

Use of Tele-physiotherapy as a treatment tool by physiotherapists in North Gujarat: A Survey

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Abstract:

Background: Tele-physiotherapy is the development of telemonitoring systems to facilitate or enhance independent rehabilitation of patients within their own home. Tele-physiotherapy is suitable for patients who live at a distance and therefore find it difficult to attend the clinic regularly due to the time factor and the cost of transportation. The positive effect of Tele-Physiotherapy had noted by various researchers but the use of Tele-physiotherapy in North Gujarat was not done previously, so the aim of the survey was to find out the use of Tele-physiotherapy among physiotherapists in North Gujarat. **Methods:** A qualitative research approach was used to conduct an online survey of physiotherapists in North Gujarat. A brief questionnaire was prepared with the basic information and strategic questions about the use of Tele-physiotherapy by physiotherapists. This questionnaire was sent to the physiotherapists working in the North Gujarat area by Mail, What's app, and Facebook Messenger. Data was collected and analyzed with the monkeysurvey.com. **Results:** The results showed that among n=50 participants, 28 (57.14%) participants were aware of the Tele-physiotherapy and among them only n=4 (9%) of the physiotherapists regularly using Tele-physiotherapy and only n= 9 (18%) of Physiotherapists prefer Tele-physiotherapy over Conventional Physiotherapy Treatment. **Conclusions:** The use of Tele-Physiotherapy is limited in the North Gujarat.

Keywords: Tele Physiotherapy, Uses, North Gujarat, Survey.

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I. Introduction

The science and practice of telehealth have undergone rapid growth in recent years.¹ Many health disciplines have integrated telehealth in the healthcare delivery.²

These disciplines include medicine, radiology, nursing, rehabilitation, physiotherapy, pharmacy, pediatrics, cardiology & ophthalmology.²

American Telemedicine Association (2010) states that telerehabilitation refers to the delivery of rehabilitation services via information and communication technologies to adults and children by a broad range of professionals that may include, but not limited to, physical therapists, speech-language pathologists, occupational therapists, audiologists, rehabilitation physicians and nurses, rehabilitation engineers, assistive technologists, teachers, psychologists, and dieticians.³

High quality randomized, controlled trials that support the benefits of telehealth interventions in many physiotherapy sub-disciplines have been published over recent years.¹

Tele-physiotherapy is the development of telemonitoring systems to facilitate independent rehabilitation of patients within their own home.⁴

Telemonitoring is a convenient way for patients to avoid traveling and to perform some of the more basic work of healthcare for themselves. The objective of tele-physiotherapy is to allow patients and medical experts to carry on their sessions through telecommunication networks as if they are in the same place. The applications of tele-physiotherapy have been previously documented in some medical conditions.⁴

Tele-physiotherapy can take many different forms, with the components driven by the goals of treatment. Videoconferencing provides direct contact between patients and physiotherapists, either one-to-one or in a virtual group setting.¹

The increase in our capacity to deliver physiotherapy at a distance using telehealth has occurred at the same time that 'hands-on' physiotherapy techniques have become less important for some health conditions. For example, electrotherapy is no longer recommended for routine treatment of low back pain, whereas exercise therapy is an important component of care.¹

Trials in tele-physiotherapy, which typically involve delivering a treatment from a remote location, have generally been more successful, producing similar results to interventions that are delivered face to face. Many of PT interventions, which typically involve goal setting, exercise prescription and self-management training, do not require hands-on therapy and are highly amenable to tele-physiotherapy.¹

Pahwa P et al (2018) in a mini-review study discuss about role of tele-physiotherapy for cerebral palsy children in school settings and concluded that tele-physiotherapy for cerebral palsy children is an effective mode of treatment in developing motor skills.⁵

A Systemic Review and meta-analysis study by Van Egmond M et al (2018) showed the effectiveness of physiotherapy with telerehabilitation on postoperative functional outcome and quality of life in surgical patients and concluded that Physiotherapy with telerehabilitation has potential to increase the quality of life and is feasible but less equally effective as usual care in surgical patients.⁶

Odole A et al (2014) in their study investigated the effect of a 6-week tele-physiotherapy program on quality of life (QoL) of patients with knee osteoarthritis. Fifty patients with knee OA were randomly and equally assigned into two treatment groups: Clinic Group (CG) and Tele-Physiotherapy Group (TG), they concluded that Tele-physiotherapy using telephone medium improved Quality of Life (QoL) in patients with knee OA comparable to clinic-based treatment.⁷

Despite the potential for tele-physiotherapy to increase the capacity of the health system and deliver better health outcomes, there have been relatively fewer articles that show the use of Tele-Physiotherapy regularly by the Physiotherapists.

Therefore the survey aimed to identify the use of tele-physiotherapy as a treatment tool by the physiotherapists in North Gujarat.

II. Methods

A cross-sectional survey was conducted. The duration of the survey was December 2019-March 2020. Ethical approval for this study obtained from the institutional ethical committee. The Participants were the Physiotherapists working in North Gujarat. For digital and speedy collection of the information, the questionnaire was prepared with the help of www.surveymonkey.com.

The questionnaire included basic information and strategic open and close-ended questions about the use of Tele-physiotherapy by physiotherapists working in the North Gujarat. A total of 65 Physiotherapists were included in the study and send them the questionnaire through Mail, What's app or facebook messenger. Among them n=50 physiotherapists were interested to join the survey and they gave inputs.

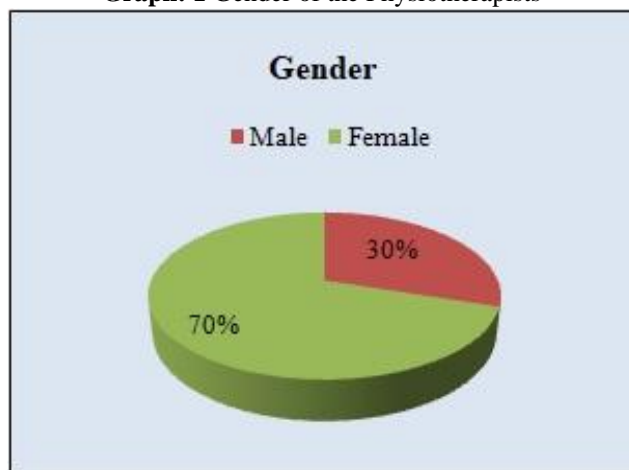
III. Data Collection & Data Analysis

The Total study population comprised of the physiotherapists (n=50) working in North Gujarat. Among the entire physiotherapists working in the North Gujarat area (n=65) majority of the physiotherapists (n=50) showed interest in the survey. The majority of the physiotherapists (n=25) responded through what's app and some of them (n=18) responded through facebook messenger and remaining Physiotherapists (n=07) were responded via mail. The data were collected and analyzed with the descriptive statistics on survey monkey.com.

IV. Results

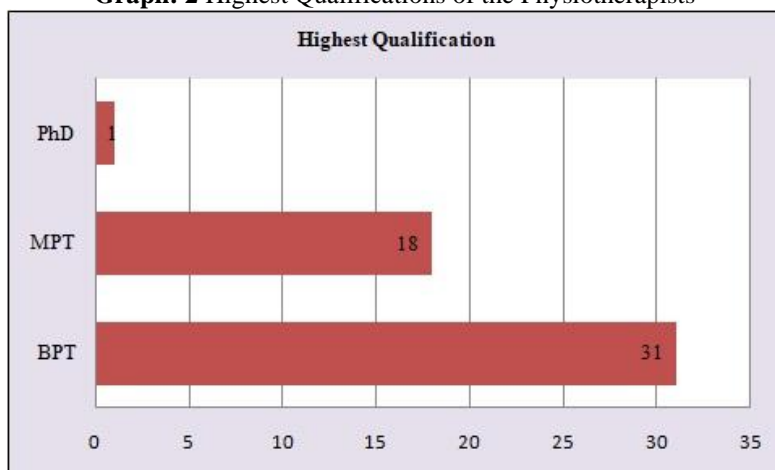
Graph 1 shows the demographic data of the participated Physiotherapists. Among the (n=50) Physiotherapists 30% (n=15) were Male and 70% (n=35) were female.

Graph: 1 Gender of the Physiotherapists



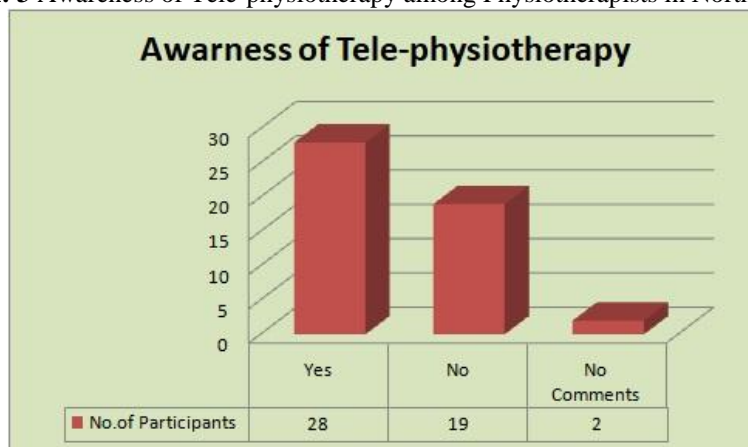
Graph 2 shows the Highest qualification of the Physiotherapists (BPT=31, MPT=18, Phd=01). The total professional experience varies from 2 months to 13 years.

Graph: 2 Highest Qualifications of the Physiotherapists



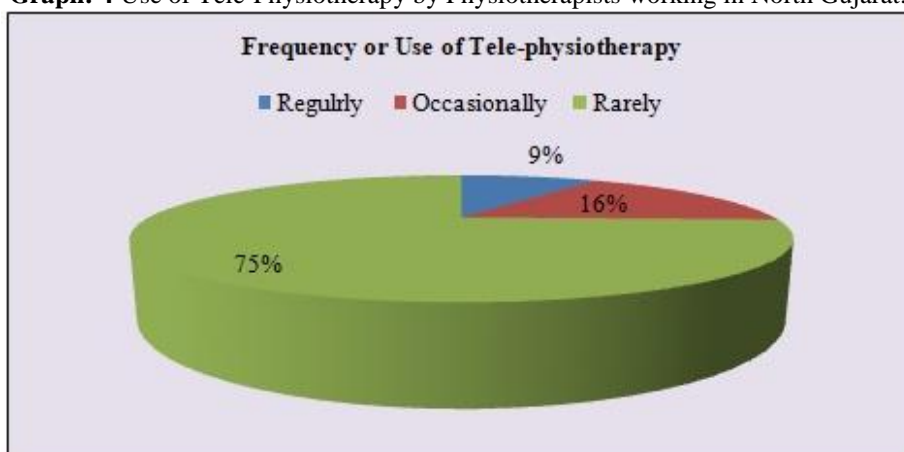
It is described in the Graph 3, that the awareness of Tele-physiotherapy among 57.14% (n=28) whereas 38.78% (n=19) were not aware of Tele-physiotherapy at all and 4.08% (n=02) responded to no comments and 1 skipped the question.

Graph: 3 Awareness of Tele-physiotherapy among Physiotherapists in North Gujarat



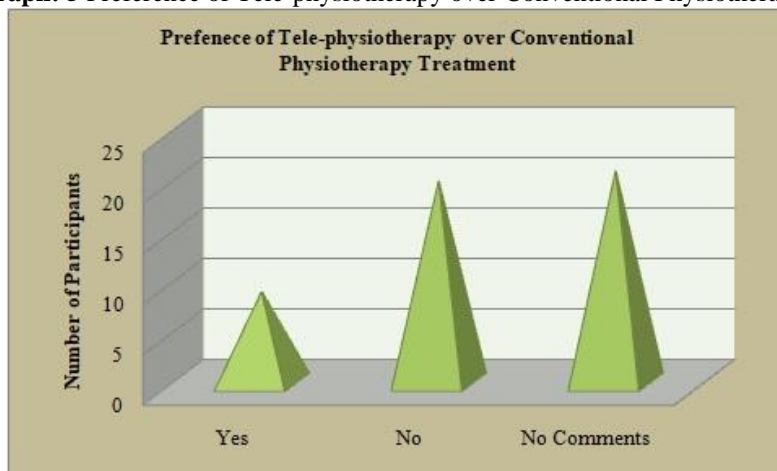
As per Graph 4, among the participants only 9 % (n=04) regularly using Tele-physiotherapy while 16% (n=07) occasionally using tele-physiotherapy and the majority of the participants that is 75% (n=32) rarely using Tele-physiotherapy as a treatment tool.

Graph: 4 Use of Tele-Physiotherapy by Physiotherapists working in North Gujarat.



Graph 5 shows that among participants only 18% (n=9) participants prefer tele-physiotherapy over conventional physiotherapy while 40% (n=20) do not prefer tele-physiotherapy over conventional physiotherapy and 42% (n=21) were responded to No comments.

Graph: 5 Preference of Tele-physiotherapy over Conventional Physiotherapy.



V. Discussion

From the available and accessible literature, there is no single study on the awareness, knowledge and perception of physiotherapists about tele-physiotherapy in the North Gujarat area in any published literature.

Belinda J et al (2018) in their study investigated the physiotherapist's perception and willingness to use a telephone and internet-mediated service model for exercise therapy for patients with knee and/or hip osteoarthritis and concluded that it offers time-saving and privacy advantage for patients.⁸

Tele-physiotherapy is an emerging concept in India and especially in the North Gujarat area. The adoption of tele-physiotherapy in clinical practice has many benefits. The awareness and knowledge of tele-physiotherapy among physiotherapists in the North Gujarat is good. The survey revealed that the physiotherapists working in North Gujarat are fairly knowledgeable about tele-physiotherapy.

Physiotherapists in North Gujarat Area are fairly knowledgeable and know about the advantages such as treatment that can be given from anywhere and patients from a remote area can also be easily assessable for physiotherapy treatment. Many Physiotherapists agree with the use of tele-physiotherapy for elderly patients and patients from remote areas. Apart from these they also gave the idea that Tele-physiotherapy gave provision to give physiotherapy service when in patient visit is not available, by using telecommunication such as video conferencing. As per many physiotherapists tele-physiotherapy is the best way to teach ergonomics for the patients and even we can visualize that patient is properly performing exercises or not. Even during pandemic disease situation physiotherapy treatment can be continued via Tele-physiotherapy.

These findings are also in accordance with Alessandro Peretti (2017) their review study tele rehabilitation reduces the costs of both health care providers and patients compared with traditional inpatient or person-to-person rehabilitation. Furthermore, patients who live in remote places, where traditional rehabilitation services may not be easily accessible, can benefit from this technology.⁹

Apart from these many advantages there are many factors or challenges found from this survey. This study has identified perceived challenges to the implementation and development of tele-physiotherapy in North Gujarat. Most of the identified barriers were unavailability of telecommunication infrastructures, ethical issues, financial implication, training of physiotherapists, and physiotherapist-patients' contact.

The financial implication of tele-physiotherapy on hospitals was also one of the identified challenges to the implementation of tele-physiotherapy in North Gujarat.

Furthermore, issues bordering on the ethical grounds such as lack of confidentiality, patient privacy, abuse of use by patients, internet fraud, and quackery have been identified in this research as challenges to implementation of tele-physiotherapy in North Gujarat.

Similarly, these challenges to tele-physiotherapy have also been identified in the developed nations. For instance, in Canada, the Canadian Alliance for Physiotherapy Regulators (2006) documented that potential for increased risk of fraud because of the elimination of face-to-face contact, increased ease of unauthorized individuals posing as registered practitioners, increased potential for providers to practice outside of their scope of practice, and potential for decreased security of information are concerns and challenges related to the tele-practice.⁸

In order to address these challenges, there exist position statements for professionals in the field of tele rehabilitation in addressing issues such as clinical and technical standards, administration, ethics, professional licensing, liability and malpractice, privacy and confidentiality (American Telemedicine Association, 2010; National Initiative for Telehealth Guidelines, 2003) in developed countries.^{4,10}

Many Physiotherapists were unaware of the use of Tele-physiotherapy. Physiotherapy education in North Gujarat should include telehealth, health informatics, and tele-physiotherapy as courses in the university physiotherapy curriculum. This should invariably address the challenge of inadequate knowledge and negative perception of tele-physiotherapy among physiotherapists.

These findings are also in accordance with the Adesola C. Odole, in their study use of Tele-physiotherapy and its implementation and they also find the perceived challenges by Physiotherapists in Nigeria.⁴

The above challenges were the reason for the limited use of Tele-physiotherapy by the North Gujarat Physiotherapists. Further Study can be performed in the other geographical area also. Even the perception of Tele-physiotherapy among physiotherapy students can also be included in further studies.

VI. Conclusion

The Survey concluded that the Physiotherapists working in the North Gujarat are fairly knowledgeable about Tele-physiotherapy and found various advantages and disadvantages for implementing Tele-physiotherapy in regular Physiotherapy practice.

Conflict of interest: None declared

Acknowledgment: To the participants who participated and gave feedback for this survey.

Ethical approval: The study was approved by the Institutional Ethical Committee.

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