

Osteoarthritis Telehealth Patient Education Course



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SETTINGS AND BACKGROUND

- The patient education for upper extremity osteoarthritis management programs is targeted for people diagnosed with upper extremity osteoarthritis and do not to have access to traditional in person outpatient therapy services.
- The use of telehealth technology to delivery occupational therapy services is relatively new in the last decade and has limited research on the effectiveness and outcome measures for a variety of patient populations.
- The limited research data indicates a need to validate telehealth technology as a viable delivery method for producing positive patient outcomes in the field of occupational therapy.

QUESTION

Does a six-week patient education telehealth program provide functional improvement with daily living tasks in patients diagnosed with upper extremity osteoarthritis?

SIGNIFICANCE

- Osteoarthritis is one of the most common medical conditions that people are diagnosed with and impact their quality of life
- The advancement of modern medicine has developed a combination of holistic and pharmaceutical solutions to limit the progression of the disease and the severity of the symptoms, many people still lack improvements in their quality of life.
- In the profession of occupational therapy, practitioners are tasked with educating clients on how to manage the symptoms of these conditions and assisting in success engage in their meaningful activities of daily living tasks.

The purpose of this capstone project is to examine if a six-week telehealth patient education program can improve the quality-of-life perception for patients diagnosed with upper extremity osteoarthritis. The intention for this project is to demonstrate the effectiveness of using telehealth technology for improving functional performance and quality of life for patients diagnosed with upper extremity osteoarthritis.

METHODS

- Obtain clearance for Physical Medicine and Rehabilitation management team to start the program and to recruit participants for the program.
- Complete Caseload review of potential candidates of current patients and developed the standard upper extremity osteoarthritis patient management education telehealth 6-week lesson plan/protocol and content. Each session was biweekly with a total of twelve session.
- The program was completely virtual and required patients to use a smart device with a fully functional camera and working audio. Smart devices can consist of computers, laptop, tablets, and smart phones.
- All participants were provided a digital security link that sent to their smart devices. This link had an encrypted a consent form confirming that the participants safety in their home environment and acknowledgement that their data was being collected for this program.
- All participants were cleared by their primary physician for light to moderate level of exercise in order be deemed a participant.
- At to the start of the program, each patient completed a private individual evaluation session to complete the standardized test of Disabilities of Arm, Shoulder and Hand (DASH) questionnaire and Barthel Index..
- All twelve of the sessions were conducted on Tuesdays and Thursday for 45 minutes each. Each session will consist of a 5-minute social check in period, 20 minutes of upper extremity exercise and 20 minutes of patient education Each week was assigned a focus topic that was introduced on Tuesday and reviewed/reinforced on Thursday.
- At the conclusion of the six-week program, each patient completed a private individual evaluation session to complete the standardized test of Disabilities of Arm, Shoulder and Hand (DASH) questionnaire and Barthel Index.
- The participants pre and post test scores were collected and analyzed using Microsoft Excel Functions system.

For each of the participants, the scores standardized tests of Disabilities of Arm, Shoulder and Hand (DASH) questionnaire and Barthel Index were taken at the start of the program and at the completion of the program. Scores were then be reviewed and measured to see if significant changes in categorization and/or numerical value. Both standardized tests of Disabilities of Arm, Shoulder and Hand (DASH) questionnaire and Barthel Index have standardized scoring that correlate patients' function performance and quality of life for patients.

LITERATURE REVIEW

Telehealth in Occupational Therapy discusses the role of virtual Telehealth within the scope of occupational therapy and establishes practice standards for interventions, assessments, and functional use for practitioners (AJOT, 2018). As the official AOTA document states, video technology contributes to an essential tool for occupational therapy practice and the document illuminates the importance and relevance in modern occupational therapy practice

- The Better Management of Patients with Osteoarthritis Program: Outcomes evidence-based education and exercise delivered nationwide in Sweden
- Structured education and exercise-based self-management program for patients with knee or hip osteoarthritis conducted by Physical and Occupational Therapists.
 - The research study included over 43,000 participants divided into groups of 7-12 hip and knee Osteoarthritis patients who were mandated to participate in a biweekly supervised exercise program for 6 weeks.
 - A Full follow up evaluation from completed by participants in increments of 3, 6, and 12 month were completed.
 - Multiple subgroups of study and was conducted from 2008-2016

- Telehealth and Home-Health Occupational Therapy: Patients' Perceived Satisfaction with and Perception of Occupational Performance,
- A quasi-experimental pretest posttest design was used to analyze home health patients ages 61-90 years old with no restrictions on diagnoses
 - Study explored of on-site and telehealth visits on the participants' overall perception of and satisfaction with improvement in occupational performance.
 - Examined the immediate focus on options for OT utilization and practice patterns in home healthcare by analyzing g standardized performance evaluations like COPM Canadian Occupational Performance Measure (COPM) and Outcome and Assessment Information Set (OASIS)

RESULTS AND LIMITATION

All participants demonstrated improvement in their functional independence level perceptions following the conclusion of the six-week program. The participants increased functional independence perception as demonstrated by the improvement from their original numeral scores on the Barthel Index and QUICK DASH score at the start of the program compared to their final scores at the end of the session. Below are the categories of each test

The Quick DASH

Normal (0-20)
Mild (21-40)
Moderate (41-60)
Severe (61-80)

Barthel Index

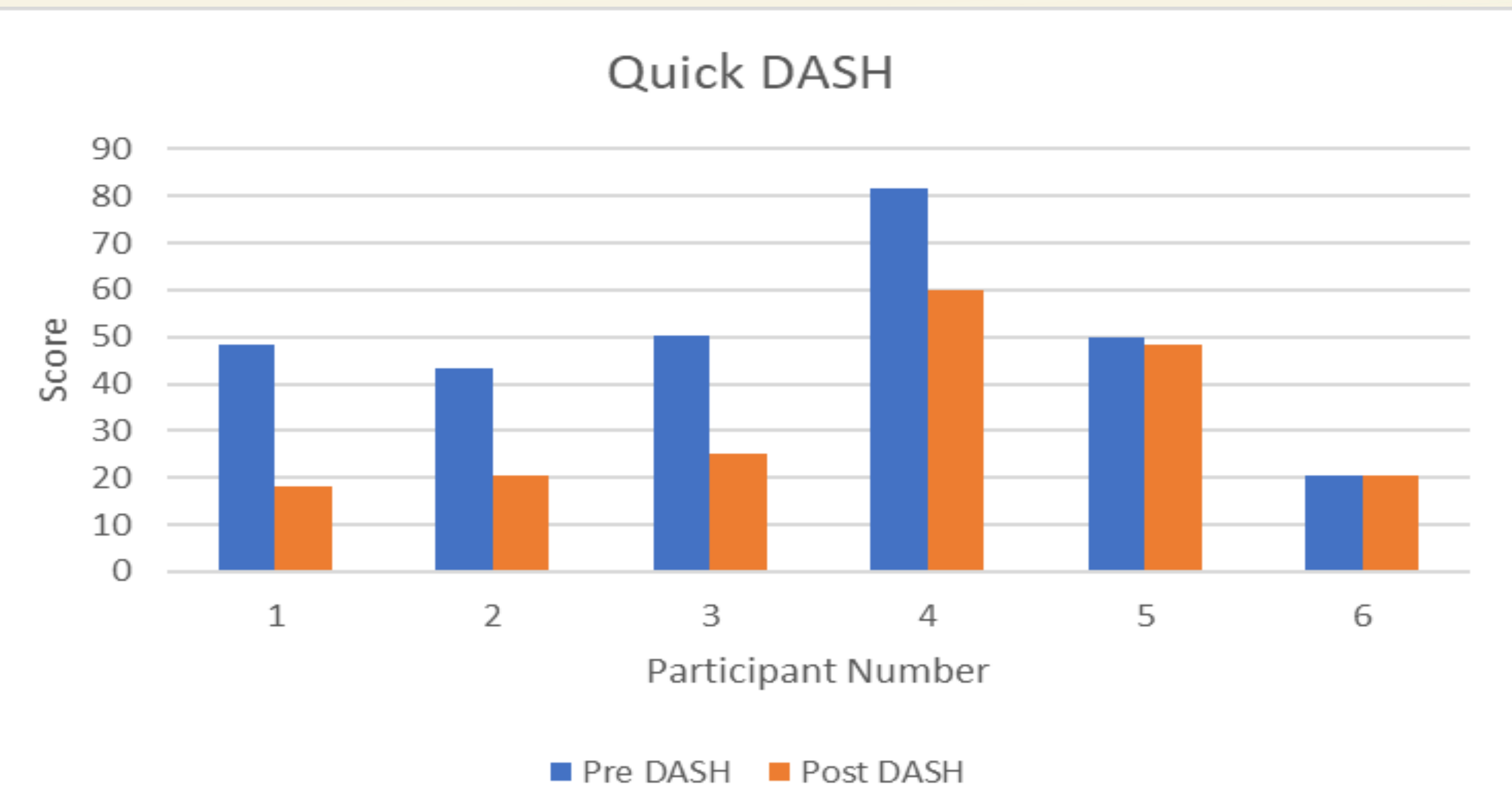
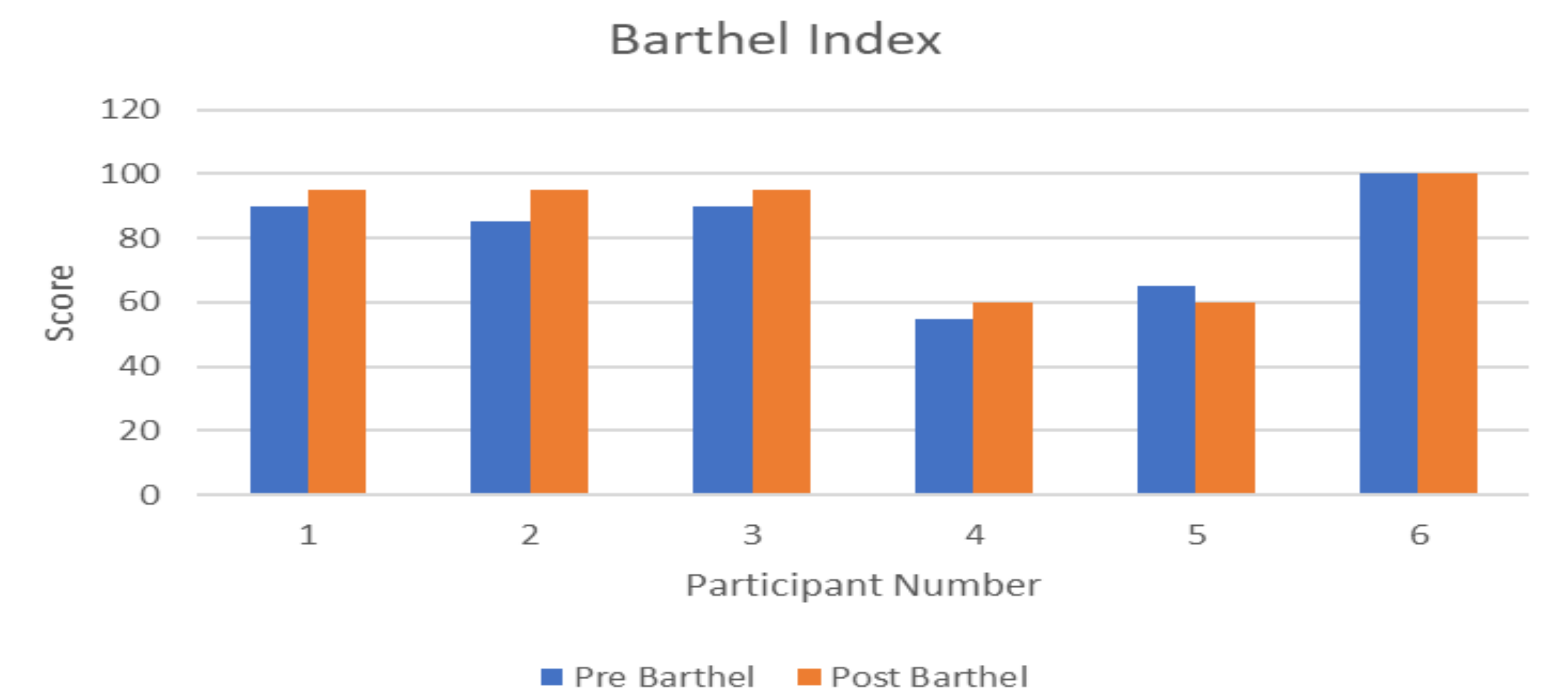
Independent (80-100)
Minimally dependent (60-79)
Partially dependent 40-59)
Very dependent (20-39)
Total dependent (0-19)

As is the concern for most outpatient clinical programs, making sure patients are committed and consistent with participation. Prior to enrollment, an emphasis on the importance of consistently attending the bi-weekly course program but there is no way to fully guarantee a participant's attendance. Another concern is the time constraint of completing this program and analyzing the effectiveness of the program within a small-time duration with only one skilled occupational therapist clinician.

SUMMARY

In conclusion, all six participants were able to improved their scores standardized test scores and functional categorization on both the of Disabilities of Arm, Shoulder and Hand (DASH) questionnaire and Barthel Index at the conclusion of the six-week telehealth program. The participants improvement on these two standardized test indicate that patients diagnosed with upper extremity osteoarthritis can increase their functional abilities with daily living tasks after participation in a patient education course using telehealth technology.

GRAPH OF RESULTS



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