



A LITERATURE REVIEW: COMPARISON OF PATIENTS SATISFACTION LEVELS IN USING TELEPHARMACY SERVICES

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Abstract:

Introduction: Telepharmacy is an innovation in the healthcare field that offers remote pharmacy services through digital technology. Telepharmacy offers some advantages, such as easier accessibility and time efficiency due to visiting a pharmacy. Many patients have switched from traditional pharmacy services to telepharmacy services, so they don't have to visit the pharmacy. However, telepharmacy services also have some disadvantages, one of which is internet access, which leads many patients to still prefer conventional pharmacy services. There will be some differences in patient preferences and perceptions that affect patient satisfaction with these services. This review aims to compare patient satisfaction levels after experiencing both services to understand patient preferences and perceptions of both services. This review was written after doing research in some journals related to telepharmacy.

Methods: Using English Language publications that were published and connected to telepharmacy. The article was collected from PubMed, ScienceDirect, and Google Scholar.

Result: The results show that there are differences in patient satisfaction levels between patients who experienced tele pharmacy services and those who experienced conventional pharmacy services. Some studies show a higher satisfaction with telepharmacy compared to physically visiting the pharmacy. However, other research suggests that patient satisfaction with physically visiting the pharmacy is higher due to a few factors, such as poor internet access, more accurate disease diagnosis, more accurate and better disease examination and treatment, as well as comprehensive physical examinations. These differences can serve as insights to improve pharmacy services by addressing weaknesses in each type of healthcare service and enhancing their respective strengths.

Conclusion: telepharmacy is a useful, accessible and fast technology in providing drug counseling and information. However, existing obstacles such as internet network instability, inaccurate checks, are challenges that must be resolved for the future development of telepharmacy..

Keywords: *telepharmacy, technology, pharmacy services,, patient satisfaction*

INTRODUCTION

Information and communication technology development has influenced the healthcare service system.¹ The availability of internet access creates a demand among patients for quick access to health information and services from healthcare providers.² This has prompted healthcare services to innovate and create easier as well as faster access to healthcare services. One of the innovations is telepharmacy, which provides consultation and treatment services through remote communication without requiring patient presence at healthcare facilities.³

In addition to the influence of technological advancements, the COVID-19 pandemic has impacted the global healthcare system by reforming healthcare practices. Social restrictions have been implemented to control the spread of the virus and have transformed healthcare services by shifting healthcare services from in-person visits to remote services. Moreover, there was a finding that shows a 60% increase in the use of telemedicine applications in 2020.⁴

The new shift towards using telepharmacy services instead of conventional ones requires an understanding of the effectiveness of treatment from both types of services. Telepharmacy offers some advantages, such as easier accessibility, time efficiency, and cost-efficiency. Besides those advantages, there are some disadvantages, such as security systems and internet accessibility.⁵ Meanwhile, conventional pharmacy services also offer advantages in terms of direct interaction with pharmacists, allowing patients to ask multiple questions to receive more detailed information and allowing patients to receive verbal affection from the pharmacists.⁶ Differences in preferences and perceptions regarding the types of services received can influence patient adherence to the medication and satisfaction to the services.

Evaluation of patient satisfaction is the key to assessing the quality of telepharmacy services and conventional pharmacy services. Comparative studies on patient satisfaction with telepharmacy services and direct pharmacy visits can provide insights into patient preferences and perceptions regarding both types of pharmacy services. Understanding the factors that influence patient satisfaction in using healthcare services can optimise healthcare providers to improve their services. Therefore, this journal explains the comparison of patient satisfactions between telepharmacy and direct pharmacy visits as well as factors influencing satisfaction in using these types of services. Therefore, it can provide a better understanding of the effectiveness of both types of pharmacy services and provide insights for healthcare practitioners in making policies and strategies for better and more efficient services.

METHODS

Data collection was carried out by searching English journal publications through Pubmed, ScienceDirect, and Google Scholar by using keyword “telepharmacy” and “telepharmacy versus in-person visits to the pharmacy.” Inclusion area:

- explanation on the level of satisfaction in using telepharmacy, *telemedicine, telehealth*, or direct visits.
- journal was published between 2018 -2024
- Not a journal review

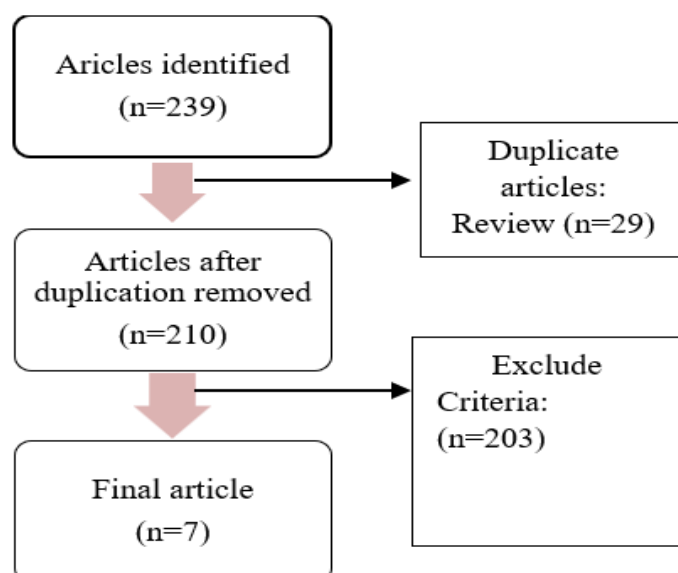


Figure 1. screening article process

RESULTS AND DUSCUSSION

Pharmacy services are a form of service that provides pharmaceutical preparations delivered by pharmacists or pharmacy personnel to patients. Pharmacy services consist of both direct pharmacy and telepharmacy services. Telepharmacy is a pharmacy service provided by pharmacists to patients remotely.

Both types of pharmacy services have their own strengths and weaknesses. The presence of advantages and disadvantages between two types of services will create different preferences and perceptions among patients for each type of service, thus affecting satisfaction with service usage. This can be observed in **Table 1**.

From table 1, it can be inferred that the COVID-19 pandemic has influenced the high satisfaction of patients towards the use of telepharmacy services. This is due to social restrictions, and therefore telepharmacy is chosen to fulfil healthcare service which could reduce direct contact with healthcare providers. Additionally, the benefits of easier accessibility, time efficiency, and cost-efficiency have made patients more satisfied by selecting telepharmacy services. (Gil *et al.*, 2023) This founding is also supported by research (Moulaei *et al.*, 2022; Cheen *et al.*, 2022; Hays *et al.*, 2022) indicating that patient satisfaction levels with telepharmacy are higher compared to in- person visits to the pharmacy. The high satisfaction of patients with telepharmacy is influenced by factors, such as the time saved in obtaining healthcare services more quickly, easier accessibility without requiring patients to physically visit the pharmacy, thus cutting transportation costs, and reducing direct contact with others to avoid the potential transmission of infectious diseases.

However, some patients prefer healthcare services by directly visiting pharmacies or other healthcare facilities because accessing pharmacies is easier than accessing the internet. This is often experienced by patients who live in places where internet service is poor which prompts them to opt for direct visits to pharmacies. Additionally, the desire for face-to-face interaction with pharmacists and the difficulty in using technology are primary reasons for utilizing healthcare services directly at pharmacies. (Moulaei *et al.*, 2022 ; Moulaei *et al.*, 2023)

Similar research indicates that out of 1226 respondents, 71% prefer utilizing healthcare services through direct visits. This preference stems from the fact that receiving treatment in person provides a clearer picture of disease diagnosis through examination and clearer, better-explained information. Additionally, physical contact with pharmacists or healthcare personnel makes patients more comfortable and increase trust in the treatment being administered. (Moulaei *et al.*, 2023)

Patient characteristics also play a role in the choice between telepharmacy and in-person visits to pharmacies. Female patients aged 18–44 is more inclined to opt for telemedicine services than males

aged over 44. Additionally, patients who live far from healthcare facilities and have good internet access prefer telemedicine or telepharmacy services to in-person visits. (Reed *et al.*, 2020)

Table 1: The results of patients satisfaction using telepharmacy versus to in-person visits to pharmacy

No	Title	Objective	Results
1	Developing a telepharmacy programme with home medication dispensing and informed delivery in a tertiary hospital: description of the model and analysis of the results (Gil <i>et al.</i> , 2023)	Implementing telepharmacy programmed during the COVID-19 pandemic aims to enhance patient accessibility and satisfaction.	The high level of patient satisfaction with telepharmacy services during the COVID-19 pandemic is attributed to the benefits it offers, such as easy accessibility. This allows patients to save time and money while reducing direct contact with healthcare personnel.
2	Survey of the patients' perspectives and preferences in adopting telepharmacy versus in-person visits to the pharmacy: a feasibility study during the COVID-19 pandemic (Moulaei <i>et al.</i> , 2022)	Identifying patient's perspectives and preferences regarding the use of telepharmacy services compared to direct visits to pharmacies.	As many as 77% of the total respondents prefer using telepharmacy services because it saves time in receiving pharmaceutical services, reduces costs, and minimizes the risk of contracting infectious diseases. Meanwhile, 23% of respondents chose to use direct pharmaceutical services at pharmacies because access to pharmacies was easier than internet access as they preferred face-to-face interactions with pharmacists and had difficulty using technology.
3	Patients' perspectives and preferences towards telemedicine versus in-person visits: a mixed-methods study on 1226 patients (Moulaei <i>et al.</i> , 2023)	Identifying patients' perspectives and preferences regarding telemedicine compared to healthcare service, through direct visits, identifying perceived benefits of telemedicine, and understanding reasons why patients choose one of the two types of healthcare services	As many as 71% of the total respondents prefer utilising healthcare services through direct visits on the grounds of more accurate disease diagnosis, more precise examination, and treatment, as well as comprehensive physical examinations. Meanwhile, 29% of respondents opt for telemedicine services to avoid infectious diseases, save costs, and overcome geographical barriers.
4	Telepharmacy and quality of medication use in rural areas (Pathak <i>et al.</i> , 2020)	Evaluating patient's adherence to the use of non-insulin diabetes medications, renin-angiotensin system antagonists, statins, and high-risk medications between telepharmacy services and traditional pharmacies in rural areas.	There is no significant difference in medication adherence between telepharmacy and traditional pharmacy services.
5	Patient characteristics associated with choosing a telemedicine visit vs office visit with the same primary care clinicians (Reed <i>et al.</i> , 2020)	Identifying patients' characteristics in choosing treatment between telemedicine and direct visits to healthcare facilities.	Female patients aged 18-44 prefer telemedicine services to male patients aged over 44. Patients who live far from healthcare facilities and have good internet access prefer telemedicine or telepharmacy services to in-person visits.
6	Patient satisfaction with telehealth versus in-person visits during COVID-19 at a large, public healthcare system (Cheen <i>et al.</i> , 2022)	Comparing patient satisfaction between using telehealth and direct visits during COVID-19	Patients' satisfaction with telehealth services is higher than direct visit services.
7	Patient Experience with In-Person and Telehealth Visits Before and During the COVID-19 Pandemic at a Large Integrated Health System in the United States (Hays <i>et al.</i> , 2022)	Comparing patient experiences based on in-person visits and telehealth before and during the COVID-19 pandemic.	The patients experience in using telehealth services is more positive than in-person visit services

CONCLUSION

There is a difference in patient satisfaction with health services over the phone compared to visiting the pharmacy in person. This difference can be used as knowledge to improve pharmacy services by overcoming the shortcomings of each type of health service and strengthening their respective strengths. In the future, technology utilization must consider ease of access, ease of use, and features that can overcome the shortcomings of telepharmacy.

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