Original Research Article

EFFECT OF TELEREHABILITATION IN POST VIRAL FATIGUE AFTER COVID19: A NARRATIVE REVIEW

ABSTRACT

PURPOSE:

The purpose of this study was to see how telerehabilitation affected post-viral tiredness following covid19.

MATERIALS AND METHODS:

Various computerised data bases were used to conduct a structured Literature search. PubMed, Google Scholar, Pedro, American Physical Therapy Association (APTA), World Health Organization (WHO), World Confederation Physical Therapy (WCPT), Medscape, Research-gate Embase, American Physical Therapy Association (APTA), World Health Organization (WHO), World Confederation Physical Therapy (WCPT), Medscape, Research-gate Embase Clinical trials, randomised controlled trials, cross-sectional studies, cohort studies, and literature reviews were all part of the search strategy. The search was restricted to English literature alone.

RESULT:

A total of 75 items were found in various electronic databases. Based on inclusion and exclusion criteria, 57 articles containing actual substance were shortlisted. Telerehabilitation in post-viral fatigue syndrome following covid 19 had a good effect on the patients, according to the study. It helps individuals with Post-Viral Fatigue Syndrome increase their breathing rate, physical strength, and overall function.

CONCLUSION:

This narrative review of the literature discovered that physiotherapy therapies, particularly Telerehabilitation, have a good effect in post-viral fatigue following covid19. Telerehabilitation has a greater impact on reducing the symptoms of post viral fatigue syndrome patients and will aid in their recovery.The things taught in Telerehabilitation also assist a lot, and the exercise improves the cardiovascular system by increasing HR (heart rate), breathing rate, body temperature, and blood pressure (Blood pressure).

KEY WORDS: Telerehablitation , covid19 , respiratory diseases, Post viral fatigue syndrome

Introduction

Telerehabilitation is defined as the use of technology to assist people with disabilities "Data and communication technologies are used to deliver recovery and rehabilitation services. Assessment, evaluation, checking, anticipating, intervening, oversight, instruction, meetings, and coaching are all examples of telerehabilitation administrations" [1] Telerehabilitation is a new and innovative methodology that can provide real assistance during the home restoration procedure for the improvement of engine, cognitive, or mental disorders. It can provide services such as physiotherapy, language training, word-related treatment, patient telemonitoring, and teleconsultation to help patients who are confined to their homes and do not have access to specialists or other medical professionals [2]. There are a couple of studies that have involved telerehabilitation in patients with COVID-19. This mediation has been demonstrated to be viable in respiratory, cardiovascular, metabolic, and neurological pathologies [3]post-viral condition, otherwise called post-viral weariness, is a sensation of fatigue and shortcoming that continues after an individual has recuperated from a viral sickness. It can grow even after a typical disease like the flu [4].

For a long time, post-viral fatigue has been recognised and investigated. Previous research on post-viral tiredness is reviewed in this article [6]. Upper respiratory tract infections frequently result in short-term fatigue, emphasising the importance of considering time periods after the person has recovered from the acute symptoms [6,8]. More serious infections can cause long-term exhaustion, and human herpesviruses and enteroviruses have been linked to chronic fatigue syndrome. It's not surprising, then, that a severe disease like COVID-19 can result in long-term

symptoms. Long Covid is a condition that has only recently been identified, and the symptoms are discussed here. Researchers are currently in the process of identifying the condition [6,7].

Post-viral weariness condition (PVFS) is an ailment that is sorted among different problems of the sensory system in the 11th update of the International Classification of Diseases. As per the current codification framework distributed by the World Health Organization in 2019, PVFS covers constant exhaustion disorder (CFS) and harmless myalgic encephalomyelitis (ME), baffling conditions recently assigned as individual substances, and presently arranged under the PVFS umbrella. Albeit a few CFS/ME cases are not gone before by a viral contamination. [5]. Post-viral exhaustion is incessant and normal, and can be noticed after contamination with various infections. By and large, the greatness of exhaustion is connected with the seriousness of the disease, and may to a limited extent mirror the recuperation saw in any extreme ailment and it is to depict the relentless impacts seen after COVID-19 contamination, and the condition currently alluded to as Long Covid [6].The COVID-19 pandemic, which was caused by the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), has had a devastating effect on the global population, with a high fatality rate. The current study examines the literature on the short- and long-term health effects of previous epidemics and illnesses in order to determine whether there are any health risks related with COVID-19 recovery. Such problems, according to previous research on post-epidemic and post-infection recovery, include the development of significant weariness. Certain factors, such as the severity of infection, in addition to the 'cytokine storm' experienced by many COVID-19 patients, may contribute to the development of later health problems [8].

Rehabilitation professionals plays an important role in speeding up the recovery of post viral fatigue syndrome patients[7].

Table 1. Review of literature

AUTHOR & YEAR OF PUBLICATION	**TOPIC**	**METHOD**	**RESULT**
Marcelo Dalbosco-Salas et.al.,Rodrigo Torres-Castro et.al.,Andres Rojas Leyton et.al.,2020	Effectiveness of a Primary Care Telerehabilitation Program for Post-COVID-19 Patients: A Feasibility	In Chile, an observational, prospective investigation was carried out in seven primary care centres. Adult patients (>18 years) who had previously been infected with	After the intervention, the 1-min STST improved from 20.5 10.2 (53.1 25.0 percent expected) to 29.4 11.9 (78.2 28.0 percent projected) repeats (p 0.001). From

	Study	SARSCoV-2 were included in the study. The telerehabilitation program included 24 supervised home-based exercise training sessions. Before and after the intervention, the efficacy was assessed using the 1-minute sit-to-stand test (1-min STST), the 36-Item Short Form Health Survey (SF-36), weariness, and dyspnea symptoms. A total of 115 patients (55.4 percent female) with an average age of 55.6 12.7 years were included in the study. Fifty-seven patients (50%) had previous hospitalizations, with 35 (30.4%) being admitted to the ICU [11].	39.6 17.6 to 58.9 20.5, the SF-36 global score improved dramatically. After the intervention, fatigue and dyspnea were greatly reduced. Despite the lack of a control group, this study found that a telerehabilitation programme used in primary health care is practical and helpful in increasing physical capacity, quality of life, and symptoms in adult COVID-19 survivors [9].
Jianan Li et.al., Wenguang Xia et.al., Chao Zhan et.al., 2022	A telerehabilitation programme in post-discharge COVID-19 patients (TERECO): a randomised controlled trial	Randomized controlled trial with 1;1 block randomization in parallel groups. Setting China's Jiangsu and Hubei provinces have three large hospitals. Participants were 120 COVID-19 survivors who had previously been hospitalised and still had dyspnoea problems, with 61 being assigned to the control group and 59 to the TERECO group. Intervention Unsupervised 6-week home-based workout program that includes breathing control and thoracic expansion, aerobic exercise, and LMS exercise given through smartphone and remotely monitored with heart rate monitoring. Outcomes The 6 minute walking distance (6MWD) in meters was the primary outcome. Squat time in seconds, pulmonary function as	At post-treatment, the adjusted between-group difference in 6MWD was 65.45 m (95 percent CI 43.8 to 87.1; p0.001), and at follow-up, it was 68.62 m (95 percent CI 46.39 to 90.85; p0.001). The post-treatment effect for LMS was 20.12 s (95 percent CI 12.34 to 27.9; p0.001), and the follow-up effect was 22.23 s (95 percent CI 14.24 to 30.21; p0.001). Except for post-treatment maximum voluntary breathing, there were no variations in lung function between the groups. The TERECO group had a higher increase in the SF-12 physical component, with treatment effects of 3.79 (95 percent CI 1.24 to 6.35; p=0.004) at post-treatment and 2.69 (95 percent CI 0.06 to 5.32; p=0.045) at follow-up[10].

		determined by spirometry, HRQOL as defined by the Short Form Health Survey-12 (SF-12), and mMRC-dyspnoea were all secondary outcomes. At 6 weeks (post-treatment) and 28 weeks, the outcomes were evaluated (follow-up) [12].	
Abubeker Alebachew et.al., Ahmed Adem Mohammed et.al., 2020	Effectiveness and feasibility of telerehabilitation in patients with COVID-19: a protocol for a systematic review and meta-analysis	From the beginning through the end of November 2021, the databases PubMed, Web of Science, Science Direct, Physiotherapy Evidence Database, Google Scholar, and the Cochrane Library will be searched. There will be randomised controlled trials looking into the effectiveness of telerehabilitation in the treatment of COVID-19. Functional ability, cardiopulmonary exercise testing, and quality of life will be the major outcomes. Anxiety/depression levels, sleep quality, mortality rate, completion rate, cause for withdrawal, adverse events, service satisfaction, cost-effectiveness, and other potential factors will all be secondary outcomes. Two reviewers will independently screen and collect data from included research, as well as assess their quality. To assess the risk of bias, the Cochrane risk of bias instrument will be utilised. For statistical analysis, the Review Manager V.5.4 (Cochrane Collaboration) programme will be used [13].	The I test will be used to analyse the heterogeneity of the included studies. The data will be analysed using a fixed-effects model first. It is assumed that there is significant heterogeneity among the included trials if I >0.5 or p0.1, and a random-effects model will be utilised in this situation. Sensitivity analysis will be used to establish the source of heterogeneity by removing trials one by one [11].
Shrushti Prashant Jachak et.al., Pratik Arun et.al., 2021	Great Awakening – Telerehabilitation in Physiotherapy during Pandemic and Impact of COVID-19	The number of diseases and deaths continues to climb, and the impact of the crisis is expanding across emerging countries. Reactions, attitudes, and outcomes differed all	As the world scrambles to alleviate the virus's massive healthcare burden, most economies are bracing for the damage the infection will wreak.

		throughout the world. The outbreak has had negative mental health consequences and symptoms. This pandemic has had an impact on the healthcare system, which treats patients with diseases other than corona. Despite the fact that the power and severity of the slowdown varies from transitory to long-term recession, they all agree that the slowdown will have a significant influence on various sectors of the economy. Most importantly, panic among consumers and businesses has distorted regular purchase patterns and resulted in market inconsistency. In this difficult period, digitalization and automation have shown to be the answer intense impact amongst various sectors of the economy. Most importantly, some panic among consumers and firms has disfigured normal patterns of consumption and caused market inconsistency. Digitalization and automation have proved to be the solution in this challenging phase [14].	Many governments have already proposed a series of 'economic packages' to aid struggling businesses, workers, and healthcare systems. The Indian government and the Reserve Bank of India have also taken a number of steps to combat the corona virus sickness and improve the country's economic situation. As a result of the social distancing used to break the chain of infection, healthcare is also impacted, with patients unable to visit clinics and hospitals. In this difficult period, digitalization and automation have shown to be the answer.With the help of numerous smartphone applications and websites for online consultation, telemedicine and telephysiotherapy have revolutionised the way people spend their time in a good way Whether it's a live session or a recorded one, Psychological hazards are reduced in individual or group sessions. It is beneficial to the patients as well as the motivation of the staff. As a result, telemedicine and tele physiotherapy are becoming more popular the amount of care provided to those suffering from both mental and physical illnesses health and mental well-being, reduced hospital costs bolster traditional face-to-face practise and increase adherence to therapy and happiness with it[12]

Cleofas Rodriguez- Blanco et.al., Juan Jose Gonzalez et.al., 2021	Short-Term Effects of a Conditioning Telerehabilitation Program in Confined Patients Affected by COVID-19 in the Acute Phase. A Pilot Randomized Controlled Trial	A total of 40 volunteers were randomly assigned to one of two groups: an experimental group that underwent muscle training and a control group that did not engage in any physical activity. The one-week intervention was completed by 36 individuals, 18 in each group. The six-minute walking test, multidimensional dyspnoea-12, thirty-second sit-to-stand test, and Borg Scale were all used to collect data [15].	At the start, both groups were similar. The experimental group showed statistically significant improvement (p 0.05) over the control group. There were no gender differences found (p > 0.05). [13].
Juan Jose Gonzalez et.al., Martin Botella- Rico et.al., 2020	Therapeutic pulmonary telerehabilitation protocol for patients affected by COVID-19, confined to their homes: study protocol for a randomized controlled trial	In the regions of Andalusia, Murcia, and Valencia, patients will be recruited (Spain). Patients will be confined to their homes, where they will follow their prescribed exercise programme, which will be monitored remotely. Evaluators will be on hand to conduct telematically controlled measurements at the start, middle, and end of the study. The patients will be randomly assigned to one of three groups: two will participate in a home exercise programme (breathing exercises or non-specific muscle toning exercises), and the third will engage in sedentary activities while using mental activation techniques as a sham group. Physical tests, effort, and perceived weariness will be used to assess respiratory variables and other physical state factors [16].	Researchers look at how two types of exercise regimens, toning and respiratory, influenced patients with COVID-19 during their home confinement phase in terms of fatigue and perceived exertion, physical health, and respiratory activity maintenance. Researchers want to look into a field that has never been investigated before, such as the effects of a toning and respiratory exercise programme in these patients, in historical circumstances that no one has ever seen before in Spain, because the general population has never been forced to remain confined in their homes due to a coronavirus pandemic (COVID-19)[14].
Kelsey Rosen et.al., Monika Patel et.al., 2020	Delivering Telerehabilitation to COVID-19 Inpatients: A Retrospective Chart Review Suggests it is a Viable Option	A study was performed a retrospective chart assessment of COVID-19 patients who underwent either telerehabilitation alone or a mix of telerehabilitation and in-person rehabilitation. COVID-19 inpatients were chosen for telerehabilitation	Twelve of the 33 COVID-19 inpatients who underwent telerehabilitation, in-person rehabilitation, or both received solely telerehabilitation (age range, 33 to 65 years; all but one male). They were discharged

		based on the algorithm if they were able to ambulate freely, use technology, had stable vital signs, require minimum supplementary oxygen, and are cognitively intact. Data from inpatients who solely received telerehabilitation, which comprised patient education, therapeutic activities, and breathing techniques, was evaluated [20].	home after demonstrating independence with their tailored home exercise programmes in one to two sessions, without the need for an in-person rehabilitation consultation, without the need for extra oxygen, and with no exacerbation of symptoms [15].
Jose- Manuel Pastora- Bernol et.al., Marin Jose et.al., 2021	Telerehabilitation Intervention in Patients with COVID-19 after Hospital Discharge to Improve Functional Capacity and Quality of Life. Study Protocol for a Multicenter Randomized Clinical Trial	This study uses a single blind multicenter randomised clinical trial in patients with a COVID-19 diagnosis who have been released from the hospital in Andalusia (south of Spain). This study will follow the SQUIRE (Standards for Quality Improvement and Excellence in Reporting) recommendations and will follow the CONSORT (Consolidated Standards of Reporting Trials) criteria [21].	This study should give information on the feasibility of implementing TR programs in COVID-19 patients after release from the hospital, as well as health resources and costs, which will allow the development of new intervention policies for this group of patients [16].
Snehil Dixit et.al., Audrey Borghi-Silva2 et.al., Kalyana Chakravarthy Bairapareddy et.al., 2021	Revisiting pulmonary rehabilitation during COVID-19 pandemic: a narrative review	During the coronavirus pandemic of 2019, there was an apparent link between the chances of problems associated with SARSCoV-2 infection and people with a history of chronic respiratory disease (COVID-19). In cardiopulmonary management, SARS-CoV-2 poses a serious risk. Furthermore, in the event of a pandemic, chronic respiratory disorders may increase the risk of morbidity and mortality among the affected population[48].	The purpose of this review is to highlight the importance of pulmonary rehabilitation (PR) in people with chronic respiratory disorders (COPD and Asthma) in the COVID-19 era. Following initial medical therapy and acute recovery, exercise-based pulmonary rehabilitation (PR) may play a critical role in long-term management and recovery in the population with a pre-existing pulmonary diagnosis who have contracted SARS-CoV-2. To combat post-COVID-19tiredness, energy saving measures will be useful in PR of low to moderate intensity instances. Furthermore, there is an immediate need to

			manage post-COVID-19 anxiety and sadness, which is impacting the PR delivery system[49].
Abayomi Salawu et.al., Angela Green et.al., Nina brixey et.al., 2020	A Proposal for Multidisciplinary Tele-Rehabilitation in the Assessment and Rehabilitation of COVID-19 Survivors	In February 2020, a global pandemic of COVID-19, a new extremely contagious disease caused by coronavirus (severe acute respiratory syndrome (SARS)-Cov-2) infection, was declared. Although it is usually transmitted through the respiratory system, it can damage other organ systems in the body. In severe circumstances, 20% of individuals affected require hospitalisation and mechanical ventilation. About half of those who survive the disease have lasting functional abnormalities that require multimodal therapy. Existing community services are unable to provide the manpower needed to give the essential rehabilitation input. To monitor these patients, strict medical follow-up rules need scheduled assessments within 12 weeks of release. Existing treatment pathways are unlikely to be able to meet demand because to the short timeframe in which these occurrences occur The following is a proposal for an innovative integrated post-discharge care pathway to ease follow-up by acute medical teams (respiratory and intensive care) as well as a specialty multidisciplinary rehabilitation team [49].	The monitoring and provision of complete medical assessments and multidisciplinary rehabilitation will be possible with such a pathway. This research recommends that a tele-rehabilitation model be added into the pathway, utilising digital communication technologies to provide these patients with speedy remote assessment and efficient therapy delivery. Following hospital discharge, tele-rehabilitation provides a speedy and effective way to respond to the specialised rehabilitation needs of COVID-19 survivors [17].
Pamela Tanguay et.al., Nicole Marquis et.al., Isabelle Gaboury et.al.,	Telerehabilitation for Post-Hospitalized COVID-19 Patients: A Proof-of-Concept Study During a Pandemic	A pre-experimental, pre-post pilot research was done. COVID-19 patients who had been discharged from the hospital were recruited. Eight weeks of supervised physiotherapy sessions were part of	We booked 64 supervised sessions with seven individuals who had only minor technical difficulties. Initial results revealed that pulmonary symptoms had a moderate to significant influence

2021		the intervention. We kept track of technical concerns, recruitment strategy success, and participant participation during supervised sessions. The effect of pulmonary symptoms on quality of life and functional health was studied [50].	on quality of life. On the EuroQol-Visual Analog Scale (EQ-VAS) instrument, all patients had improved from 10 to 45 points after eight weeks, suggesting clinical significance [18].
Siddhi Ghodge et.al., Prajakta Tilaye et.al., Swati Nerkar et.al., 2020	Effect of Pulmonary Telerehabilitation on Functional Capacity in COVID Survivors; An Initial Evidence	This study included 10 participants (8 males, 2 females) who met the inclusion criteria of post-covid-19 survivors with respiratory system involvement who underwent at least 6 weeks of pulmonary telerehabilitation at least 3 days per week. Breathing exercises, an incentive Spirometer, a variety of aerobic and strengthening exercises, and patient education were used in pulmonary telerehabilitation. The visual analogue scale (VAS) for tiredness, SPO2 using a pulse oximeter, single breath count, one minute sit to stand test, and one minute squat test were measured before and after 6 weeks of rehabilitation[51].	The descriptive statistics had been completed. According to the normality analysis, non parametric data was subjected to the Wilcoxon sign rank test, while parametric data was subjected to the Paired t test. A p value of less than 0.05 was deemed significant. The one minute sit to stand test (p=0.005), one minute squat test (p=0.007), resting SPO2 (p=0.025), post exercise SPO2 (p=0.003), and post exercise VAS for tiredness (p=0.017) all indicated statistically significant differences between pre and post rehabilitation. In the single breath count test (p=0.415), there was no statistically significant difference. Resting, post-exercise SPO2, and the VAS for exhaustion all demonstrated clinically meaningful differences with substantial effect sizes[19].

3Methodology

3.1 PURPOSE

The purpose of this study was to see if Telerehabilitation affected post-viral tiredness following covid 19.

3.2 OBJECTIVE

The goal of this study is to see how Telerehabilitation affects post-viral tiredness following covid 19.

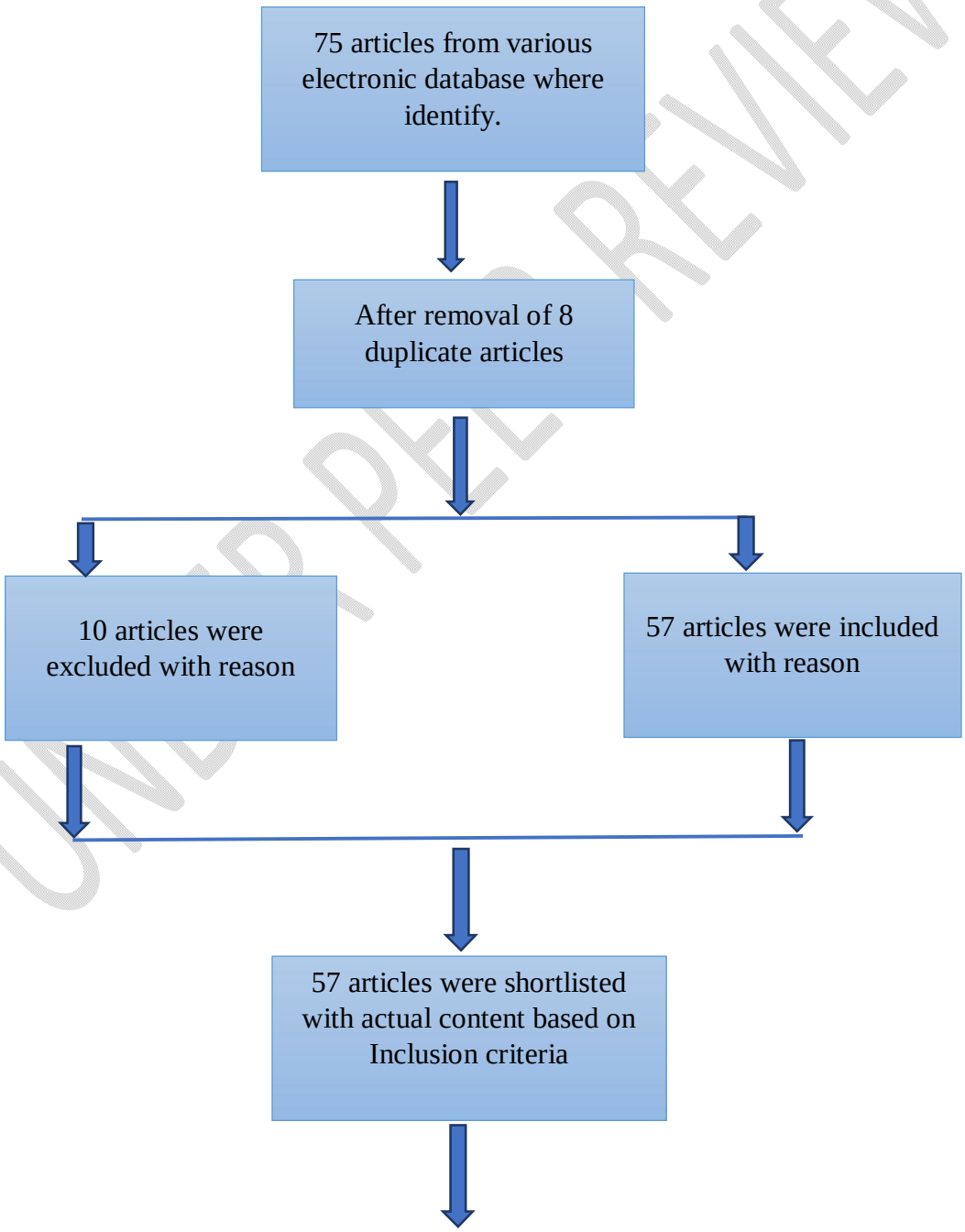
3.3 STUDY DESIGN: Narrative review of literature.

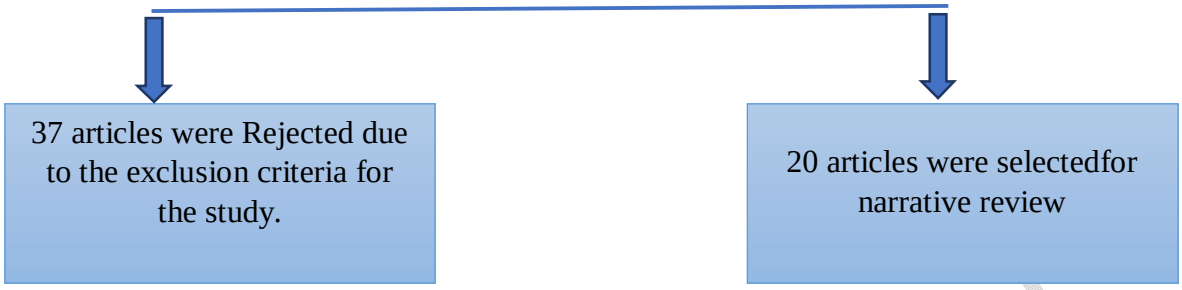
3.4 MATERIALS AND METHODS:

Various computerised data bases were used to conduct a structured Literature search.

3.5 SOURCES OF DATA: PubMed, Google Scholar, Pedro, American Physical Therapy Association (APTA), World Health Organization (WHO), World Confederation Physical Therapy (WCPT), Medscape, Research-gate Embase, American Physical Therapy Association (APTA), World Health Organization (WHO), World Confederation Physical Therapy (WCPT), Medscape, Research-gate Embase Clinical trials, randomised controlled trials, cross-sectional studies, cohort studies, and literature reviews were all part of the search method. Only English literature was included in the search.

FIG 1. PRISMA CHART





Results and Discussion

According to the findings of this study, telerehabilitation provides various benefits in postviral fatigue syndrome patients, including decreasing symptoms and assisting recovery. Exercise improves the cardiovascular system by increasing HR (heart rate), breathing rate, body temperature, and blood pressure, hence telerehabilitation lessons are also beneficial (Blood pressure).

Shrushti Prashant Jachak et.al., Pratik Arun et.al., in 2020 stated that Telemedicine and Telephysiotherapy for online consultation have positively impacted time. Patients' psychological risks are reduced when live sessions are conducted, and it is also advantageous to the therapy's motivation. Tele-rehabilitation improves the quality of treatment for persons with physical and mental health problems, lowers hospital costs, and strengthens traditional face-to-face therapy [12].

In 2021 Cleofas Rodriguez- Blanco et.al., Juan Jose Gonzalez et.al., did a study and stated that In COVID-19 individuals with mild to moderate symptomatology in the acute stage, a one-week telerehabilitation programme based on muscle toning exercise is beneficial, safe, and feasible [13].

Juan Jose Gonzalez et.al., Martin Botella- Rico et.al., in 2020 did a study and stated that this article provides a detailed description of a randomised controlled trial that looked at the effects of two types of exercise programmes, toning and respiratory, on fatigue and perceived exertion, physical health, and respiratory activity maintenance in patients with COVID-19 who were confined to their homes[16].

In 20 Kelsey Rosen et.al., Monika Patel et.al., did a study and stated that Inpatient telerehabilitation appears to be a viable alternative for COVID-19-positive hospitalised patients,

and it could be a safe way to give inpatient rehabilitation to isolated or at-risk groups. Inpatient telerehabilitation minimised staff exposure while offering critical teaching and services to patients at our hospital. No research has looked into the use of telerehabilitation for hospitalised patients, including those with COVID-19, to our knowledge. Our findings indicate that this novel strategy merits further investigation [15].

In 2021Jose- Manuel Pastora- Bernol et.al., Marin Jose et.al., did a study and concluded that the viability of executing TR programmes in COVID-19 patients after discharge from the hospital, as well as health resources and costs, in order to design new intervention policies for this group of patients [16]

The current concerns about COVID-19's consequences should not deter us from taking action; rather, they should encourage us to look for alternatives that will bring pulmonary rehabilitation closer to patients who require it after being discharged from the hospital [20]. Telerehabilitation is viewed in this light as a method that could give an efficient and cost-effective treatment to the health issues highlighted. Physiotherapy will be a cornerstone in the interdisciplinary health team for the recovery of the sequelae, which should lead to an improvement in the quality of life of COVID-19 patients, not only in intensive care units and in hospitalised patients, but also in the interdisciplinary health team for the recovery of the sequelae, which should lead to an improvement in the quality of life of patients with COVID-19 [20,21].

Unlike other studies that require software to be installed on specific devices, our intervention has minimal drawbacks because it can be accessed from any location and on any device that has an internet connection, which most patients have (personal computer, laptop, tablet, smartphone) [33,34]. Other investigations, by contrast, necessitate a highly complex technological platform, software installation, and multidirectional cameras for controlled clinical control between the healthcare professional and the patient[22]. The speedy installation process is ensured because the patient employs his own technical devices.

In 2020 Siddhi Ghodge et.al., Prajakta Tilaye et.al., Swati Nerkar et.al., did a study and stated that Pulmonary telerehabilitation shows statistically and clinically significant improvement in functional capacity in COVID survivors[16].

However, this may result in a selection bias for patients who do not have access to technology. With the use of technology, technical issues (disconnection, device failures) and technological difficulties may arise[23].

Conclusion

This narrative review of the literature discovered that physiotherapy interventions, notably Telerehabilitation, are effective in reducing post-viral tiredness after covid19 infection. Telerehabilitation has a higher influence on lowering symptoms and aiding recovery in individuals with postviral fatigue syndrome. According to the preliminary findings, pulmonary symptoms had a moderate to major impact on quality of life. After eight weeks, all patients had improved from 10 to 45 points on the EuroQol-Visual Analog Scale (EQ-VAS), indicating clinical relevance.

Telerehabilitation lessons are also very beneficial, because exercise improves the cardiovascular system by boosting HR (heart rate), breathing rate, body temperature, and blood pressure (Blood pressure). As a result, telemedicine and telephysiotherapy are becoming more popular, increasing the amount of care provided to those suffering from both mental and physical illnesses, lowering hospital costs, bolstering traditional face-to-face practise, and increasing adherence to therapy and satisfaction with it.

References

1. Rosen K, Patel M, Lawrence C, Mooney B. Delivering telerehabilitation to COVID-19 inpatients: a retrospective chart review suggests it is a viable option. HSS Journal®. 2020 Nov;16(1_suppl):64-70.

2. Maggio MG, De Luca R, Manuli A, Calabrò RS. The five 'W'of cognitive telerehabilitation in the Covid-19 era. Expert Review of Medical Devices. 2020 Jun 2;17(6):473-5.

3. Dalbosco-Salas M, Torres-Castro R, Rojas Leyton A, Morales Zapata F, Henríquez Salazar E, Espinoza Bastías G, Beltrán Díaz ME, Tapia Allers K, Mornhinweg Fonseca D, Vilaró J. Effectiveness of a primary care telerehabilitation program for post-COVID-19 patients: a feasibility study. Journal of clinical medicine. 2021 Jan;10(19):4428.

4. Brancatella A, Ricci D, Cappellani D, Viola N, Sgrò D, Santini F, Latrofa F. Is subacute thyroiditis an underestimated manifestation of SARS-CoV-2 infection? Insights from a case series. The Journal of Clinical Endocrinology & Metabolism. 2020 Oct;105(10):e3742-6.

5. Ostojic SM. Diagnostic and pharmacological potency of creatine in post-viral fatigue syndrome. Nutrients. 2021 Feb;13(2):503.Islam MF, Cotler J, Jason LA. Post-viral fatigue and COVID-19: lessons from past epidemics. Fatigue: Biomedicine, Health &Behavior. 2020 Apr 2;8(2):61-9.

6. Simani L, Ramezani M, Darazam IA, Sagharichi M, Aalipour MA, Ghorbani F, Pakdaman H. Prevalence and correlates of chronic fatigue syndrome and post-traumatic stress disorder after the outbreak of the COVID-19. Journal of Neurovirology. 2021 Feb;27(1):154-9.Islam MF, Cotler J, Jason LA. Post-viral fatigue and COVID-19: lessons from past epidemics. Fatigue: Biomedicine, Health &Behavior. 2020 Apr 2;8(2):61-9.

7. Dalbosco-Salas M, Torres-Castro R, Rojas Leyton A, Morales Zapata F, Henríquez Salazar E, Espinoza Bastías G, Beltrán Díaz ME, Tapia Allers K, Mornhinweg Fonseca D, Vilaró J. Effectiveness of a primary care telerehabilitation program for post-COVID-19 patients: a feasibility study. Journal of clinical medicine. 2021 Jan;10(19):4428.

8. Xia W, Zhan C, Liu S, Yin Z, Wang J, Chong Y, Zheng C, Fang X, Cheng W, Reinhardt JD. A telerehabilitation programme in post-discharge COVID-19 patients (TERECO): a randomised controlled trial. Thorax. 2021 Jul 26.

9. Behan PO, Behan WM, Bell EJ. The postviral fatigue syndrome—an analysis of the findings in 50 cases. Journal of Infection. 1985 May 1;10(3):211-22.

10. Seid AA, Aychiluhm SB, Mohammed AA. Effectiveness and feasibility of telerehabilitation in patients with COVID-19: a protocol for a systematic review and meta-analysis. BMJ open. 2022 Jan 1;12(1):e058932.

11. Jachak SP, Phansopkar PA, Naqvi WM, Kumar K. Great Awakening--Telerehabilitation in Physiotherapy during Pandemic and Impact of COVID-19. Journal of Evolution of Medical and Dental Sciences. 2020 Nov 9;9(45):3387-94.

12. Rodriguez-Blanco C, Gonzalez-Gerez JJ, Bernal-Utrera C, Anarte-Lazo E, Perez-Ale M, Saavedra-Hernandez M. Short-term effects of a conditioning telerehabilitation program in confined patients affected by COVID-19 in the acute phase. a pilot randomized controlled trial. Medicina. 2021 Jul;57(7):684.

13. SPERANZA E, BOLZAN V, Giulio S, VITALI F. Impact of telerehabilitation after sports injuries on psychological outcomes during the COVID-19 pandemic. Medicinadello Sport. 2021 Dec;74(4):657-71.

14. Gonzalez-Gerez JJ, Bernal-Utrera C, Anarte-Lazo E, Garcia-Vidal JA, Botella-Rico JM, Rodriguez-Blanco C. Therapeutic pulmonary telerehabilitation protocol for patients affected by COVID-19, confined to their homes: study protocol for a randomized controlled trial. Trials. 2020 Dec;21(1):1-9.

15. Rosen K, Patel M, Lawrence C, Mooney B. Delivering telerehabilitation to COVID-19 inpatients: a retrospective chart review suggests it is a viable option. HSS Journal®. 2020 Nov;16(1_suppl):64-70.

16. Pastora-Bernal JM, Estebanez-Pérez MJ, Molina-Torres G, García-López FJ, Sobrino-Sánchez R, Martín-Valero R. Telerehabilitation Intervention in Patients with COVID-19 after Hospital Discharge to Improve Functional Capacity and Quality of Life. Study Protocol for a Multicenter Randomized Clinical Trial. International Journal of Environmental Research and Public Health. 2021 Jan;18(6):2924.

17. Salawu A, Green A, Crooks MG, Brixey N, Ross DH, Sivan M. A proposal for multidisciplinary tele-rehabilitation in the assessment and rehabilitation of COVID-19 survivors. International journal of environmental research and public health. 2020 Jan;17(13):4890.
18. Tanguay P, Marquis N, Gaboury I, Kairy D, Touchette M, Tousignant M, Décary S. Telerehabilitation for post-hospitalized COVID-19 patients: a proof-of-concept study during a pandemic. International Journal of Telerehabilitation. 2021;13(1).
19. Ghodge S, Tilaye P, Deshpande S, Nerkar S, Kothary K, Manwadkar S. Effect of pulmonary telerehabilitation on functional capacity in COVID survivors; initial evidence. Int J Health Sci Res. 2020;10(10):123-9.
20. Lista-Paz, A.; González-Doniz, L.; Souto-Camba, S. Quépapeldesempeña la Fisioterapiaen la pandemia mundialpor COVID-19. Fisioterapia 2020, 42, 167–169.
21. Concepción Martín Cortijo, Francisco Javier Zarza Bejarano EGD, Marta Sánchez Cortés VTRFHU 12 de, (Madrid) O. Guía. De FisioterapiaenelPaciente con Sospecha De COVID-19 O COVID-19 Confirmado.
22. Guzik TJ, Mohiddin SA, Dimarco A, Patel V, Savvatis K, Marelli-Berg FM, Madhur MS, Tomaszewski M, Maffia P, D'acquisto F, Nicklin SA. COVID-19 and the cardiovascular system: implications for risk assessment, diagnosis, and treatment options. Cardiovascular research. 2020 Aug 1;116(10):1666-87.
23. Hwang R, Bruning J, Morris N, Mandrusiak A, Russell T. A systematic review of the effects of telerehabilitation in patients with cardiopulmonary diseases. Journal of cardiopulmonary rehabilitation and prevention. 2015 Nov 1;35(6):380-9.