



RESEARCH PAPER

Telemedicine and Patient Satisfaction: A Qualitative Study Exploring the Treatment Transition to the Digital Medium in Pakistan

¹Inayat Ur Rehman* ²Zia-un-Nisa ³Afsheen Talat

1. Pharmacist, Hayatabad Medical Complex, Peshawar, KP, , Pakistan
2. Research Associate, Association for Social Development, Islamabad, Pakistan
3. Research Associate, Association for Social Development, Islamabad, Pakistan

*Corresponding Author: afsheentalat53@gmail.com

ABSTRACT

The study explores the transition of healthcare services to the digital medium through telehealth and its impact on patient satisfaction. In recent years, telehealth technology has advanced significantly as it provides services to patients remotely in far-flung areas. This qualitative study utilized purposive sampling technique. In-depth interviews were conducted with patients who opted for online consultation through telehealth services (n=30) at two major hospitals in Islamabad [Pakistan Institute of Medical Sciences (PIMS) and Shifa International Hospital]. For the identification of themes regarding telemedicine and patient satisfaction, reflexive thematic analysis was employed in the study. Results revealed that patients have an optimistic approach regarding the digital transition of telehealth. Some common factors highlighted by the study participants include increased convenience, less waiting time, decreased traveling costs, and prompt availability of healthcare facilities in less privileged areas. Patients' knowledge, awareness, acceptance, and experiences were considered crucial factors influencing their participation and outcome satisfaction.

KEYWORDS Digital Medium, Patient Satisfaction, Telehealth, Telemedicine, Treatment Transition

Introduction

Telehealth refers to the provision of health-related services remotely by using telecommunication modes (video conferencing, remote patient monitoring, and mobile health applications) instead of in-person visits (Cypher 2020). Telemedicine refers to tele-assisted support (including any kind of medical, psychological, diagnostic, and treatment) provided by healthcare providers (Nieto-Calvache et al. 2022; Vitacca et al. 2019). As telehealth and telemedicine serve the same purpose, they are used interchangeably in the present study.

In recent years telehealth was considered a revolutionary approach that has innovated the healthcare system. As technology advances, healthcare providers can facilitate patients remotely through digital mediums by using telehealth communication. In this way, patients can get medical care with ease and convenience without being bound to personal visits (Gajarawala and Pelkowski 2021). Telehealth demonstrated promising results in improving patient satisfaction and healthcare delivery. Previous literature stated that many studies explored the effectiveness of patient satisfaction by telemedicine, and findings revealed that telehealth produces optimistic outcomes like prompt health service delivery, accessible treatment options, and pocket-friendly healthcare costs (Rutledge et al. 2017).

The core benefits of telehealth services include access to healthcare facilities remotely by providing convenience for patients belonging to peri-urban/rural areas where they have limited access to healthcare facilities. It reduces the traveling costs and waiting times for patients providing them with a convenient and approachable space, This leads to higher patient satisfaction and prompt medical facilities in any geological region (Mahdi et al. 2022). According to a study conducted on telehealth services, it was found that telehealth

improves patient satisfaction by providing them with personal access to their physician and creating an accessible space for treatment guidance and support (Niето-Calvache et al. 2022).

Additionally, telehealth has the potential to reduce many financial constraints for both providers and patients. Telehealth provides a cost-effective treatment strategy by diminishing multiple expenses including overhead charges, infrastructure costs, and physical transportation (Mahmoud Sr 2020). Patient satisfaction is significantly influenced by the cost-saving, quality treatment facility aspect of telehealth (Pogorzelska and Chlabicz 2022). For physical appointments, patients need to take time off from their work and spend a whopping amount on traveling and treatment. Now, with the help of telemedicine, they can schedule virtual appointments and save money and time. As a result, patients can get treated for healthcare issues on their terms from the safe space of their homes. (Ahmed and Ahmed 2018).

Telehealth proves to be an effective treatment strategy as it allows improvement in patient satisfaction. With the availability of advanced and prompt monitoring and timely diagnosis, healthcare providers can now monitor patients' conditions and apply new treatment management practices to patients that are being utilized in the Western telemedicine world. (Rajkumar et al. 2023).

Pakistan being an underdeveloped country has its limitations in the telehealth arena, multiple issues like financial constraints due to poverty, digital illiteracy, and lack of internet availability hinder the optimal usage of telemedicine/ telehealth services in the country. (Ahmed 2017). However, telemedicine is an emerging area in Pakistan and healthcare providers are exploring the distinct nature of this healthcare medium. Telehealth has a potential and promising avenue for policymakers, and healthcare providers to increase patient satisfaction and patient-centered care. As technology advances day by day, telehealth can play a vital role in flourishing the future of healthcare delivery by enhancing patient satisfaction if utilized properly.

Material and Methods

This qualitative study explores the role of telemedicine in patient satisfaction in patients seeking treatment through telemedicine in two major hospitals in Islamabad, Pakistan. (Pakistan Institute of Medical Sciences (PIMS) and Shifa International Hospital). The researchers analyzed patients' subjective experiences and perspectives regarding telemedicine. The study used purposive sampling to select 30 (n=30) respondents who have used telemedicine services at PIMS and SHIFA hospitals. Data was collected from December 2nd Dec'2022 to 4th April 2023 through in-depth interviews with the respondents. The interviews were audio recorded and ended when the ability to obtain new information was exhausted (data Saturation). Themes and sub-themes were drawn followed by transcription and translation of the obtained results. Data analysis was conducted using reflexive thematic analysis by two independent coders to ensure the reliability and validity of the findings. The study adhered to ethical principles, including informed consent, confidentiality, and anonymity of the respondents.

Results and Discussion

The participants of the study were thirty in number (n=30). The average age of the participants ranged from 20 to 55 years. Based on the information shared by the respondents, the results were categorized into three main themes i.e., (1) "The perspectives regarding telemedicine," which further fall into two sub-themes; "Knowledge about telemedicine", "Acceptance of telemedicine post-Covid 19", (2) "The perspectives regarding patient satisfaction" which further fall into two sub-themes; "Willingness to treatment", and "Patients' trust on Physician", and (3) "Telemental Health"

The perspectives regarding telemedicine

Knowledge of Telemedicine

The respondents seeking treatment through telemedicine in the current study shared diverse perspectives. While some patients were in favor of this new tech-friendly service, some found this invention to be complex and not user-friendly. However, it was found that people who are above 40 lack the knowledge to utilize this service and require assistance from the younger population.

As per one respondent

“Telemedicine has made it possible for me to communicate with my physician without going to the hospital. It saves my time and energy. However, I am still learning to operate the mobile.” (R6)

Some respondents opined that they find the concept of Telemedicine to be faulty as to how can a physician examine a patient online. In their opinion physical examination is vital to treatment seeking.

“I do not understand the concept of Telemedicine. How can a doctor who is not even physically present examine you and then prescribe you medicine, I cannot trust this service. Physically examining a patient gives the patient personal satisfaction as well.” (R17)

Acceptance of Telemedicine during Covid

The pandemic has revolutionized clinical practices and treatment-seeking behavior. The respondents asserted that telemedicine services have gained much recognition amidst COVID-19. It was during the pandemic that hospital settings started to provide telemedicine services to avoid contact and observe precautions.

As per one respondent:

“I think people started to accept telemedicine during the pandemic. They knew how deadly physical contact was for them, so they preferred the online option. It was for the better.” (R5)

Telemedicine is a great tool to spread medical services to people who do not have physical access to hospital settings. During Covid-19 online telemedicine, consultations saved hundreds of lives according to the respondents.

“Everything was shut down as a consequence of the pandemic. It was highly dangerous to visit a hospital even for consultations other than COVID-19. I am a diabetic patient with a foot ulcer. To protect me from the deadly virus, my doctor introduced me to teleconsultations. I was a little skeptical in the beginning but gradually I understood how useful it is especially during a pandemic.” (R28)

The perspectives regarding patient satisfaction

Willingness to Treatment

Some patients opined that they had difficulty accepting telemedicine services. Due to the online approach, they felt that they were not being heard properly by the doctor. However, others opined that although they were reluctant to use the service eventually, they got used to it and now feel that it is the need of the hour.

“I don’t feel comfortable using this service, my children help me in setting up the consultation but I do not get that satisfaction of being under treatment by a doctor.” (R19)

According to one respondent:

“I wasn’t aware of telemedicine and so was reluctant to use it. My doctor counseled me and asked me to give it a try. I was happy with the result as I felt I was in a personal conversation with my doctor without any side distractions.” (R24)

There were other barriers like lack of proper internet facilities, power cuts, and other financial constraints due to poverty reported by the patients related to online consultation through telehealth services.

“Internet is very slow in my area, and the amount of power cuts we have daily, especially during the summers makes it difficult for people like me to utilize this service effectively.” (R12)

Patients’ Trust in Physicians

The role of a physician is pivotal in seeking telemedicine services according to the patients. They asserted that if the physician makes them feel heard and listens to their problems patiently during online consultations then they don’t feel the need to be physically examined.

As per one respondent:

“My doctor is the reason I am comfortable seeking treatment through Telemedicine. She listens to my problems and provides an apt solution. I do not feel the need to go see in person if I am healthy and following her instructions.” (R9)

The respondents opined that the doctors and the hospital staff counseled them to take telemedicine sessions and even patiently addressed all their concerns regarding telemedicine.

“My doctor introduced me to telehealth services. He even guided me on how to join the sessions and answered all my relevant and irrelevant queries regarding telemedicine.” (R12)

Tele Mental Health

According to the respondents, telemental health services proved to be highly effective in helping them overcome their mental health conditions. They stated that having access to a psychiatrist or psychologist helped them cope with the Covid era. As per the respondents, seeking treatment within the safe space and comfort of their home saved them time and energy, and helped them in personalizing their illness.

“During Covid, I developed severe depression which led to extreme mood swings and anger outbursts. A friend suggested seeking treatment through tele mental services being offered in Shifa Hospital. I was reluctant, to say the least, but after just one session I felt better. It has been two years since I have been seeking treatment through tele mental health services, and I could not be more grateful for this service.” (R28)

The respondents felt a sense of safety and security while taking online sessions as mental health is a relatively emerging concept in Pakistan, and seeking mental health treatment is stigmatized significantly.

“Telemental health services are a lifesaver for me, as I have reservations about disclosing my mental illness. Through this service, I feel that my secret is safe with me and my psychiatrist. Now I can seek treatment without being stigmatized in my society.” (R3)

Mental health treatment is not widely available in far-flung areas. Through tele mental health services, people were able to get access to psychological/psychiatric treatment. This led to more people seeking treatment.

“I belong to a rural area called Jhangi Sayedan, we do not have any mental healthcare facility in our area. I got to know about tele mental health services being offered in PIMS and I started taking these consultations. These sessions have been extremely helpful for my mental health.”

Discussion

This qualitative study aimed to explore the role of telehealth in patient satisfaction. It considered perspectives on telehealth, patient satisfaction, and telemental health. In-depth interviews were used to analyze individuals' telehealth experiences. Three main themes emerged from the research. The first theme was “perspectives regarding telemedicine” (knowledge and acceptance of telehealth/medicine during COVID-19). The second theme derived was “perspectives regarding patient satisfaction” (patients' willingness and trust in a physician). The third theme that emerged was “Telemental health”. An amalgamation of the mentioned factors resulted in better physiological and psychological health by using digital technology for human betterment. Telehealth services gained momentum during the pandemic when quarantine was a necessity. Contrary to conventional in-person consultations, telehealth provides healthcare services remotely.

The findings of this research suggest that the acquisition of telehealth knowledge is essential for the usage of telehealth. As per existing literature, acceptance of telehealth services is affected by patients' knowledge and awareness about the same. Patients feel uncertain and cautious about telehealth services due to their lack of knowledge and unfamiliarity with technology (Kamal, Shafiq, and Kakria 2020). According to the findings of the present study patients' attitudes toward the technology were more positive if patients had heard of telehealth services. From the literature, it was evident that in influencing telehealth service acceptance, patient experience played a crucial role (Bennell et al. 2021). Patients were more likely to use the service in the future if they had positive experiences with telehealth. From previous studies, it was shown that the patient's decision about getting treated through telehealth services or not was also governed by the type of condition being treated, and its severity. Additionally, proximity to a healthcare facility was greatly influenced by the patient's experience and knowledge (Alsabeeha, Atieh, and Balakrishnan 2023; Leonardsen et al. 2020). Findings of the present study also showed that after COVID-19 telehealth services have increasingly been adopted by most patients, they prefer remote consultations and treatment strategies instead of visiting medical facilities often. The previous literature asserts that if patients understand the technology and its benefits then they are more likely to accept telehealth services (Maraju et al. 2023). When patients have positive experiences with the service, they better understand the value of remote consultations. Current findings suggest that telehealth services have been adopted fast due to the pandemic and the availability of digital solutions.

The second theme explored in this was patient satisfaction. The current study proves that willingness to undergo treatment was a critical factor in patient satisfaction. Additionally, higher satisfaction was reported by the patients who receive treatment via telehealth services. Patients highlighted that positive relationships with physicians play a vital role in being optimistic about telemedicine. Patients were more likely to be pleased with the care they received when they felt confident in their physician's capability to diagnose and treat their condition. According to the available literature, another essential

factor that influenced patient satisfaction was patients' trust in their physicians (Nittari et al. 2022; Ralston, Holt, and Hope 2020). Patients were more motivated to stick to their treatment plan if they developed a positive bond with their physicians (Burgener 2020; Vosburg et al. 2022). Moreover, patients are more likely to be satisfied with the care they receive when they feel that their doctors take their concerns seriously and listen to them. From the findings of previous literature, it was also confirmed that patients are more likely to take advantage of telehealth services when they trust their physicians and have a positive relationship with them (Darr et al. 2020; Orrange et al. 2021).

The last theme derived from the study was telemental health. The current study shows that in providing mental health services remotely, telehealth services have become an essential tool. The results of the present study indicated that mental health conditions such as depression, anxiety, and PTSD can be effectively treated by telemental health services. Previous literature established that higher levels of comfort, convenience, and privacy were reported by the patients who receive telemental health services. (Costa et al. 2021). Patients who opted for these services reported that telemental health services were vital tools for managing their psychological concerns of patients (Siegel et al. 2021). The present research findings also confirm that increased access to care can be provided for those in rural areas or who otherwise lack access to traditional mental health services utilizing telemental health services. There are numerous benefits of telemental health services as they remove barriers such as time, distance, and cost that prevent people from accessing mental health services. As patients can access services from their own homes or other convenient locations, therefore, it allows more flexibility and convenience in terms of schedules (Ralston et al. 2020; Sagar and Singh 2022). Furthermore, it was prominent that for both the patient and the provider, telemental health services can be cost-effective (Faleh AlMutairi et al. 2021).

Conclusion

This study explores the contribution of telehealth (telemedicine) to patient satisfaction. During the pandemic, telehealth services proved an effective treatment strategy for patients suffering from any psychological or physical abnormality. However, it was concluded that patients' knowledge, awareness, acceptance, and experiences were considered crucial factors influencing their participation and outcome satisfaction. As technology advances day by day, telehealth can play a vital role in flourishing the future of healthcare delivery by enhancing patient satisfaction if utilized properly.

References

- Ahmed, A. & Ahmed, M. (2018). The Telemedicine Landscape in Pakistan- Why Are We Falling Behind?" *JPMA. The Journal of the Pakistan Medical Association* 68(12), 1820-1822
- Ahmed, W. (2017). Telehealth: Trend in Pakistan. *Journal of the College of Physicians and Surgeons Pakistan* 27(10), 663-665
- Alsabeeha, N. H. M., Momen A. A., & Melodena S. B. (2023). Older Adults' Satisfaction with Telemedicine During the COVID-19 Pandemic: A Systematic Review. *Telemedicine Journal and E-Health: The Official Journal of the American Telemedicine Association* 29(1), 38-49
- Bennell, K. L., Belinda J. L., Ben M., David M., Trevor R., Maayken V. D. B., Karen F., Shelley C., Jenny A., Jenine F., & Rana S. H. (2021). Physiotherapists and Patients Report Positive Experiences Overall with Telehealth during the COVID-19 Pandemic: A Mixed-Methods Study. *Journal of Physiotherapy* 67(3), 201-209
- Burgener, A. M. (2020). Enhancing Communication to Improve Patient Safety and to Increase Patient Satisfaction. *Health Care Manager* 39(3), 128-132
- Costa, Mark, Graziela R., A. P., Chyrell B., Katherine P., & Larry D. (2021). Tele-Mental Health Utilization Among People with Mental Illness to Access Care During the COVID-19 Pandemic. *Community Mental Health Journal* 57(4), 720-726
- Cypher, R. L. (2020). Telehealth and Telemedicine during a Crisis: Tips to Reduce Liability Risk. *Journal of Perinatal and Neonatal Nursing* 34(3), 205-207
- Darr, Adnan, Andrew S., Kalliopi A., Jack L., Huimin N., Ada K., Kate S., Amit P., & Joe G. (2020). The Impact of the Coronavirus (COVID-19) Pandemic on Elective Paediatric Otolaryngology Outpatient Services – An Analysis of Virtual Outpatient Clinics in a Tertiary Referral Centre Using the Modified Paediatric Otolaryngology Telemedicine Satisfaction Survey (POTSS). *International Journal of Pediatric Otorhinolaryngology* 138, 110383
- Faleh, A., M., Ayla M. T., Alian A. A., Turki J. A., Abdulaziz M. B. R., Mohammed A., & Yazed A. (2021). Cost-Effectiveness of Telemedicine Care for Patients with Uncontrolled Type 2 Diabetes Mellitus during the COVID-19 Pandemic in Saudi Arabia. *Therapeutic Advances in Chronic Disease* 12, 20406223211042542
- Gajarawala, S. N., & Jessica N. Pelkowski. (2021). Telehealth Benefits and Barriers. *Journal for Nurse Practitioners* 17(2), 218-221
- Kamal, S. A., Muhammad S., & Priyanka K. (2020). Investigating Acceptance of Telemedicine Services through an Extended Technology Acceptance Model (TAM). *Technology in Society* 60, 101212
- Leonardsen, A. C. L., Camilla H., Ann K. H., & Vigdis A. G. (2020). Patient Experiences with Technology Enabled Care across Healthcare Settings- a Systematic Review. *BMC Health Services Research* 20(1), 1-17
- Mahdi, S. S., Raheel A., Gopi B., Tamsal K., Daniyal A., Mariam K., & Francesco A. (2022). The Promise of Telemedicine in Pakistan: A Systematic Review. *Health Science Reports* 5(1), e438

- Mahmoud Sr., Islam A. M. (2020). Usability of Telemedicine in Physical Therapy Rehabilitation: Systematic Review (Preprint). *JMIR Rehabilitation and Assistive Technologies*, 2196-25250
- Maroju, R. G., Sonali G. C., Mohammed K. S., Sonali K. B., & Harshal M. (2023). Role of Telemedicine and Digital Technology in Public Health in India: A Narrative Review. *Cureus*, 15(3), 35986
- Nieto-Calvache, A. J., Jose M. P., Lorgio R. A., William A., Alejandro C., Rozi A. A., Alejandro S. N., Juliana M., Lina M. V., & Adriana M. B. (2022). Telemedicine Facilitates Surgical Training in Placenta Accreta Spectrum. *International Journal of Gynecology and Obstetrics* 158(1), 137-144
- Nittari, G., Demetris S., Daniele T., Seyed K. T., & Francesco A. (2022). Telemedicine in the COVID-19 Era: A Narrative Review Based on Current Evidence. *International Journal of Environmental Research and Public Health* 19(9), 5101
- Orrange, S., Arpna P., Wendy, J. M., & Julia C. (2021). Patient Satisfaction and Trust in Telemedicine during the COVID-19 Pandemic: Retrospective Observational Study. *JMIR Human Factors* 8(2), e28589
- Pogorzelska, K., & Slawomir, C. (2022). Patient Satisfaction with Telemedicine during the COVID-19 Pandemic—A Systematic Review. *International Journal of Environmental Research and Public Health* 19(10), 6113
- Rajkumar, E., Aswathy, G., Aditi J., Aleena E., Thomas, N. M., Arunima, G., Sri R., Prachi K. P. R., Allen J. G., John R., & John A. (2023). Applications, Benefits and Challenges of Telehealth in India during COVID-19 Pandemic and beyond: A Systematic Review. *BMC Health Services Research* 23(1), 1-15
- Ralston, A. L., Natalie R. H., & Debra A. H. (2020). Tele-Mental Health with Marginalized Communities in Rural Locales: Trainee and Supervisor Perspectives. *Journal of Rural Mental Health* 44(4), 268
- Rutledge, C. M., Karen K., Patty A. S., Rebecca P., Christianne F., & Tina S. H. (2017). Telehealth and Ehealth in Nurse Practitioner Training: Current Perspectives. *Advances in Medical Education and Practice* 8, 399-409
- Sagar, R., & Swarndeep S. (2022). National Tele-Mental Health Program in India: A Step towards Mental Health Care for All? *Indian Journal of Psychiatry* 64(2), 117.
- Siegel, A., Yushen, Z., Nika M., Roger S. M., & Joshua D. R. (2021). Barriers, Benefits and Interventions for Improving the Delivery of Telemental Health Services during the Coronavirus Disease 2019 Pandemic: A Systematic Review. *Current Opinion in Psychiatry* 34(4), 434
- Vitacca, M., Laura C., Erminio T., Bruno P., & Lidia G. (2019). Tele-Assisted Palliative Homecare for Advanced Chronic Obstructive Pulmonary Disease: A Feasibility Study. *Journal of Palliative Medicine* 22(2), 173-178
- Vosburg, R. W., Kortney, A. R., Chuanyun, G., & Julie J. K. (2022). Patient and Provider Satisfaction with Telemedicine in a Comprehensive Weight Management Program. *Telemedicine and E-Health* 28(3), 384-390