

## Physical Therapy via Telerehabilitation for Chronic Low Back Pain: An Editorial

Gali Dar

*Department of Physical Therapy, Faculty of Social Welfare & Health Studies, University of Haifa, Mount Carmel, Haifa & Physical Therapy Clinic, The Ribstein Center for Sport Medicine Sciences and Research, Wingate Institute, Israel*

**\*Correspondence to:** Dr. Gali Dar, Department of Physical Therapy, Faculty of Social Welfare & Health Studies, University of Haifa, Mount Carmel, Haifa & Physical Therapy Clinic, The Ribstein Center for Sport Medicine Sciences and Research, Wingate Institute, Israel.

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During recent decades, global changes have transpired in various areas due to technological progress. These changes have affected the medical sphere where many innovations, advanced treatments and better quality has led to an increased life expectancy. Subsequently, this has led to an increase in chronic diseases.

With the development of the internet and additional communication technologies, the medical discipline began employing these tools as a means of treatment accessibility. Telemedicine, the general term used when integrating the medical domain with the internet, is a remote medical service transferring information through the internet using digital communication tools, such as computers, laptops, tablets and smartphones. One of these services, linked to rehabilitation, is called telerehabilitation (TR). TR combines technology and treatment as a means of promoting rehabilitation within the patient's home and enabling accessibility of home treatment at a time most convenient for them.

A rehabilitation process following any injury or disease which caused alterations in function, includes practice, learning movement patterns and repetition of the learned functions. The physical therapist's role is to teach the patient correct exercises and functions, help him to achieve his goals and encourage and maintain the patient's motivation to continue the rehabilitation. Rehabilitation options via a digital platform, using the

internet to transmit information in real time or asynchronously, were found to be effective in various disciplines such as rehabilitation after trauma or fractures [1], in neurological patients following stroke [2], in multiple sclerosis patients [3], in head injuries, Parkinson's disease [4] and heart and lung diseases [5]. In the musculoskeletal sphere, TR was found to be effective during rehabilitation post-total knee and hip replacement, knee osteoarthritis and spinal stenosis [6,7]

## Low Back Pain

LBP is a very common problem in the western world. The probability that symptoms will appear during one's lifetime is 80-85%. It is considered to be the second reason for incurring sick days [8]. A likelihood of 70% exists that the symptoms will reoccur during the first three years from appearance of initial symptom [9]. Only 10% of the patients are clearly diagnosed with malignancy, radiculopathy, stress fractures, spinal stenosis, spondylolisthesis and blood vessels problems. Almost 90% of low back problems are considered non-specific, diagnosed by ruling out all other possible clear diagnoses [10].

Over the past few years, there has been a change in the approach towards LBP and its accompanied functional impairments. It has been suggested that LBP should be treated as a chronic disease with functional disability and not as a degenerative disease [11]. Consequently, LBP patients are evaluated and treated with an emphasis on patient function, focusing on rehabilitation. The rehabilitation program usually includes exercises and patient education (Dagenais *et al.*, 2010). It has been previously established that active exercise are effective in treating LBP and that exercises are more effective than other modalities for pain reduction and improving patient function [12-14].

## LBP and Telerehabilitation

Research studies investigating TR methods of treatment for LBP are limited and have mainly explored the use of TR in educating patients as to LBP and encouraging an active lifestyle [15-19]. Others have studied the use of TR for patient examination [20,21], the use of different internet websites and forums for transferring information regarding LBP, combining cognitive behavioral treatment (CBT) through the internet [22-24] or monitoring patients following completion of treatment [25]. These studies found moderate quality evidence of the effectiveness of TR for reducing pain, fear from pain, disability and depression [26].

Practice is an important part of the treatment for patients with LBP. Independent practice and adherence to treatment are vital for increasing treatment success and promoting patient recovery. The exercises include learning new movement patterns. The physiotherapist's role is to guide the patient to correctly perform the exercises. Learning can be conducted by demonstration, watching videos, verbal explanations, etc. Practice is an important part of the treatment for patients with LBP.

Implementation, independent practice and adherence to a treatment protocol are essential in furthering a LBP patient towards recovery. TR methodology can be very useful in assisting and guiding the patients to correctly perform the exercises. Nevertheless, there is still a scarcity of studies examining the effectiveness of TR during physical therapy treatment in LBP patients.

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