

People with Musculoskeletal Conditions Benefit from Tele Rehabilitation by Reducing the Level of Disability

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Abstract

A program was started in Saudi Arabia during the coronavirus pandemic to offer telerehabilitation to people with musculoskeletal conditions who couldn't get in-person physiotherapy because of the lockdown. The study's objective was to investigate the Saudi population's acceptance and therapeutic impact of telerehabilitation. Methods: A Google Meet-based online video conference platform was used to recruit 95 participants, who received physiotherapy consultations and interventions. Participants received individualized education and conditioning exercises two to three times per week for six weeks following red flag screening. The Pain Self-Efficacy Questionnaire, Patient-Specific Functional Scale, Musculoskeletal Health Questionnaire, and a satisfaction survey were the outcome measures that were recorded at baseline and every six weeks. Results: Lower back (37%) pain, knee (14%) pain, and neck (10%) pain were the most common musculoskeletal conditions reported. At the program's conclusion, participants reported a high level of satisfaction with the telerehabilitation intervention and significant improvements in outcomes ($p=0.001$), with effect sizes ranging from 0.6 to 1.9. This study demonstrated that Saudi Arabian patients with musculoskeletal conditions could benefit from physiotherapy treatments via telerehabilitation.

Keywords: Telerehabilitation • Physical activity • Anxiety • Rehabilitation

Introduction

Musculoskeletal pain is regarded as a significant community burden. It is linked to significant impairments in functional activities, including participation in work and other daily activities. The goals of physiotherapy treatments for people who have musculoskeletal conditions are to reduce pain, improve function, encourage activity and self-management, and address the physical limitations, beliefs, and behaviours that are associated with musculoskeletal conditions. These physiotherapy treatments are typically carried out one-on-one with the patient and physiotherapist in an outpatient setting.

The practice of "healing at a distance" through the use of technology in healthcare is known as "telerehabilitation." It looks like a good way to get around the demographic shift toward an older population and the rise in chronic diseases that are linked to a high demand for rehabilitation services. It has the potential to reach rural and environmentally challenging regions. Telerehabilitation has been slow to be implemented into clinical practice, despite its potential. The lack of acceptance of telerehabilitation by patients and physiotherapists is thought to be one factor in the slow adoption rates.

Description

During the new flare-up of the Coronavirus pandemic, World Physiotherapy distributed assets for part associations to help physiotherapy work on during and after the lockdown. For many patients with conditions that normally necessitate in-person attendance in an outpatient setting, telerehabilitation has provided

a secure means of continuing treatment. Online physiotherapy assessment for musculoskeletal pain has achieved comparable treatment outcomes for patients with musculoskeletal conditions, according to the few studies that are available, and previous research has demonstrated that, in comparison to in-person assessments, it has good concurrent validity and excellent reliability. Patients and therapists were also found to be willing to adjust to the shift from in-person to online treatment, and those receiving telerehabilitation were found to be more committed to home exercise programs. Telemedicine as a whole is still in its infancy in Saudi Arabia. However, telerehabilitation can be used effectively in Saudi Arabia due to the robust infrastructure and rapid development of digital technology. Prior to the COVID-19 pandemic, Saudi Arabia's health authorities recognized the significance of telehealth [1].

National telehealth guidelines were published by the National Health Information Center and updated in 2020. Due to the lockdown that was put in place to stop the spread of COVID-19, it was much harder to get in-person health consultations, like physiotherapy, for conditions that weren't urgent. The Saudi Physical Therapy Association launched a project to provide telerehabilitation in partnership with a private physiotherapy practice in Riyadh, Saudi Arabia, in an effort to address this issue. The study's objective was to investigate the therapeutic efficacy and acceptability of telerehabilitation physiotherapy for Saudi Arabian patients with musculoskeletal conditions. During the COVID-19 pandemic, this study looked at the therapeutic impact and acceptability of telerehabilitation-based physiotherapy assessments and interventions for patients with musculoskeletal conditions. Critical upgrades were found in agony, handicap and wellbeing status as estimated utilizing the PSE survey, PSFS and MSK-HQ from gauge to the furthest limit of the telerehabilitation mediation period, and a serious level of fulfillment with the telerehabilitation intercession was communicated by members [2].

The positive impact on participants pain and function as well as their acceptance of online physiotherapy as a treatment option for musculoskeletal conditions are supported by these outcomes. Out of the 13 districts in the country, more than six participated. This supports the nation's healthcare reform to provide equitable and accessible healthcare services by suggesting that telerehabilitation made it easier for people in many different parts of the country to access physiotherapy care. Simpler admittance to medical services may likewise further develop adherence, which was proposed because they used telerehabilitation in Hong Kong during the pandemic lockdown and showed high adherence to it ($n=1246$), which included physiotherapy and

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other services for rehabilitation. Patients and rehabilitation professionals satisfaction was also high, according to the study. From the perspective of the therapists, this study demonstrated that almost all of them were pleased with the experience; however, they also pointed to some difficulties, such as the fact that they were unable to carry out hands-on assessments or treatments [3].

When compared to traditional face-to-face interactions, it has been reported that online consultation and management may encounter difficulties. To make up for the lack of a hands-on approach, assessment and management must be modified.

This study's findings, which demonstrate the potential of telephysiotherapy for musculoskeletal conditions patients, have implications for upcoming clinical practice. For non-surgical patients with musculoskeletal disorders who live outside of urban areas, where access to clinics can be difficult and time-consuming for both patients and clinicians, telerehabilitation may be a viable option for providing physiotherapy assessments and treatments. In comparison to traditional healthcare or home-based rehabilitation, home-based telerehabilitation may be an alternative method for providing outpatient rehabilitation to patients with chronic musculoskeletal pain (e.g., neck, shoulder, or back). Physiotherapists could technically perform telerehabilitation, with validity and reliability ranging from "good to excellent" [4].

In addition, effectiveness of real-time telerehabilitation with MSK conditions in comparison to standard face-to-face practice in a systematic review and meta-analysis; Telerehabilitation was found to be effective in reducing pain, disability, and physical function in this review. Telerehabilitation is superior to face-to-face consultation when it comes to clinical diagnostic accuracy, such as range of motion. Patients with MSK disorders may benefit from telerehabilitation as an alternative to face-to-face interventions for reducing pain and enhancing physical function, daily activities, and quality of life. However, when evaluating the strength of the evidence and interpreting it, caution is required. A group of researchers in Australia have demonstrated another benefit of telerehabilitation by establishing a telerehabilitation service in an advanced physiotherapy clinic for screening programs and providing patients with a single point of access to relevant healthcare services. This has led to an increase in the number of patients seeking various telerehabilitation services at this clinic. Telerehabilitation consultation for MSK pain has good to excellent reliability and validity, according to other studies.

Even though the majority of Saudi Arabia's cities have excellent internet coverage, home-based telerehabilitation services are still relatively new. Patients with musculoskeletal disorders may be able to receive telerehabilitation services without putting an additional strain on the healthcare system or reducing the amount of healthcare and resources used. This could provide opportunities to reshape the traditional methods of providing healthcare

to these patients. Various chronic conditions have been treated with home-based telerehabilitation, and the pilot study demonstrated promising results, where they used virtual games to give exercises at home that were watched by virtual therapists. The study found that the therapist-monitored interactive telerehabilitation system was just as effective as traditional face-to-face therapy for improving balance in chronic stroke patients. The study during the COVID-19 pandemic lockdown, a randomized controlled clinical trial looked into video-based aerobic exercise for women with fibromyalgia [5].

Conclusion

When compared to a control group, the intervention group's improvements in pain intensity, mechanical pain sensitivity, and psychological distress were statistically significant. In elderly patients who had hip surgery, telerehabilitation was also used to support home-based exercises that were led by caregivers rather than a medical professional and were guided by video recordings. This controlled study demonstrated that both groups improved function regardless of the intervention they received, with the telerehabilitation program performing better at three months. Telerehabilitation can now be used for a wider range of conditions thanks to advances in technology, fast internet connections, and smart devices. To get the most out of telerehabilitation and to reevaluate the healthcare system's regulations, policies, and reimbursement models, training and education are necessary. To find out if this method works in the long run and for other conditions, more research is needed.

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