

Perception of Residents of Ahmedabad on Effectiveness of Tele-Health Physiotherapy Versus in-Person Physiotherapy Services

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ABSTRACT

BACKGROUND: Tele-health physiotherapy offers treatment, guidance, and consultation through digital platforms like video calls or apps, & enables access to physiotherapy services from the comfort of home, particularly in areas with limited access to clinics. Tele-health physiotherapy has gained prominence as an alternative to traditional in-person physiotherapy, especially in the wake of the COVID-19 pandemic. However, the effectiveness and acceptance of this modality in comparison to in-person services remain underexplored, particularly in urban settings like Ahmedabad.

AIMS: This study assesses the perceptions of Ahmedabad residents on the effectiveness of tele-health versus in-person physiotherapy, focusing on convenience, treatment outcomes, and satisfaction.

METHOD: A cross-sectional survey was conducted with 150 residents of Ahmedabad (98 females, 52 males) who had used either tele-health or in-person physiotherapy services. Participants shared their views on treatment efficacy, comfort, and overall satisfaction. Data were analyzed using descriptive statistics and comparative analysis.

RESULTS: Tele-health physiotherapy was perceived as more convenient, with higher satisfaction regarding accessibility. However, in-person physiotherapy was favored for personalized care and physical outcomes. 59.47% of tele-health users reported moderate effectiveness, while 88.38% of in-person physiotherapy users were satisfied overall.

Conclusion: Both tele-health and in-person physiotherapy services are considered effective, with distinct advantages. Tele-health offers convenience, while in-person care is preferred for more personalized comfort and physical results. The findings suggest that integrating both approaches could enhance patient care in urban settings.

Keywords: Tele-health physiotherapy, In-person physiotherapy, Patient perception, Patient satisfaction, Ahmedabad

INTRODUCTION

Telemedicine uses information and communication technology to provide diagnostic and management consultations irrespective of geographical and functional

distance. The importance of telemedicine lies in the fact that people living in less developed areas especially rural areas can receive state of the art medical consultation from experts worldwide.

The COVID-19 pandemic and the ensuing travel restrictions necessitated medical care to be provided to patients in their place of stay. This could be accomplished only by teleconsultation which apart from providing timely care reduced the risk of unnecessary exposure to infection. Telemedicine has helped public health care delivery during earlier emergencies too.

The Government of India (GOI) initiated various telemedicine services including National Teleconsultation Centre (CoNTec) and National Medical College Network to boost the medical response to COVID-19. The state governments adopted the “stay home OPD” launched by the GOI for providing teleconsultations.

The national telemedicine practice guidelines were subsequently released to decrease the ambiguity in the practice of telemedicine. India has over 560 million internet users accounting for one-half of our population. With the available technological advances and governmental support, the major limiting factor for telemedicine and teleconsultation is the interest evinced by the general public.^[1]

Telerehabilitation which is described by the American Telemedicine Association as the delivery of rehabilitation services via information and communication technologies to adults and children by a broad range of professionals is redefining the rehabilitation landscape and services^[2].

The advantages of telehealth include convenient access to high-quality care, safety for the patient and provider, and reduced burden on patients who worry about taking time off of work and dealing with travel, parking, and child care. However, to our knowledge, there are few studies that analyze patient satisfaction with telehealth PT^[3].

Traditionally, telehealth delivery methods were used for primary care purposes, medical specialties, the management and monitoring of chronic diseases, and rehabilitation services. Tele health allows for easier collaboration between multiple providers when developing treatment plans

for a patient. As mentioned, telehealth's major benefit is (instant) accessibility and thus a reduction in patient travel time and expenses. This increased access results in a decreased isolated feeling for those living in more rural areas. Tele health is not a new phenomenon; it actually dates back to early in the 1990's. In March 2010 as part of the Patient Protection and Affordable Care Act, telehealth was identified and considered an effective and efficient method to deliver healthcare.^[4]

Attendance at planned medical appointments has a significant impact on how well health services work. Poor attendance is linked to worse patient outcomes and is an inefficient use of the few resources available in the healthcare system. Patient-related and health system-related issues are both involved in the complicated problem of non-attendance. Access to transportation and closeness to the clinic have been shown to be among these variables that facilitate attendance, whereas a lack of time to attend appointments has been noted as a barrier^[5].

A potential solution to overcome many of the environmental barriers associated with poor healthcare access may be the implementation of telehealth, as an additional method of service delivery.^[6]

This study aims to explore the perspective of residents of Ahmedabad on telehealth physiotherapy services and in-person physiotherapy services.

MATERIALS & METHODS

Study Design

This study was conducted using a descriptive cross-sectional survey design. The purpose of this design was to gather data at a single point in time from a defined population—residents of Ahmedabad—to assess their perceptions, experiences, and preferences regarding two different modes of physiotherapy service delivery: telehealth physiotherapy and in-person physiotherapy.

The cross-sectional approach is particularly suitable for this study as it enables the

assessment of community awareness and acceptance levels, preferences, and satisfaction factors without requiring long-term follow-up. It also allows for comparing perceptions across different demographic groups (e.g., age, gender, education level) and identifying patterns or trends in public opinion that may inform future healthcare planning and physiotherapy service models. By employing a quantitative survey method, this design facilitated the collection of standardized data through a structured questionnaire, enabling statistical analysis and meaningful comparisons between tele-health and in-person physiotherapy perceptions.

Study Population

The study focused on the general adult population residing within the city limits of Ahmedabad, Gujarat, India. Ahmedabad is a metropolitan city with a diverse population in terms of age, education, income level, and access to healthcare services. This diversity provides a suitable sample to explore the perceptions of various population subgroups toward physiotherapy delivery methods.

Eligible participants included adults aged 18 years and above from any occupational background. Both male and female residents were considered for participation, provided they were able to read and understand English, as the questionnaire was designed in English for consistency and ease of analysis.

Study Setting

The data collection took place across both online and offline settings:

- Online platforms included social media groups, email circulations, and WhatsApp, where Google Form links were distributed to digitally literate individuals.
- Offline settings included physiotherapy clinics, wellness centers, hospitals, colleges, and community areas where printed copies of the questionnaire were distributed by trained data collectors.

This dual-mode approach ensured the inclusion of both tech-savvy individuals likely to use tele-health services and others who may prefer in-person services, thus providing a balanced perspective on both service models.

Sample Size

A total of 150 participants were included in the study. This sample size was chosen based on the exploratory nature of the study and the practical considerations related to time and resource availability. Although not statistically powered for population-wide generalization, a sample of 150 is considered appropriate for capturing meaningful trends and insights in community perception studies. The sample was selected using a non-probability convenience sampling technique, meaning participants were selected based on their availability and willingness to participate.

Inclusion Criteria

- Residents of Ahmedabad city
- Aged 18 years or above
- Male and female participants
- Individuals who can read and understand English

Exclusion Criteria

- Individuals with visual, speech, cognitive, or neurological impairments that could hinder their ability to comprehend and complete the questionnaire.

OUTCOME MEASURE

The primary outcome measure of this study was assessed using a structured and pre-validated questionnaire developed by the researcher. The questionnaire was specifically designed to evaluate the perception of residents of Ahmedabad regarding the effectiveness and comfort of tele-health physiotherapy services in comparison to in-person physiotherapy.

The questionnaire consisted of both closed-ended questions and Likert-scale items, allowing participants to express the degree

of their agreement or satisfaction across various parameters. The two main domains covered were effectiveness, comfort and convenience.

PROCEDURE

Following ethical approval from the Institutional Ethics Committee, the data collection process was initiated. Participants were recruited through both online and offline methods to ensure broader reach and inclusivity. Online participants received a Google Form link shared via social media, email, and messaging platforms, while offline participants were approached at physiotherapy clinics, fitness centers, and community spaces across Ahmedabad.

Before participation, all individuals were informed about the purpose of the study and were required to provide informed consent. Those meeting the inclusion criteria were asked to complete a self-administered questionnaire, which was available in English.

The questionnaire took approximately 10–15 minutes to complete and included sections on demographic details, prior experience with physiotherapy, and comparative perceptions of effectiveness and comfort related to tele-health and in-person physiotherapy services.

RESULT

In this study, participants were asked to evaluate their perception of the effectiveness and comfort associated with tele-health physiotherapy services compared to in-person physiotherapy. Regarding effectiveness, 42.8% of respondents rated tele-health physiotherapy as effective, whereas 30.1% considered in-person physiotherapy effective. (**Figure 1**)

This indicates a notable preference toward tele-health services in terms of treatment outcomes, possibly due to their flexibility, accessibility, and the increasing familiarity with virtual healthcare platforms. Interestingly, while in-person physiotherapy traditionally provides hands-on care and direct therapist-patient interaction, a smaller

proportion of participants rated it effective, suggesting that the perceived convenience and evolving quality of virtual care may be shifting patient preferences.

When evaluating comfort, 34.1% of participants found tele-health physiotherapy to be comfortable, compared to 39.9% who rated in-person physiotherapy as more comfortable. This suggests that, although tele-health offers advantages such as eliminating the need for travel and providing care at home, some individuals may still find in-person sessions more reassuring due to face-to-face interaction, hands-on guidance, and the structured clinical setting.

The close percentages in both categories highlight that each mode of delivery holds distinct advantages, and patient comfort and perceived effectiveness may depend on personal preferences, previous experiences, and the nature of the physiotherapy required.

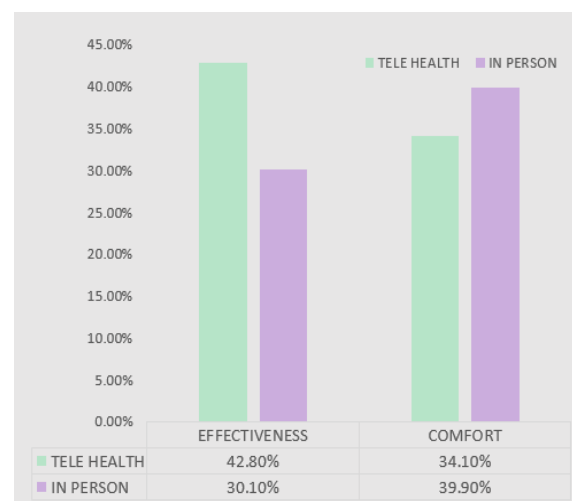


Figure 1

DISCUSSION

The findings of this study provide valuable insights into the evolving perceptions of residents of Ahmedabad regarding the effectiveness and comfort of tele-health versus in-person physiotherapy services. Interestingly, a greater proportion of participants (42.8%) rated tele-health physiotherapy as effective compared to 30.1% who favored in-person physiotherapy. This trend highlights a

growing acceptance of tele-health as a viable and efficient mode of physiotherapy service delivery. The convenience of accessing care from home, reduced travel time, and flexible scheduling may be contributing factors influencing participants' perception of tele-health's effectiveness.

Additionally, the advancements in digital health platforms, video consultations, and home-based exercise guidance have likely enhanced the quality of remote care, allowing patients to feel supported even in the absence of physical contact.

However, when it comes to comfort, a slightly higher percentage of respondents (39.9%) reported feeling more comfortable with in-person physiotherapy compared to 34.1% for tele-health. This suggests that despite the advantages of digital platforms, many individuals still associate comfort with traditional, face-to-face interactions. The presence of a therapist, physical assessments, manual techniques, and the clinical environment may provide a greater sense of security, reassurance, and personalized attention. This is particularly relevant for patients undergoing complex or acute rehabilitation, where physical manipulation and close monitoring are essential.

The results reflect a balanced perception, where both modalities are recognized for their strengths. Tele-health is gaining traction, especially among individuals who prioritize convenience and adaptability, while in-person services remain valued for their tactile and relational components. These findings are consistent with recent literature indicating that hybrid or blended physiotherapy models—combining virtual follow-ups with periodic in-person visits—may offer the most patient-centered approach moving forward.

The overwhelming advantages of telehealth physiotherapy include flexibility, reduction in travel for the service user but the service users' computer literacy may be poor and technology may fail and this may create a digital divide between areas with different

educational opportunities and varying internet speeds.^[7]

CONCLUSION

This study highlights the evolving perceptions of Ahmedabad residents regarding the effectiveness and comfort of tele-health versus in-person physiotherapy services. The findings reveal that while tele-health physiotherapy is increasingly recognized for its convenience, flexibility, and accessibility, in-person physiotherapy continues to be valued for its personalized care and hands-on approach.

A higher percentage of participants found tele-health effective, reflecting growing trust in digital health solutions. However, a slightly greater number reported comfort with in-person sessions, suggesting a continued preference for physical interaction and therapist engagement.

These results underscore the complementary strengths of both service modalities. Tele-health serves as an effective alternative, particularly in urban environments where time constraints, travel, or accessibility might be barriers. In-person care, meanwhile, remains crucial for patients needing direct assessment, manual therapy, or enhanced physical support.

Overall, the findings support the adoption of a hybrid physiotherapy model, which combines the convenience of virtual care with the effectiveness of in-person interventions. Such a model can help address diverse patient needs, improve satisfaction, and optimize outcomes in physiotherapy practice. Future research should focus on long-term outcomes, cost-effectiveness, and strategies for enhancing digital inclusivity, especially for populations with limited access to technology.

Declaration by Authors

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