

Physiotherapy led Palliative Exercise Program for Parkinson's Disease (PEP-PD) Patients in a Hospice Out-Patient Setting

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Aim: To examine the feasibility of a lower limb strength based progressive exercise program for people with Hoehn and Yahr (H&Y) Stage 3 or 4 PD in a hospice setting.

Background: Research has demonstrated the role for palliative care services for PD patients. Palliative care needs begin between H&Y stage 3-5 or 12 years after diagnosis. Research has shown that strength training interventions can positively affect gait parameters in patients with PD in stages 1-3 H&Y.

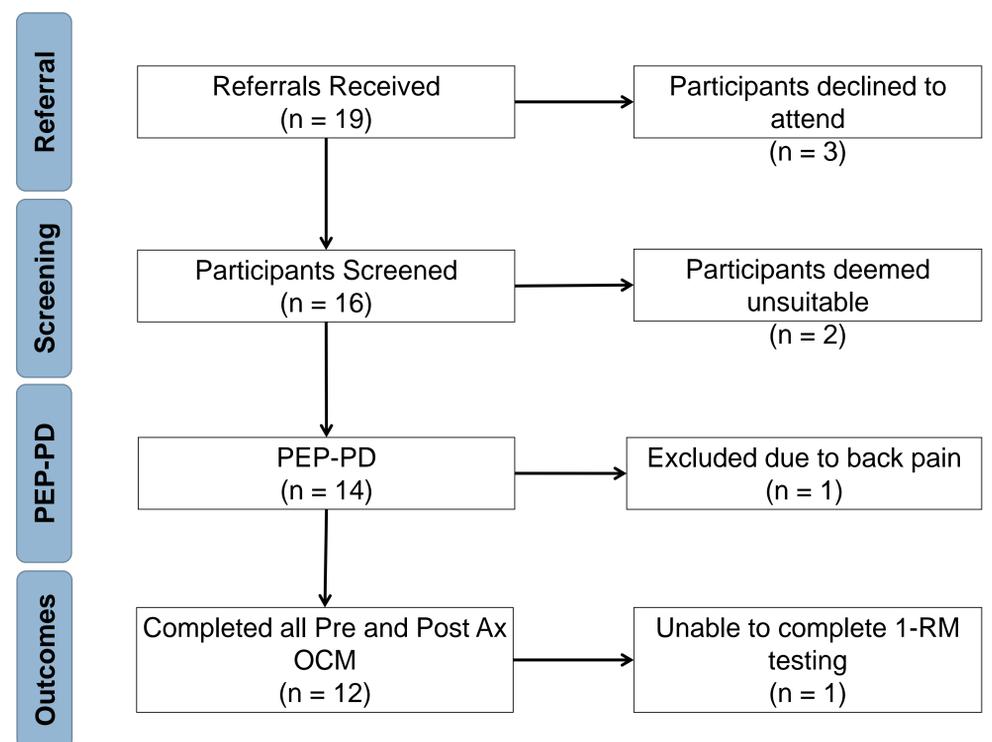
Methods: We conducted a small scale feasibility study, single patient cohort, pre-test post-test design using mixed methods of quantitative outcome measures and qualitative semi-structured interviews. The outcome measures included the six minute walk test (SMWT), MDS-UPDRS, PDQ-39 and predicted one repetition maximum (p1-RM) strength testing.

Results: Nineteen referrals were received from the recruitment sites. Fourteen participants took part in the program with 12 patients completing the pre and post outcome measure assessments.

Table 1: Demographics of PEP-PD participants

Demographics	
Age (yrs)	69.86 (SD - 7)
Sex	13m/1f
TSD (yrs)	14.14 (SD - 16)
H&Y 3 (n)	7
H&Y 4 (n)	7
Medication changes (n)	1

Figure 1: Recruitment pathway for PEP-PD



There was a significant improvement in all measures of strength of the lower limb following the intervention ($p < 0.05$).

There was no significant difference in changes in walking capacity as measured by the SMWT [mean change 26.9 metres, 95% CI -8.6 - 62.4), $p = 0.12$]. Similar non-significant changes were reported for the PDQ-39 and the UPDRS.

The qualitative results showed a clear theme of 'improved self-efficacy' in the semi-structured interviews.

Interpretation: It is feasible to run a progressive strength training program for people with advanced PD. The lack of a comparison group does however reduce the internal validity of this study. The results support the undertaking of a randomised controlled trial to further investigate the results of this study.

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