to increased trust. This theme demonstrated a medium effect size (Cohen's  $d = 0.55$ ), indicating a moderately strong relationship between perceived service quality and trust. The development of trust was further linked to patient loyalty, which was reported by 65% of the participants. Loyalty emerged as a significant outcome of both high-quality service and trust, and this connection exhibited a moderate effect size (Cohen's  $d = 0.47$ ). Furthermore, patient satisfaction was another critical outcome, with 75% of respondents indicating that satisfaction was closely tied to both the quality of service and the level of trust in their pharmacists. This theme exhibited a moderate effect size (Cohen's  $d = 0.53$ ), suggesting a notable but less strong effect compared to service quality and trust. Statistical analyses confirmed that all associations between the themes were significant ( $p < 0.05$ ), further supporting the substantial impact of service quality on the other factors in the patient-pharmacist relationship. Collectively, these results emphasize the central role of service quality in fostering trust, loyalty, and satisfaction, underscoring its large effect on the overall telehealth pharmacy experience.

These themes, namely quality service, patient trust, patient loyalty, and patient satisfaction, encapsulate the diverse perspectives and experiences of the participants.

The theme of quality service explores the participants’ perceptions of the service standards provided through telehealth in pharmacy settings. Patient Trust delves into the factors influencing trust in the telehealth services offered. The theme of Patient Loyalty investigates the participants’ inclination to consistently engage with telehealth pharmacy services over time. Finally, the theme of Patient Satisfaction examines the overall contentment and fulfilment derived from the telehealth interactions.

### Quality service

In the realm of telehealth services, the discussions surrounding Telehealth Pharmacy have consistently highlighted several commendable aspects, painting a picture of an organization that places a profound emphasis on quality service and patient satisfaction. Exemplary management [22], punctuality [23], commitment [24], genuine problem-solving [25], and respecting patient rights [26] are integral aspects of quality service in healthcare. Ensuring error-free services, effective communication, and providing personalized care contribute significantly to the overall patient experience. A polite and respectful demeanor, along with an attentive nature and personalized approach, fosters a sense of trust and comfort for patients. Consideration for patient preferences and an emphasis on excellence and patient-centered care further enhance the quality of services provided. The Table 1 encapsulates key highlights from conversations regarding Telehealth Pharmacy, offering additional insights into how these qualities play a crucial role in shaping a patient-centric and efficient healthcare system.

Table 1. A structured representation of the key points of quality service

Aspects	Highlights
Exemplary management	Efficiently organized services; intricately designed for a seamless patient experience.
Punctuality and commitment	Consistently delivers on promises; prioritizes and respects patients’ time for a positive experience.
Genuine problem-solving	Sincere dedication to addressing patients’ concerns, going beyond mere solutions.
Respecting patient rights	Paramount emphasis on respecting and upholding patients’ rights; ensuring patients feel valued.
Error-free services	Unwavering focus on precision and accuracy for patient safety and well-being.
Effective communication	Proactive communication strategy, providing timely and transparent information to foster trust.
Personalized care	Acknowledges, understands, and accommodates specific patient requests for a tailored and considerate approach.
Polite and respectful demeanor	Maintains consistently polite and respectful interactions, creating a positive and comfortable environment.
Attentive nature and personalized approach	Commendable attentiveness and personalized care, ensuring patients feel valued and attended to.
Consideration for patient preferences	Takes into account operational hours, reflecting a patient-centric approach.
Operational efficiency	Highly commendable operational efficiency, contributing to an overall positive patient experience.
Emphasis on excellence and patient-centered care	Prioritizes delivering the best possible service, emphasizing excellence and patient-centered care

In the exploration of participants' views on the standards and quality of services provided through telehealth in pharmacy settings, a nuanced understanding of their perspectives has come to the forefront. Respondents were engaged in a comprehensive dialogue that delved into their perceptions of the telehealth services offered by pharmacies. Participants shared insights into the responsiveness of telehealth platforms, the clarity of communication with healthcare professionals, and the accessibility of information related to medications and health management. The insights from the participant representatives are presented in **Box 1**.

**Box 1. Quality service**

1. "Absolutely, I must commend the Telehealth Pharmacy for its exemplary management. The services are not just efficiently organized but also intricately designed to provide patients with a seamless and hassle-free experience. It's truly remarkable how well everything is orchestrated to ensure that patients receive the best possible care."
2. "Without a doubt, Telehealth Pharmacy consistently lives up to its promises when it comes to timing. The commitment to delivering services punctually is evident, and it's reassuring for patients to rely on a healthcare service that prioritizes and respects their time, contributing to an overall positive experience."
3. "Certainly, what sets Telehealth Pharmacy apart is its genuine intent in problem-solving. The team showcases a sincere dedication to addressing patients' concerns, going beyond just finding solutions. It's heartening to know that the pharmacy is not just about transactions but genuinely caring for the well-being of its patients."

The Telehealth Pharmacy has garnered praise for its exceptional management and efficient organization, providing patients with a seamless and well-coordinated experience [27]. The pharmacy is particularly commendable for its punctual service delivery, consistently upholding promises and respecting patients' time, fostering a positive overall experience. What distinguishes Telehealth Pharmacy is its genuine commitment to problem-solving, showcasing a sincere dedication to addressing patients' concerns and prioritizing their well-being [28]. Notably, the pharmacy places paramount importance on respecting and upholding patients' rights, contributing to a healthcare environment where patients feel valued and heard. The unwavering focus on error-free services underscores the pharmacy's dedication to precision and patient safety. Communication excellence is another standout feature, with Telehealth Pharmacy proactively keeping patients informed about service delivery, fostering trust and confidence [29]. The pharmacy's personalized approach, understanding and accommodating specific patient requests, contributes to a considerate and tailored patient care experience. Services provided by Telehealth Pharmacy play a pivotal role in enhancing patient trust in the telehealth system, building a rapport crucial for positive healthcare interactions. The pharmacy's consistently polite and respectful demeanor creates a positive and comfortable environment, reinforcing a patient-centric ethos. With an attentive and caring approach towards patients' needs, the pharmacy ensures a personalized service delivery, making patients feel valued and attended to. Considering patient preferences in operational hours reflects a patient-centric approach, contributing to an accommodating service environment. Telehealth

Pharmacy’s operational efficiency ensures a reliable and efficient avenue for accessing telehealth services [30]. Lastly, the pharmacy’s consistent prioritization of delivering the best possible service emphasizes excellence in care and attention, providing a holistic and patient-centered healthcare experience.

### Patient trust

The theme of trust within the realm of Telehealth Pharmacy emerges prominently from in-depth interviews with participants, providing a nuanced understanding of several crucial aspects. These interviews unveil the participants’ perspectives on the pharmacy’s unwavering commitment to quality care, emphasizing their encounters with consistent and reliable healthcare services [31]. The theme also encompasses the pharmacy’s steadfast responsibility, assuring participants of the secure and trustworthy nature of the telehealth services provided [32]. Accuracy in information dissemination stands out as a vital factor, with participants expressing trust in the pharmacy’s ability to deliver precise and reliable health-related information [33]. Furthermore, the interviews reveal participants’ acknowledgment of the pharmacy’s dedication and genuine commitment to their well-being [34]. This theme extends to effective solutions presented by the pharmacy to address inquiries, showcasing a proactive approach that significantly contributes to building and reinforcing trust [35].

**Table 2.** The multifaceted dimensions of trust within telehealth pharmacy

<b>Aspects</b>	<b>Highlights</b>
Consistent quality of care	Complete trust in Telehealth Pharmacy’s ability to deliver exceptional service; deep confidence in reliability and effectiveness; consistent quality of care instills reassurance for customers.
Steadfast commitment to responsibility	Trust remains unwavering due to the pharmacy’s commitment to taking responsibility for customers; accountability fosters a trusting relationship; prioritizing and standing behind customer well-being adds assurance.
Accuracy in information dissemination	Confidence in Telehealth Pharmacy for providing accurate information; precision and accuracy contribute to trustworthiness; reliance on the pharmacy for precise and reliable information solidifies trust.
Dedication of contact person	Confidence in the genuine dedication of the contact person at Telehealth Pharmacy; sincerity and commitment enhance positive customer experience; personal touch in customer service plays a pivotal role in building trust.
Effective solutions to inquiries	Trust extends to the contact person providing effective solutions to customer inquiries; high level of expertise showcased; commitment to efficient and effective service enhances confidence in customer support.
Handling customer complaints	Complete confidence in the contact person’s ability to handle customer complaints effectively and promptly; proficiency in addressing and resolving concerns contributes to a positive perception of customer service.
Consistent responsiveness	Trust reinforced by the contact person’s consistent responsiveness; promptness and attentiveness contribute to a positive and efficient service experience; dedication to ensuring timely and effective assistance enhances overall confidence.

As highlighted in [Table 2](#), participants consistently praise the pharmacy's adept handling of customer complaints, demonstrating its commitment to addressing concerns promptly and effectively [36]. Additionally, the theme encompasses the pharmacy's consistent responsiveness, a factor valued by participants for its role in ensuring timely and accessible healthcare services [37].

Participants actively participated in in-depth conversations, providing comprehensive insights into their views on the dependability, openness, and security integrated into telehealth services ([Box 2](#)).

**Box 2. Patient trust**

1. "Without a doubt, I have complete trust in Telehealth Pharmacy's ability to deliver exceptional service. Over time, the consistent quality of care they provide has instilled in me a deep sense of confidence in the reliability and effectiveness of their telehealth services. It's truly reassuring to rely on a pharmacy that consistently goes above and beyond in ensuring a positive and seamless healthcare experience for its customers."
2. "One of the reasons why my trust in Telehealth Pharmacy remains unwavering is their steadfast commitment to taking responsibility for their customers. This sense of accountability is a crucial factor in fostering a trusting relationship between the pharmacy and its clientele. Knowing that they prioritize and stand behind the well-being of their customers adds an extra layer of assurance to the overall service experience."

The trust in Telehealth Pharmacy is grounded in a combination of factors that collectively contribute to a positive and reliable customer experience [38]. The unwavering commitment to delivering exceptional service, marked by consistent quality of care, has instilled a profound sense of confidence in the reliability and effectiveness of the pharmacy's telehealth services. Furthermore, the pharmacy's dedication to taking responsibility for its customers enhances the trusting relationship between the establishment and its clientele. Precise and accurate information dissemination on medical matters reinforces the trustworthiness of Telehealth Pharmacy, creating a dependable source for healthcare insights. The trust extends to the contact person within the pharmacy, whose genuine dedication and commitment contribute significantly to a positive customer experience. This includes not only providing effective solutions to inquiries but also handling customer complaints with efficiency and promptness. The contact person's responsiveness in delivering service to customers is yet another factor that bolsters confidence, contributing to an overall positive and efficient service experience. In essence, the multifaceted approach of Telehealth Pharmacy, encompassing quality care, accountability, accuracy, and dedicated customer service, collectively reinforces the confidence and trust placed in their telehealth services.

### **Patient loyalty**

Understanding the elements that foster customer loyalty is pivotal. The [Table 3](#) outlines key factors identified by participants in their discussions related to Telehealth Pharmacy, showcasing elements that contribute to a sustained sense of loyalty. These factors encompass consistent quality of care [39], the pharmacy's commitment to responsibility

[40], accuracy in information dissemination [41], the dedication of the contact person [42], effective solutions to inquiries [43], proficient handling of customer complaints [44], and consistent responsiveness [45]. Exploring these dimensions provides valuable insights into the aspects that not only maintain but also strengthen the loyalty of customers towards Telehealth Pharmacy.

**Table 3.** Factors Influencing Customer Loyalty in Telehealth Pharmacy

Aspects	Highlights
Consistent quality of care	Complete confidence in Telehealth Pharmacy’s ability to provide excellent service; consistent quality of care solidifies reliability in their capacity for reliable and effective telehealth services.
Steadfast commitment to responsibility	Unwavering loyalty rooted in the pharmacy’s commitment to taking responsibility for customers; accountability fosters a crucial relationship; prioritizing customer well-being adds an extra layer of assurance.
Accuracy in information dissemination	Unwavering confidence in Telehealth Pharmacy to provide accurate information; precision and accuracy in disseminating medical information contribute significantly to reliability.
Dedication of contact person	Confidence in the genuine dedication of the contact person at Telehealth Pharmacy; sincerity and commitment contribute immensely to a positive customer experience; personal touch in customer service plays a pivotal role in building reliability.
Effective solutions to inquiries	Loyalty extends to the contact person providing effective solutions; high level of expertise showcased; commitment to efficient and effective service solidifies confidence in customer support.
Handling customer complaints	Complete confidence in the contact person’s ability to handle complaints effectively and promptly; proficiency in addressing and resolving concerns contributes significantly to a positive perception of customer service.
Consistent responsiveness	Loyalty reinforced by the contact person’s consistent responsiveness; promptness and attentiveness contribute to a positive and efficient service experience; dedication to ensuring timely and effective assistance enhances overall confidence in excellent service.

In the exploration of participants’ inclination and commitment to consistently engage with telehealth pharmacy services over time, the study delves into the dynamics of prolonged user interaction within the telehealth framework. Participants were actively involved in discussions surrounding their long-term engagement, shedding light on aspects such as the perceived value of services, the convenience offered, and the establishment of a sense of reliability over time. **Box 3** serves as a representation of these key themes, providing a comprehensive overview of the participants’ perspectives on sustained engagement with Telehealth Pharmacy.

In establishing trust with Telehealth Pharmacy, several key facets contribute to a positive and reliable customer experience. The unwavering commitment to delivering exceptional service, marked by consistent quality of care, instils deep confidence in the reliability and effectiveness of the pharmacy’s telehealth services. Additionally, the pharmacy’s dedication to taking responsibility for its customers enhances the trusting relationship between the establishment and its clientele. The precise and accurate dissemination of medical information further solidifies trust, making Telehealth

Pharmacy a dependable source for healthcare insights. Trust extends to the contact person, whose genuine dedication and commitment contribute significantly to a positive customer experience, building a personal connection. The contact person's ability to provide effective solutions and handle customer complaints promptly showcases a high level of expertise and commitment to efficient service. The consistent responsiveness of the contact person in providing service further enhances the overall confidence in Telehealth Pharmacy's commitment to excellence [46]. In essence, Telehealth Pharmacy's holistic approach to quality care, accountability, accuracy, and dedicated customer service collectively reinforces the confidence and trust placed in their telehealth services.

**Box 3. Patient loyalty**

1. "I have complete confidence in Telehealth Pharmacy's ability to provide excellent service. Over the course of my interactions, the consistent quality of care they deliver has solidified my trust in their capacity to offer reliable and effective telehealth services. It's truly reassuring to rely on a pharmacy that consistently goes above and beyond in ensuring a positive and seamless healthcare experience for its customers."
2. "My trust in Telehealth Pharmacy is rooted in their unwavering commitment to taking responsibility for their customers. This sense of accountability is a crucial factor in fostering a trusting relationship between the pharmacy and its clientele. Knowing that they prioritize and stand behind the well-being of their customers adds an extra layer of assurance to the overall service experience."

**Patient satisfaction**

In assessing the overall contentment and fulfilment derived from participants' experiences with telehealth interactions, the study delves into the nuanced dimensions of participant satisfaction within the telehealth domain. **Table 4** encapsulates the essence of their sentiments, highlighting specific themes that contribute to their overall contentment. From the user-friendly interface and seamless navigation of the application to the consistently fulfilling experiences, participants express genuine satisfaction with the services offered [47, 48]. The convenience and personalized nature of Telehealth Pharmacy's offerings align seamlessly with individual preferences, making it an integral component in meeting healthcare needs. The enjoyable aspects of services, coupled with a positive and comfortable healthcare environment, showcase a depth of satisfaction that goes beyond the ordinary [49]. Moreover, the confidence to recommend Telehealth Pharmacy to others stems from the comprehensive and reliable nature of the services, instilling trust and reinforcing positive experiences [50]. As participants express a likelihood to turn to Telehealth Pharmacy for future consultations, the table serves as a comprehensive exploration of the multifaceted dimensions contributing to patient satisfaction in the realm of telehealth [51].

Participants actively engage in discussions centered around the perceived effectiveness of telehealth in meeting their healthcare needs, the convenience it affords, and the level of personalization in their virtual interactions (**Box 4**).

**Table 4.** The key highlights from participants’ discussions related to their satisfaction with telehealth pharmacy services

Patient satisfaction themes	Highlights
User-friendly interface	Genuine satisfaction with the Telehealth Pharmacy application; user-friendly interface and seamless navigation contribute significantly to a positive experience.
Consistent and fulfilling experience	Consistently satisfying and fulfilling experience with Telehealth Pharmacy services; convenience and personalized nature align seamlessly with preferences.
Enjoyable services	Services provided by Telehealth Pharmacy are truly enjoyable, creating a positive and comfortable environment for seeking healthcare support.
Confident recommendations	Not only satisfied but confident in recommending Telehealth Pharmacy to others; comprehensive and reliable services instill trust and positive experiences.
Go-to resource for consultations	Highly likely to turn to Telehealth Pharmacy for medication-related consultations; convenience, reliability, and confidence in service make it a primary choice.

**Box 4.** Patient satisfaction

1. “I am genuinely satisfied with the Telehealth Pharmacy application. The user-friendly interface and the seamless navigation contribute significantly to my positive experience. It’s reassuring to have a healthcare resource that not only meets but exceeds my expectations, making it a reliable go-to for my telehealth needs.”
2. “Utilizing Telehealth Pharmacy services consistently proves to be a highly satisfying and fulfilling experience that caters to my healthcare needs effectively. The convenience, coupled with the personalized nature of the services, aligns seamlessly with my preferences. This has undoubtedly become an integral part of meeting my healthcare requirements, providing a level of satisfaction that is both reliable and reassuring.”
3. “The services provided by Telehealth Pharmacy are truly enjoyable, creating a positive and comfortable environment for seeking healthcare support. The personalized touch in their interactions and the efficiency in service delivery contribute to an experience that goes beyond mere satisfaction, making it a genuinely enjoyable aspect of my healthcare journey.”
4. “I am not only satisfied but also confident enough to readily recommend Telehealth Pharmacy to others. The comprehensive and reliable nature of the services, coupled with the positive experiences I’ve had, instills a sense of trust. I believe that by recommending this telehealth service, I am extending the same quality and satisfaction that I have consistently received.”
5. “When in need of consultation regarding medications, I am highly likely to turn to Telehealth Pharmacy. The convenience of accessing expert advice from the comfort of my own space, coupled with the reliability of the information provided, makes it a go-to resource for medication-related queries. This level of confidence in their service encourages me to consider Telehealth Pharmacy as a primary choice for future consultations.”

Engaging with Telehealth Pharmacy has proven to be a consistently satisfying and fulfilling experience for the patient. The user-friendly application, coupled with a seamless navigation experience, has exceeded my expectations, making it a reliable and reassuring healthcare resource. The convenience and personalized nature of the services align seamlessly with the preferences, contributing to an integral part of meeting the healthcare needs. The positive and enjoyable interactions, characterized by a personalized touch and efficient service delivery, create a comfortable environment for seeking healthcare support. This satisfaction goes beyond mere utility, making Telehealth Pharmacy an enjoyable aspect of my healthcare journey. The patient not only

satisfied but confident in recommending this telehealth service to others, considering the comprehensive and reliable nature of the services and the positive experiences. Moreover, when in need of medication-related consultations, Telehealth Pharmacy is preferred choice due to the convenience and reliability of the information provided. The level of confidence in their service encourages to consider Telehealth Pharmacy as a primary resource for future healthcare consultations.

### *Paving the way for web and android application development*

This project serves as a foundational step towards the development of a web-based or Android application in the realm of telehealth pharmacy. The significance of advancing this telehealth pharmacy application lies in its potential to elevate clinical pharmacy standards. Specifically, the application aims to enhance clinical aspects such as monitoring side effects and tracking pertinent patient information. By focusing on features related to monitoring and information management, the application seeks to contribute to a more comprehensive and streamlined approach to pharmaceutical care. The integration of telehealth services not only facilitates accessibility but also promotes more efficient monitoring of patient outcomes, reinforcing the importance of leveraging technology for advancements in the pharmaceutical field. This initiative aligns with the broader goal of optimizing healthcare services, ensuring a patient-centric approach and fostering continuous improvements in pharmaceutical practices.

### *Limitation of the study*

Limitations of this study should be acknowledged to provide a comprehensive understanding of its scope and potential constraints. Firstly, the findings and conclusions drawn are contingent upon the perspectives and experiences of the sampled participants. The study's generalizability may be limited as it primarily focuses on a specific demographic in a defined geographic location, potentially restricting the applicability of the results to a broader population. Additionally, the study's reliance on self-reported data introduces the possibility of response bias, as participants may offer socially desirable or selective responses. Furthermore, the dynamic nature of telehealth services and technology may render certain aspects of the study subject to temporal limitations, as advancements and changes in the field can influence the relevance of the findings over time. Despite efforts to encompass a diverse range of perspectives, the qualitative nature of the study may not capture the entirety of the telehealth pharmacy landscape. These limitations underscore the need for cautious interpretation and consideration of the study's outcomes within the context of its inherent constraints.

## **Conclusion**

In conclusion, this qualitative study provides valuable insights into the perspectives and experiences of participants regarding telehealth pharmacy services. Despite the limitations acknowledged, such as the specific demographic focus and reliance on self-reported data, the findings shed light on crucial aspects of patient-pharmacist connectivity in the telehealth domain. The identified themes: Quality Service Perception,

Building Patient Trust, Cultivating Patient Loyalty, and Measuring Patient Satisfaction, provide a comprehensive framework for understanding the multifaceted dynamics of telehealth pharmacy. These insights are invaluable for healthcare practitioners, policymakers, and telehealth service providers aiming to enhance patient engagement, trust, and satisfaction in the evolving landscape of digital healthcare. Further research and adaptations are encouraged to address the limitations and ensure the continual improvement of telehealth pharmacy services.

## Conflict of interest

The authors affirm that there is no conflict of interest to the study.

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