

The Poise Project: Alexander technique-based group interventions for people living with Parkinson's disease and their care partners show post-course benefits and long-term retention

Authors: Monika Gross¹, Ava E. Lekawa², Rajal G. Cohen²

1. The Poise Project. 2. University of Idaho

Background

- **Alexander Technique (AT) is a cognitive embodiment intervention** shown to reduce pain and anxiety and improve balance. Using an integrated psychomotor approach, patients are taught ways of thinking that combine body awareness, self-awareness, and goal awareness
- **AT enhances performance** of daily activities, helping patients choose functional patterns that lead to optimal postural tone and improved motor and emotional self-management.

Objectives

- Test feasibility, effectiveness, and long-term retention of benefits of AT-based in-person and online group interventions for people living with Parkinson's (PWP) and their care partners (CP).
- Improve motor and non-motor symptom management.
- Reduce reactivity, increase confidence, and strengthen agency.

Interventions

Delivered in person and remotely.

- **In person:** Controlled trial. Groups met 90 minutes, twice weekly, 8 weeks. 15 PWP & 16CP completed course. 10 PWP & 2 CP were in control group.
- **Remote:** Single-arm study. Groups met 120 minutes, twice weekly, 8-9 weeks. 14 PWP & 12 CP completed course.

Self-management strategies were taught via manual and verbal instructions, demonstration, visual aids, and guided activities.

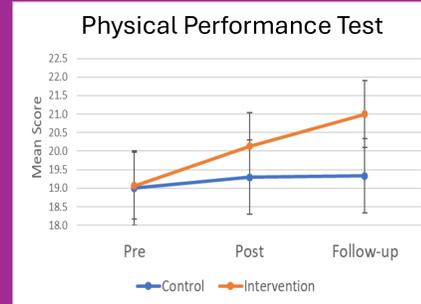
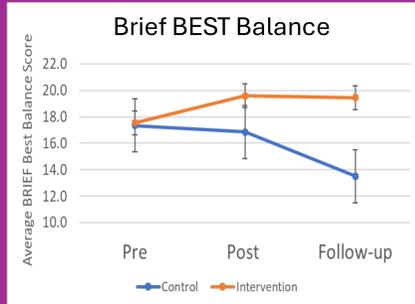
Measures

Pre-, Post-, and 6-month follow up.

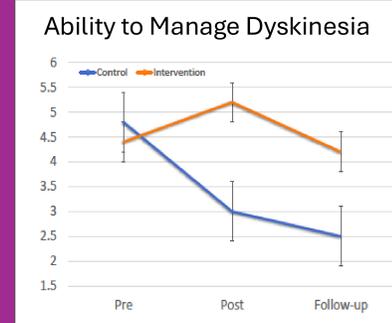
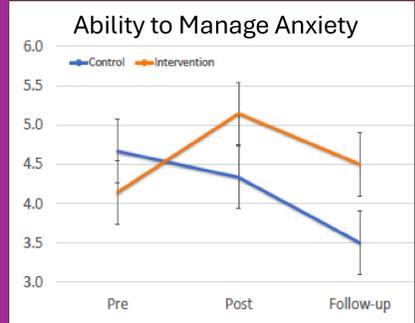
- Balance (Brief BESTest)
- Mobility (7-point Physical Performance Test)
- Self-reported motor and non-motor symptoms, self-awareness, and agency.

Results: In-Person Delivery

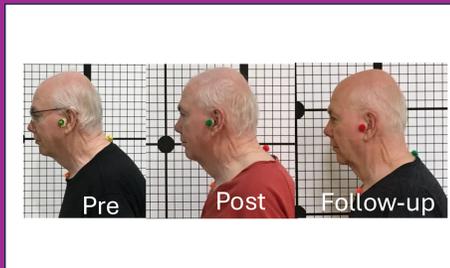
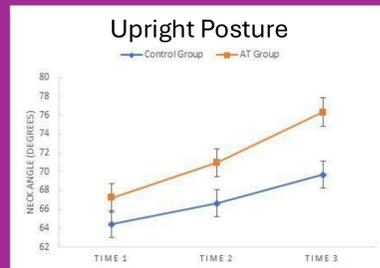
Objective assessments: AT group improved balance and physical performance, while control group did not. Relative improvement of AT group increased at 6-month follow-up.



Self-reports: AT group improved ability to manage anxiety and dyskinesia, while control group worsened. Difference was maintained at 6-month follow-up.



Posture: Both groups showed more upright posture at post-test than at pre-test. Difference relative to control group increased at 3-6-month follow-up.



Results: Remote Delivery

Self-reports: Both PWP and CP reported improvement in symptom management (left table) and self-awareness and agency (right table) at post-course and at 6-month follow-up.

Symptom Management	PWP Pre	PWP Post	PWP 6 Mo.	CP Pre	CP Post	CP 6 Mo.
Off Periods	3.9	4.3	3.3	3.6	3.6	4.0
Bradykinesia	3.7	4.1	3.6	4.0	4.3	4.5
Shuffling Gait	4.0	4.7	4.4	3.3	4.0	4.3
Balance	3.7	4.2	4.2	3.8	4.0	5.0
Upright Posture	2.9	4.1	4.7	3.6	4.0	3.2
Tremor	3.9	3.5	3.3	4.0	4.4	3.6
Dyskinesia	4.3	4.5	3.0	3.8	5.3	4.0
Dystonia	3.9	5.0	3.1	4.8	4.5	3.5
Fine Motor	3.1	4.3	4.3	3.2	4.0	3.5
Handwriting	3.1	3.7	3.6	2.3	3.3	4.3
Rolling Over	3.2	4.3	3.2	2.5	3.8	3.2
Vocal Volume	3.7	3.8	3.3	3.5	3.2	4.0
Swallowing	4.2	4.8	4.2	3.3	3.3	4.3
Pain	2.8	3.5	3.6	4.0	3.5	4.2
Insomnia	3.2	3.5	2.8	2.7	2.8	2.7
Fatigue	3.4	3.6	3.1	3.5	3.2	4.3
Task Focus	4.0	3.7	4.2	3.8	5.0	3.8
Memory	3.5	3.4	3.0	4.2	4.2	3.6
Anxiety	3.1	4.1	4.0	4.2	4.5	3.8
Apathy	3.1	4.3	3.3	3.8	4.7	4.3
Depression	4.2	4.8	5.2	3.8	4.8	4.6

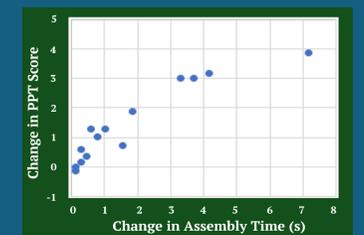
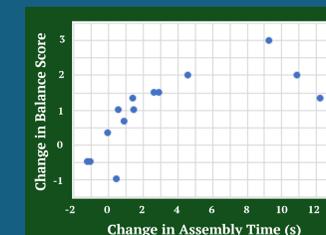
Self-Report	PWP Pre	PWP Post	PWP 6 Mo.	CP Pre	CP Post	CP 6 Mo.
Confidence	4.0	4.1	3.4	3.5	4.2	4.2
Independence	3.9	4.5	4.0	4.2	4.0	4.0
Physical Awareness	4.4	4.5	3.8	3.8	4.3	4.0
Physical Control	3.9	4.4	4.3	3.7	4.2	4.0
Emotional Awareness	4.0	4.1	4.0	4.0	4.2	4.2
Emotional Control	3.6	4.4	3.6	3.7	3.7	3.8

KEY:
Six months after the study participants reported PWP:
Improvement vs Pre & Post
Improvement vs Pre
Maintenance vs Pre
Decline vs Pre

Assembly Time Impacted Balance & Physical Performance

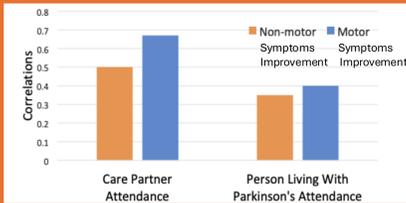
Objective assessments

- Scores improved in both the Brief BEST test (p=.006) and in the Physical Performance Test (.001).
- Assembly times (the interval between the assessor's prompt, "Let me know when you are ready," and the subject's verbal "Ready" response) increased 3.2 seconds per task for Brief BESTest (p=.02) and 1.8 seconds per task for Physical Performance Test (p=.005).
- There was a correlation between improved scores and increased assembly times both in the Brief BESTest (r=.71, p=.007) and the Physical Performance Test (r=.93, p<.00001), with a ceiling (no further improvement in score) after 4-8 seconds of assembly time.



Results: Dyads

Care partner attendance was important. The number of sessions attended by the CP was strongly correlated with the improvement in motor and non-motor symptom management for the PWP at 6-month follow-up.



Conclusions

- Both in-person and online delivery of this novel Alexander technique-based approach showed improved management of motor and non-motor symptoms, with 6-month retention of benefits. Care partner inclusion amplified outcomes for PWP.
- Online classes could reduce health risks of social isolation and increase access in underserved areas.

Acknowledgements



- **Funding**
Parkinson's Foundation and Mountain West CTR-IN
- **Course Instructors**
Glenna Batson, Lisa First, James Paisner, Petrea Warneck