

## BACKGROUND & PURPOSE

### Background

Alexander technique (AT) is a non-exercise approach that uses attention and inhibition to change functional patterns, reduce excessive muscular co-contraction, and improve coordination in everyday life<sup>1</sup>.

### Purpose

To determine whether AT group courses will be feasible for care partners of people with Parkinson's Disease while providing physical and psychological benefits.



## INTERVENTION

- ❖ Courses were designed to:
  - ❖ Counter care partner isolation
  - ❖ Allow peer-to-peer learning in a group setting
  - ❖ Encourage independent peer interactions post course
  - ❖ Remove economic barriers through cost effective delivery



Courses were held in non-clinical settings across 10 different sites in Asheville, Concord, Greensboro Boone, Winston-Salem, Burlington, Charlotte, Washington DC.

## DESIGN

90-minute Alexander Technique group classes were held weekly over 10 weeks.

Participants were tested before and after the course series, and at 6-months and 1-year after completion of the Alexander Technique course.

Subjective surveys and evaluation forms were completed by participants at home. Objective data was collected on site.



## MEASURES

- ❖ Subjective post-course self-evaluations: Course evaluations done by the participants on a 10 point Likert space.
- ❖ Subjective measures of function: Self-reported evaluations done by participants on Self-Efficacy, Perceived Stress, Burnout, Mindfulness Awareness (MAAS), Positive Affect, Fear, Fatigue, Mobility and Pain Interference
- ❖ Objective measures of cognition and mobility: MiniBEST (balance), Stroop Task (inhibitory control), Digit Span (working memory)

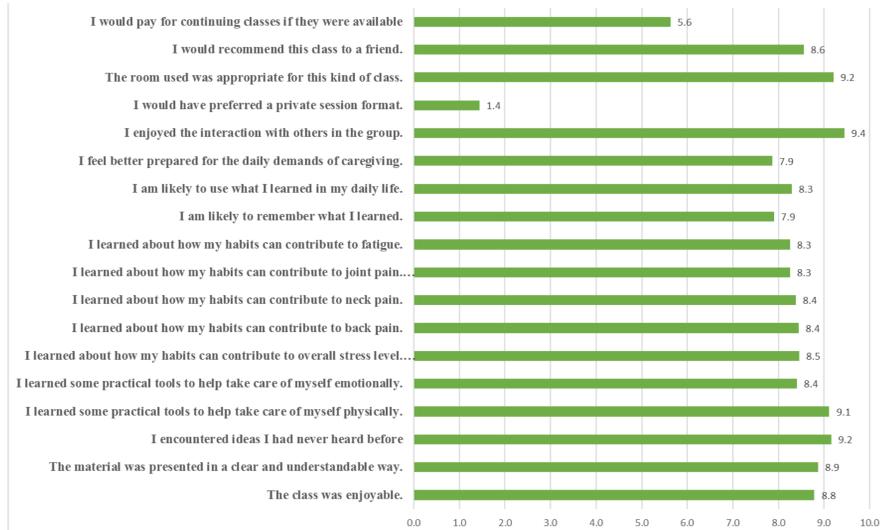


## PARTICIPANTS



- ❖ 57 participants, 51 women & 6 men
- ❖ Mean age of 67.8 years (+/- 14.6 years) completed pre and post, 6 month and 1 year study measures.
- ❖ Most participants (92%) were White Non-Hispanic college graduates and earned \$50,000 - \$74,000 / year.
- ❖ All care participants had Medicare and supplemental private insurance
- ❖ Most participants (81%) were sole care givers for their partners
- ❖ Most participants (94%) were taking care of their spouse/partner.
  - ❖ Partners had an average Hoehn and Yahr Parkinson's Disease stage of 3.
  - ❖ 70% reported that their partners had some cognitive decline

## RESULTS – POST COURSE EVALUATION



An anonymous post-course evaluation (1-10 scale) was conducted for all 57 participants. Mean agreement was >8 for learning practical tools to help care for themselves physically and emotionally, using AT tools in daily life and enjoying the course. Mean agreement was only 1.4 for preferring the course in a private session format, supporting greater need for group AT courses.

## RESULTS – OBJECTIVE MEASURES

**Digit Span:** Digit span is used to measure working memory

Digit Span Forward-  
 Experimenter: 4, 7, 9, 2  
 Subject: 4, 7, 9, 2  
 Digit Span Backwards-  
 Experimenter: 4, 7, 9, 2  
 Subject: 2, 9, 7, 4

Stroop Word: Red, Green, Blue, Purple

Stroop Colour: ■ ■ ■ ■

Stroop Conflict: Red, Green, Blue, Purple

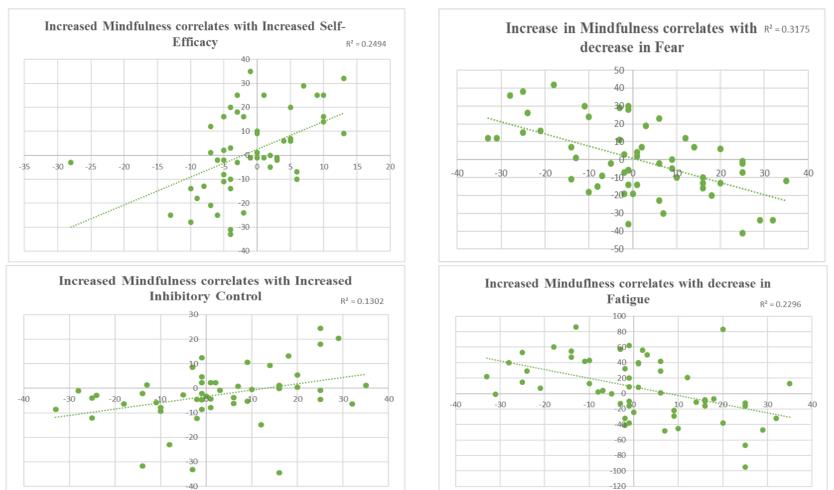
**MiniBEST:** A 14-item balance evaluation systems test<sup>3</sup>.

Measure	Pre	Post	p-value (t-test)
Digit Span Forward - High Better	6.88	7.04	0.402
<b>Digit Span Backward - High Better</b>	<b>4.86</b>	<b>5.46</b>	<b>0.001</b>
Stroop Colour - Low Better	32.16	31.98	0.367
Stroop Word - Low Better	22.86	23.17	0.335
<b>Stroop Conflict - Low Better</b>	<b>71.85</b>	<b>69.14</b>	<b>0.050</b>
MiniBEST - High Better	19.85	19.48	0.130

## RESULTS – SUBJECTIVE MEASURES

Measure	Pre	Post	p-value (t-test)
NIH Self Efficacy - High Better	35.55	34.61	0.318
NIH Perceived Stress - Low Better	23.29	24.63	0.224
Stress and Burnout Scale - Low Better	9.96	11.52	0.206
Zarit Burden Questionnaire - Low Better	24.40	25.57	0.734
Mindful Attention Awareness Scale(MAAS) - High better	63.77	65.09	0.547
Self-Efficacy Emotions - High better	68.73	68.70	0.989
Positive Affect - High Better	61.07	59.70	0.476
Emotional Distress - Low Better	41.73	42.54	0.755
Fear - Low Better	44.86	44.70	0.952
Fatigue - Low Better	111.27	118.96	0.167
Mobility - High Better	70.86	68.88	0.107
Pain Interference - Low Better	51.43	56.63	0.288

The mindful attention awareness scale (MAAS) assesses mindfulness by measuring receptive awareness of and attention to what is taking place in the present<sup>2</sup>. As mindfulness increased in participants self-efficacy and inhibitory control also significantly increased. In addition, as mindfulness increased in participants, self reported fear and fatigue decreased significantly.



## CONCLUSIONS

This study shows that AT group classes are highly feasible. In the post-course evaluations, participants self-reported a high level of enjoyment and increased understanding of physical and emotional self-care. Additionally, our objective measures showed that participants exhibited significantly higher working memory capacity and higher inhibitory control post course. AT group classes may offer a path to make access to Alexander technique more widely available.