



KNOWLEDGE AND ATTITUDE TOWARDS TELEREHABILITATION BASED PRACTICE AMONG PHYSIOTHERAPISTS IN JALGAON DISTRICT –AN OBSERVATIONAL STUDY

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Abstract: **Aim:** To assess the knowledge and attitude towards telerehabilitation based practice among physiotherapists. Telerehabilitation is defined as a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment. **Relevance of study:** TR is a medical service provided at a distance through digital media such as whatsapp , zoom , google meets etc. It includes assessment, diagnosis ,prognosis, and treatment via virtual mode through the education of patient and family members. The main objective of the study is to evaluate the extent of the use of attitude towards telerehabilitation among physiotherapists in jalgaon district. **Methodology:** In this observational study, it was a questionnaire based survey. A self-made questionnaire was validated and circulated online through google forms , sample comprised of 94 practising PTs using convenient sampling and were included according to inclusion and exclusion criteria. **Results:** The results of this study showed that more than 50% of PTs had knowledge about telerehabilitation. This study showed that a high percentage of PTs reporting TR to be reliable 83% and valid 74%. **Conclusions:** The study concluded that there was a relatively high no. of PTs with knowledge of TR ,however facilities and usage was limited. **KEYWORDS:** Tele-rehabilitation, Physiotherapy, Attitude, Knowledge

I. INTRODUCTION

II. Telerehabilitation is defined as a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment. It is a medical service provided at a distance through digital media such as whatsapp, zoom, google meets,.....etc. It includes assessment, diagnosis, prognosis, and treatment via virtual mode through the education of patients and family members. Normally tele rehabilitation is provided to individuals who are living in geographically distant locations or to individuals who are not able to reach the rehabilitation center due to disability and financial constraints.

III. Healthcare systems across the globe have undergone a rapid transformation due to advancements in digital communication, consequently, changing the paper-based health record system into the electronic health records (EHR) system^[1]. Initially, hospital administrative activities and employer's data were managed through electronic means, but now even the patient management systems have adopted electronic health assessment, diagnosis, and treatment known as telemedicine.

IV. TR is a form of rehabilitation using telecommunication technology to benefit patients located in remote areas. TR includes health care providers such as speech pathologists, occupational therapists, biomedical engineers, physiotherapists, and other allied health care personnel. It covers all the stages of rehabilitation from assessment, diagnosis, prognosis, intervention to follow-up. Rapid development in TR services stems from the desire to provide the best rehabilitation to beneficiaries irrespective of their location. Some disorders limit an individual's mobility critically, which prevents them from attending local health service.

V. One of the most recently evolved branches of development in the field of telemedicine is tele rehabilitation (TR). TR enables a disabled individual to receive health advice, assessment, and treatment from a distant expert. Traditional physical therapy involves

physical touch used to guide, direct, and facilitate movement.

The most well-known type of telerehabilitation is the replication of one-on-one physiotherapy via video conferencing, which is now referred to as "Virtual Care." Rehabilitation is required to enhance people's functioning and quality of life by improving their abilities to live, work and learn much as feasible. The impact is felt throughout the neighbourhood, society of the economy is a while rehabilitation multifaceted, multicomponent, and interdisciplinary intercede, it is also amultifaceted, multicomponent, and multidisciplinary intervention. the minimum components necessary are determined by the specific health condition as well as other factors such as the health system or method available.

I. When distance is a factor, telehealth is centered to administer health treatments outside of traditional health clinics researchers depend on telecommunications and virtual technology. Telehealth is a dynamic notion that changes as requirements and technology terminologies like tele Health, although m-Health, computerized health, virtual health, and digital therapeutics have grown in popularity, they are not interchangeable due to distinctions^[3]

II. From the availability to the actual administration of cutting-edge treatment specialist operations, technology has altered every aspect of medical rehabilitation, Telerehabilitation is a sort of information and communication technology that allows people to receive rehabilitation services from their homes or other locations via the internet. For both doctors and patients making technology to conduct rehabilitation services has various advantages. It gives the patient a sense of personal freedom and accreditation capability to manage their treatment other words rather than being passive recipient's passive recipients of care, they are becoming active participants. It makes healthcare more accessible to the person, people who live in rural locations or have physical difficulties, transportation issues, or socioeconomic concerns. additionally, lowers the cost and time spent traveling both the healthcare practitioner and patient.

III. According to research people with long-term conditions such as stroke, traumatic brain injury, and other neurological infections have unmet rehabilitation needs in their communities.

IV. A HEP is a treatment plan created for a single patient in a setting that focuses on the specific challenges identified by their physiotherapist. This exercise program may be customized between physiotherapy treatments, including repetition set and supplementary strengthening endurances to be completed by the patient at home^[4]. Continued home training guarantees that the patient's condition has improved over time, and this has been recognized. The physiotherapist's ongoing customization of the HEP from each session added to the patient's.

Resilience and trust in their altering regimen. When the patient has returned to (or possibly beyond) their baseline better outcome for the patient is indicated by both the patient's and physiotherapist's understanding of and commitment to reaching both short- and long-term objectives Non-compliance rates as low as 20% have to exist reported in various reports measuring patient compliance.

I. Tele rehabilitation is an improvement of healthcare-related treatments and services, as detailed in the previous sections. Because mobile technologies are still in their infancy and are only beginning to gain traction, information and study are scarce on their use and benefits^[6].

NEED OF THE STUDY.

- Telerehabilitation is a medical service provided at a distance through digital media such as whatsapp, zoom, google meets, ...etc. It includes assessment, diagnosis, prognosis, and treatment via virtual mode through the education of patients and family members.
- Despite some limitations telerehabilitation offers a safe and effective alternative to traditional in person care in physiotherapy.
- Patients who live in remote or rural areas can access rehabilitation services that may not have been available to them otherwise, increasing their access to care.
- Therefore, there is a need to evaluate the attitude and knowledge towards telerehabilitation among the physiotherapist.

3.1 Population and Sample

An observational study was conducted through online survey on 94 practicing physiotherapists. Criteria for inclusion was practicing PTs, practicing Interns and practicing Clinicians. And for exclusion was Undergraduate students i.e; 1st to 4th year physiotherapy students.

3.2 Data and Sources of Data

Google form, consent form

3.3 Theoretical framework

- Ethical clearance was obtained from the institutional ethical committee.
- The participants were selected based on inclusion and exclusion criteria.
- Participants were provided with information, consent form and procedure was explained to them
- Then the participants were provided with the Online Questionnaire.

➤ Data was analyzed statistically and results were generated
RESEARCH METHODOLOGY

- 1) **StudyDesign:**An Observationalstudy
- 2) **Study Setting:**Jalgaon
- 3) **Sample Size:** $n = z^2 pq / d^2$
- 4) **StudyDuration:**6 months

3.4 Statistical tools and econometric models

Surveyresultsanalysed using SPSS version20 (SPSSInc.,Chicago, IL, USA) and then descriptive statistics were obtained. The data were presented as frequency andpercentage of response from the participants

3.4.1 Descriptive Statistics

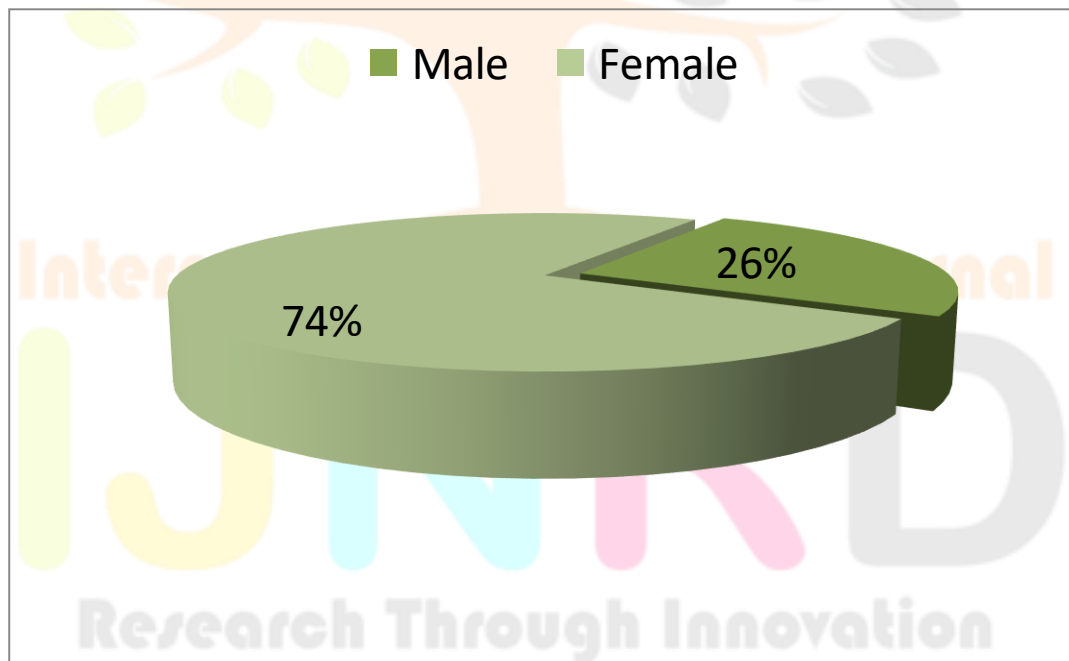
Surveyresultsanalysed using SPSS version20 (SPSSInc.,Chicago, IL, USA) and then descriptive statistics were obtained. The data were presented as frequency andpercentage of response from the participants.

IV. RESULTS AND DISCUSSION

4.1 Results of Descriptive Statics of Study Variables

Table 4.1: GenderwisedistributionofMaleandFemale:

Male	Female
23	71



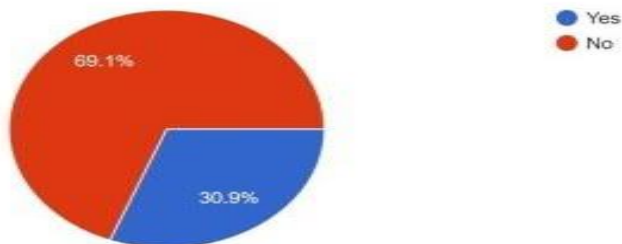
Piechartshowingthe genderwisedistributionofstudysubjects. There were 94participants in the study,among them23 are male and71are female

Table 4.2

Do you know telerehabilitation?	Percentage
Yes	92.6%
No	7.4%

Do you have telerehabilitation at work?

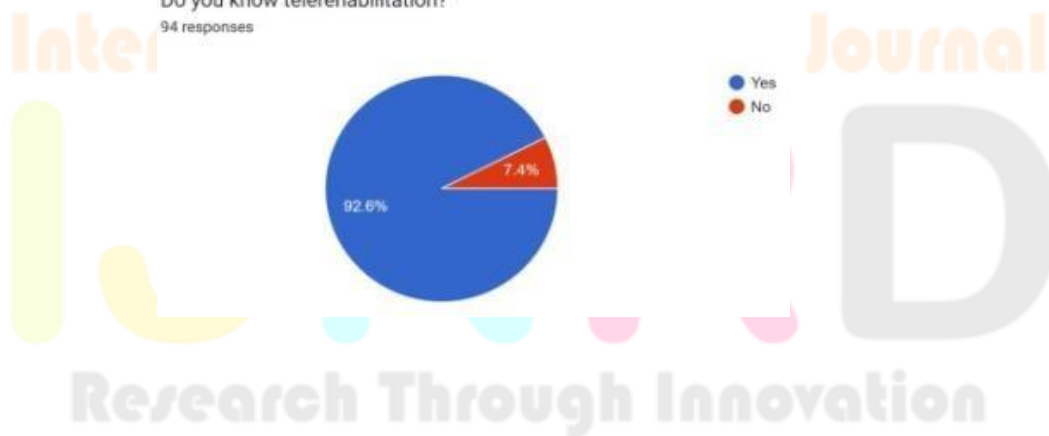
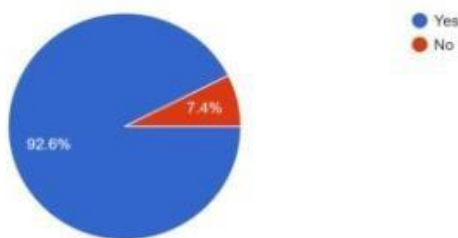
94 responses



Do you have telerehabilitation at work?	Percentage
Yes	30.9%
No	69.1%

Do you know telerehabilitation?

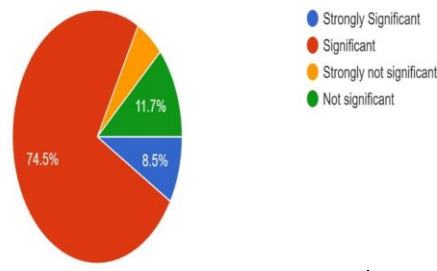
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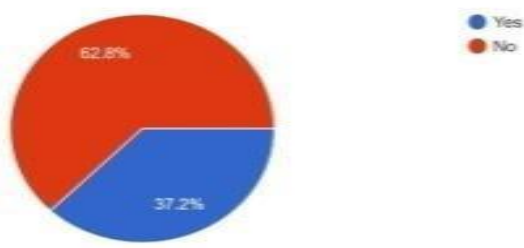
What do you think about telerehabilitation validity?	Percentage
Strongly significant	8.5%
Significant	74.5%
Strongly not significant	5.3%
Not significant	11.7%

What do you use telerehabilitation for?	Percentage
Assessment	4.3%
Diagnosis	
Prognosis	
Intervention	
Follow Up	

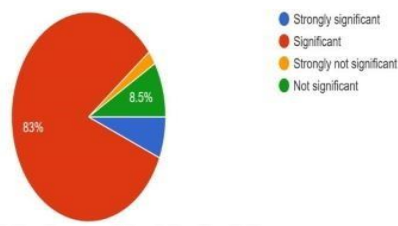
What do you think about telerehabilitation validity?
94 responses



Do you use telerehabilitation at work?
94 responses



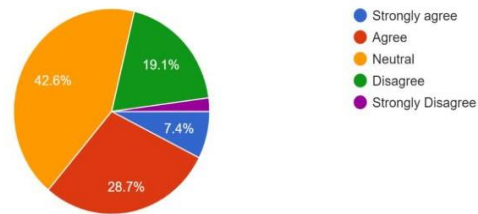
What do you think about telerehabilitation reliability?
94 responses



Strongly not significant	2.1%
Not significant	8.5%

Telerehabilitation is same as telemedicine?	Percentage
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Telerehabilitation is same as telemedicine?
94 responses

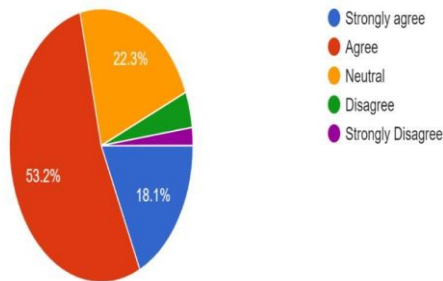


telemedicine?	
Stronglyagree	7.4%
Agree	28.7%
Neutral	42.6%
Disagree	19.1%
Stronglydisagree	2.1%

Do you think telerehabilitation should be implemented in all hospitals ?	Percentage
Stronglyagree	18.1%
Agree	53.2%
Neutral	22.3%
Disagree	4.3%
StronglyDisagree	2.1%

Do you think telerehabilitation should be implemented in all hospitals?

94 responses



What do you think that a patient can benefit from telerehabilitation ?	Percentage
Agree	47.9%
Stronglyagree	16%
Neutral	31.9%
Disagree	3.2%
Stronglydisagree	1.1%

What do you think that a patient can benefit of telerehabilitation?

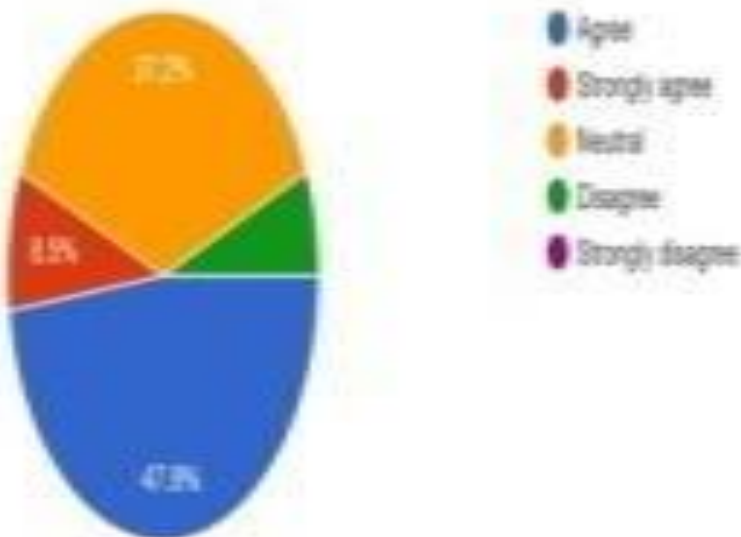
94 responses



Telerehabilitation will help in easy access to health ?	Percentage
Agree	47.9%
Strongly agree	8.5%
Neutral	37.2%
Disagree	6.4%
Strongly disagree	

Telerehabilitation will help in easy access to health? (simple and easy)?

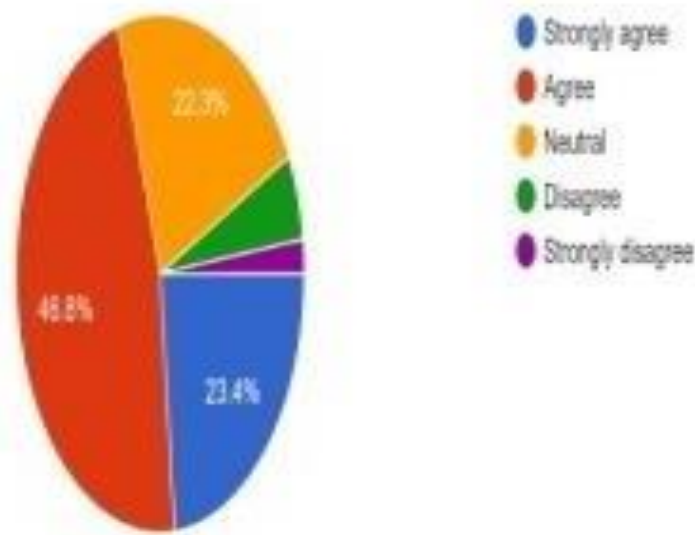
54 responses



Response	Percentage
Strongly agree	23.4%
Agree	46.8%
Neutral	22.3%
Disagree	5.3%
Strongly disagree	2.1%

Telerehabilitation should be included in university curriculum and various platforms such as seminar and workshops?

94 responses



DISCUSSION

- This survey based study aimed to assess the knowledge and attitude towards telerehabilitation –Based practice among physiotherapist in jalgaon district.
- The Study found that Majority of PTs Reported having Sufficient Knowledge about TR.
- However the usage & facilities are limited to achieve effective implement of TR in PT setting.
- A vast number of researchers had evaluated the reliability & validity of using TR. Similary these study showed a high Percentage of PTs reporting TR to be a reliable 83% & valid 74%.
- More than 50% of PTs in this study reported that the TR can be used for Assesment , Prognosis , Diagnosis, Intervention and Follow up .
- About 63.8% PTs use telerehabilitation for assessment, prognosis, diagnosis, intervention and follow up .
- A study conducted by Pamela seron et al 2021 concluded that telerehabilitation in physical therapy could be comparable

with in –person rehabilitation such as osteoarthritis ,low back pain ,hip and knee replacement .

- Also, studies conducted in India reported that the attitude of healthcare providers was good ,such as a survey conducted on the attitude towards tele-dentistry shows 70% of healthcare providers had a positive attitude .
- Likewise ,a survey that assesses the attitude towards healthcare ICT and home follow up in Sweden, indicated that 70% of health professionals have a positive attitude.
- Similarly a study conducted in Egypt on telemedicine where 75% of dermatologist have a good attitude towards telemedicine.

ACKNOWLEDGEMENT

I would like to thank DR. JAYWANT NAGULKAR,

Principal, DR. Ulhas Patil college of Physiotherapy, Jalgaon for allowing me to conduct study. I am highly grateful to DR.

ASHWINI KALSAIT Associate Professor, DR. Ulhas Patil

College of Physiotherapy, Jalgaon, for her guidance,

encouragement and support. I would like to thank all my teachers

for their immense support and guidance. Lastly, I would like to

devote my heartily gratitude towards my friends and family for

their love, support without which this effort won't be fruitful.

KALYANI B. APPALWAR

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