

## ORIGINAL ARTICLE

**Patient satisfaction with telehealth and digital physical therapy practice during COVID-19**Amina Siddique<sup>1</sup>, Farrukh Murtaza<sup>2\*</sup>

1 Al-Razi Hospital, Lahore, Pakistan

2 Life Care Hospital, Lahore, Pakistan

**Keywords**

COVID-19

Prevention

Tele-Rehabilitation

Rehabilitation

This is an open access article under the CC BY-NC-ND license

**ABSTRACT**

The objective of the current study is to investigate the problems of the patient and the level of satisfaction of physiotherapists. Patients using telehealth and digital physical therapy procedures to minimize physical contact between physiotherapists and the patient during COVID-19. The study was conducted on 151 patients of different age groups. The data was gathered from Pakistan Society for the Rehabilitation of the Disabled (PSRD) hospital in Lahore. A patient satisfaction survey was used for patients in which the different satisfaction levels were defined for different age groups of males and females. The satisfaction level of the patient was observed with telehealth and digital physical therapy. Out of 151 patients, 67 were males and 84 were females. The range of age of these individuals was 20-30, 30-50 and 50-70 years. It was observed that females were more involved as compared to males. It is concluded that the maximum number of females were satisfied. Overall patients with age group 30-50 years were more satisfied as compared to other age groups. This study concludes that the satisfaction of patients with the use of telehealth technology varies. Since the young population use technology more whereas elderly patients have various concerns regarding treatment over the telehealth platform so they do not want to continue using telehealth therapy after pandemic but patients are satisfied in the current situation of lockdown and fear of getting infected with COVID-19.

**INTRODUCTION**

The remote diagnosis and treatment of patients by the use of telecommunications technology, is known as telehealth. The provision of health and health-related services such as therapeutic care, patient education, medical information services, and self-care, as well as their facilitation, using mobile communications and digital communication technology is known as telehealth. Live video conferencing, mobile health apps, "store and forward" digital methods, and

telemedicine are all examples of telehealth technologies (1). A form of telemedicine known as digital physical therapy uses digital and, in some circumstances, Internet-based health technologies to modify patient behavior (2).

The severe acute respiratory syndrome coronavirus 2 (SARS) CoV-2, which caused the pandemic sickness coronavirus disease 2019 (COVID-19), began to spread globally in December 2019 from Wuhan, China. COVID-19 symptoms vary according to the individual case, but typically include headache, breathing problems, exhaustion,

\*Correspondence: Farrukh Murtaza  
[farrukh.murtaza@uipt.uol.edu.pk](mailto:farrukh.murtaza@uipt.uol.edu.pk)

and a loss of taste and smell. One to fourteen days after initial virus exposure, symptoms may appear. At least one-third of those who suffer from it don't exhibit any symptoms (3, 4). The COVID-19 outbreak has put the world's health at risk and made it harder for physiotherapists to treat patients. In addition to have a moral commitment to stop the spread of COVID-19, physiotherapists must also provide client-centered therapy to assist community members in regaining or maintaining function (5).

For a long time, telehealth has been considered a practical way to attain outstanding, and greater physical therapy intervention (6). The use of telemedicine in physical therapy practice may be advantageous for patients having orthopedic diseases (such as total joint arthroplasty, low back pain), neurologic impairment (such as stroke, amyotrophic lateral sclerosis), and common chronic health conditions (7). While adhering to physical distance restrictions, telehealth enables patients to maintain function, prevent further hospitalizations, and assist with hospital discharge. (8). Digital health is well-positioned in Low and Middle-Income Countries (LMICs) to enhance healthcare because of the growth in mobile phone availability and internet connectivity. Digital health-based strategies are being incorporated into Pakistan's current healthcare system gradually but steadily (9, 10). The study's objective was to explore implementation methods to promote and enhance long-term telehealth physical therapy at a major urban academic medical center, as well as to evaluate the implementation of COVID-19 from the viewpoints of patients and clinicians (10).

## MATERIALS AND METHODS

Hospitals in Lahore, formerly operational Telehealth and Digital Physical Therapy platform were used to gather setting data. The study was finished within six months. The sample size was 151 patients. By using the convenience sampling technique, the patients were selected. Any patients (male and female) who can utilize digital media and have access to telecommunications was,

included. The patients with psychological conditions and access to internet or to digital media were excluded. Hospital and operational telehealth platform data was gathered and compared. During COVID-19, telehealth and digital physical therapy practices were accessed through patient satisfaction surveys. The data was analysis by using IBM SPSS version 21. The mean and standard deviation of each variable's descriptive statistics were computed. In order to determine statistical significance, level of significance was considered 0.05.

## RESULTS

A total of 151 people were enrolled in the study. Of the 151 patients, 67 of them were male and 84 were female. These people ranged in age from 20 to 30, 30 to 50, and 50 to 70. Majority of the respondents was from 20 to 30 years. Findings show that generally, the ratio of patients who are satisfied with services has grown due to telemedicine and digital physical therapy. Patient satisfaction was used as an outcome metric that examined the efficacy of telehealth therapy (Table 1).

Table 1. Telehealth satisfaction between male and female

Telehealth Satisfaction	Male	Female
Not all	1	0
Satisfied	19	25
Very Satisfied	25	24
More than Satisfied	23	23



Figure 1. Pie graph representation of the percentage of the male and female patients.

In Figure 1, it can be observed that 56% of the

participants were females and 44% were males. Whereas, female participants are more satisfied from telehealth as compared to male (Figure 2).

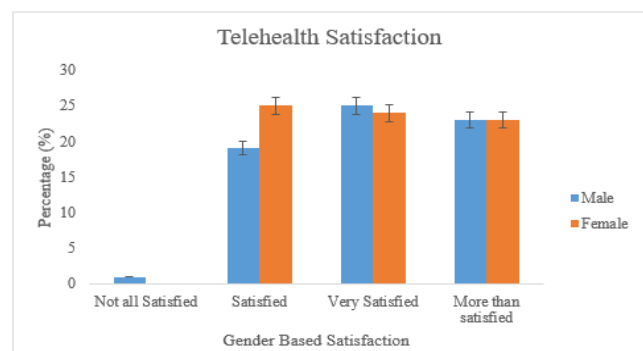


Figure 2. Graphical representation of the percentage of male and female patients

## DISCUSSION

The current study was executed to conclude a patient satisfaction with telehealth and digital physical therapy practice during COVID-19 in a study sample which consisted of total of 151 individuals from a wide-ranging age group from 20-70 years in which the greatest 56% of females that were more involved as compared to males and overall patients with age group 30-50 years were more than satisfied as compared to other age groups. The existing study established that patients were in trouble during pandemic times.

Similar to the analysis of current study, a San Francisco-based (6) investigation into the application of practical telehealth physical therapy during the COVID-19 epidemic was decided to be relevant to earlier times. However, based on current study, an investigation was conducted to assess the satisfaction levels of patients of different age groups and genders with telehealth and digital physical therapy in the context of COVID-19. The results of the current study demonstrate a substantial difference when compared to those of earlier research on telehealth and digital physical therapy.

In aligning of previous study (10) it is concluded that the benefits of adopting technology are to share and forward email as attachments for free and to use audio-based (Voice/Sound) technologies to

store data electronically. For cheap storage and transmission of audio/video presentations, audiotapes and videotapes are effective instruments. During the COVID-19 pandemic, vision-based technologies may be employed for real-time videoconferences with patients. However, disadvantages by using the technology are elderly patients raised various concerns regarding treatment over the telehealth platform. They do not want to continue use telehealth after the pandemic but are satisfied in the current situation of lockdown and fear of getting infected with COVID-19.

This elaborates further that not all the patients were positively associated with telehealth but having trouble and fear of pandemic times. This study has some limitations that need to be addressed in order to inform future health policy, quality improvement, and implementation science activities to increase the use of telehealth and research in Pakistani physical therapy practice. However, this work will help with future investigations.

## CONCLUSION

Overall, it is concludes that the satisfaction of patients with the use of telehealth technology varies with how much they are comfortable with technology in their life. Young population use technology more frequently and are more comfortable with it hence they are very satisfied and showed more interest in the use of telehealth even in the past pandemic times. Whereas, elderly patients have various concerns regarding treatment over the telehealth platform. They do not want to using telehealth after the pandemic but are satisfied in the current situation of lockdown and fear of getting infected with COVID-19.

## CONFLICT OF INTEREST

The authors declared no conflict of interest.

## REFERENCES

1. Ahmed MA, Ahmed U, Rizwan N, Tauqeer S,

- Javed H. Assessing the services quality: Expectations and perceptions of patients receiving physiotherapy services at teaching hospitals in Lahore, Pakistan. *Khyber Medical University Journal*. 2020; 12(2):143-148.
2. Dorsey ER, Topol EJ. State of telehealth. *New England Journal of Medicine*. 2016; 375(2):154-161.
3. Kazi AM, Qazi SA, Ahsan N, Khawaja S, Sameen F, Saqib M, Khan Mughal MA, Wajidali Z, Ali S, Ahmed RM, Kalimuddin H. Current challenges of digital health interventions in Pakistan: mixed methods analysis. *Journal of Medical Internet Research*. 2020; 22(9):e21691.
4. Khan UZ. Telemedicine in the COVID-19 Era: A chance to make a better tomorrow. *Pakistan Journal of Medical Sciences*. 2020; 36(6):1405.
5. Hashmi NR, Khan SA. Interventional study to improve diabetic guidelines adherence using mobile health (m-health) technology in Lahore, Pakistan. *British Medical Journal Open*. 2018; 8(5):e020094.
6. Nagra MH, Ehsan S, Ahmad U, Ali M, Hussain HA, Bakar A. Retracted: Implementation of a telemedicine service during COVID-19 pandemic in Pakistan. *International Journal of Clinical Practice*. 2021; 75(8):e14310.
7. Laver KE, Adey-Wakeling Z, Crotty M, Lannin NA, George S, Sherrington C. Telerehabilitation services for stroke. *Cochrane Database of Systematic Reviews*. 2020; 1(1):CD010255.
8. Keeney T. Physical therapy in the COVID-19 pandemic: forging a paradigm shift for rehabilitation in acute care. *Physical Therapy*. 2020; 100(8):1265-1267.
9. Malliaras P, Merolli M, Williams CM, Caneiro JP, Haines T, Barton C. 'It's not hands-on therapy, so it's very limited': telehealth use and views among allied health clinicians during the coronavirus pandemic. *Musculoskeletal Science and Practice*. 2021; 52:102340.
10. Rathore FA, New PW, Iftikhar A. A report on disability and rehabilitation medicine in Pakistan: past, present, and future directions. *Archives of Physical Medicine and Rehabilitation*. 2011; 92(1):161-166.