

# Evaluation Of A Once Weekly Exercise Class For Patients With Parkinson's Disease In A Post-Acute Rehabilitation Setting.

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## Introduction

Parkinson's Disease (PD) is a progressive neurodegenerative condition presenting with symptoms such as bradykinesia, tremor, balance and gait impairments (1). Despite physiotherapy not preventing progression of symptoms, there is a growing body of evidence revealing the benefits of physiotherapy and exercise to help manage motor and non-motor symptoms while improving physical function (2). Patients admitted to a post-acute rehabilitation setting often present with reduced awareness of the benefits of exercise and physiotherapy for managing their PD symptoms.

## Objective

The aim of this quality improvement initiative was to implement an exercise class based on the Lee Silverman Voice Treatment (LSVT) BIG principles and evaluate the effectiveness of a single physiotherapy-led exercise class for patients presenting with motor symptoms associated with PD.

## Methodology

A 6-month pilot project was undertaken within a post-acute rehabilitation setting, where a PD exercise group class based on LSVT principles of BIG movements was conducted once weekly. Patients with PD and Parkinsonism were referred to the class. The exercise class consisted of a 30-minute physiotherapist-led class including warm-up, seated and standing based exercises and cool down.

The Five Times Sit-to-Stand (5TSTS) outcome measure was evaluated pre and post each intervention to determine immediate functional impact on each participant (3). A retrospective review of data collected was conducted on all participants who attended each exercise class.

## Results

A total of 20 participants took part in the exercise class across a 6-month period. Figure 1 shows patient profile. The mean change between pre and post intervention 5TSTS was 3.61 seconds (SD 9.66 sec) (Figure 2). The minimal clinically important difference for the 5TSTS test is 2.3 seconds (3).

Figure 1. Number of participants and average age

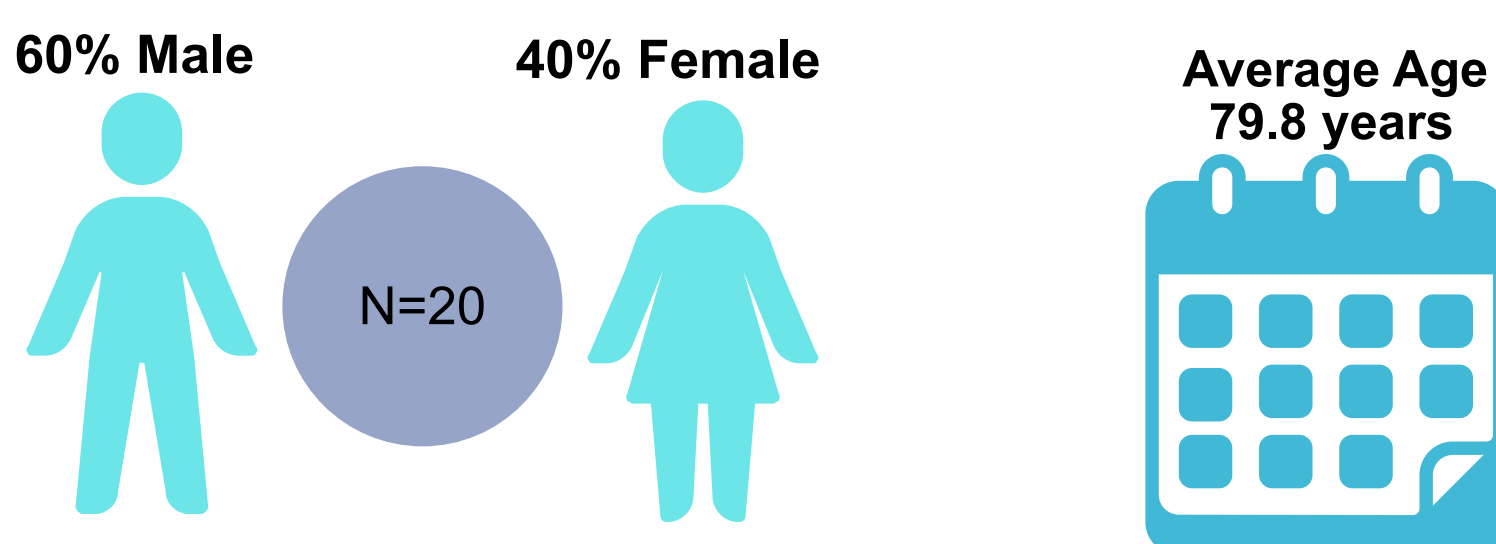
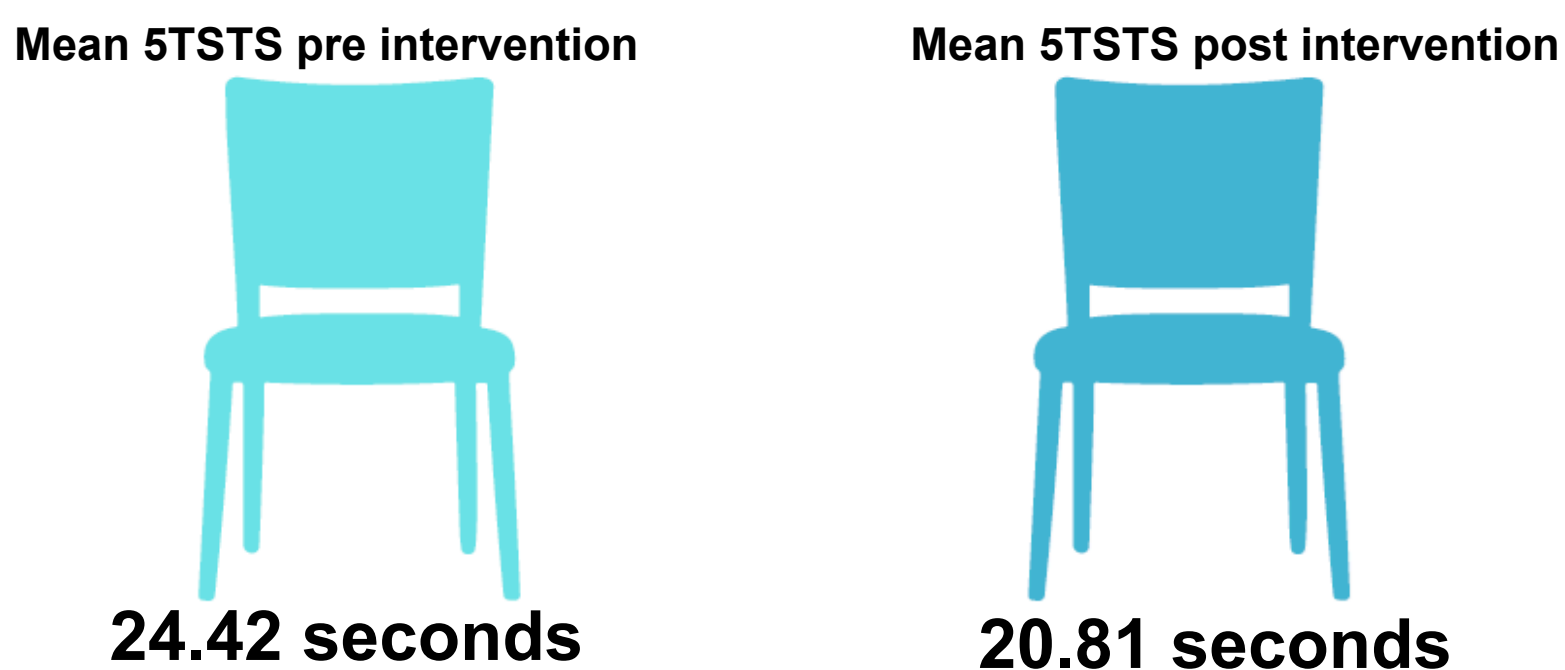


Figure 2. Mean 5TSTS pre and post intervention



## Discussion

Limitations of the study included periods of reduced admissions of patients with PD, which limited the sample size to 20 participants over the six-month period. During the study, it was observed that the exercise class provided emotional support to patients by offering a safe space for patients to discuss their symptoms with other patients. Group-based classes have been shown to help empower patients and improve their perception of exercise and PD (4), and would be an aspect of exercise and Parkinson's to further explore.

## Conclusion

The data collected demonstrated an immediate improvement in function after a single group exercise intervention. Further evaluation is required to determine longer term effects of this exercise intervention on patients with PD, as well as the effect of exercise on quality of life for this patient population.

## References

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