

Comparative Patient Satisfaction and Efficacy of a Parkinson's Disease Enrichment Program (PEP)

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Background

Available treatment options for Parkinson's disease (PD) are primarily geared towards pharmacological and/or neurosurgical treatment of motor symptoms. However, many patients also experience chronic non-motor symptoms (NMS), including significant cognitive and psychiatric changes. Currently, there is a gap in the neuropsychological literature regarding the efficacy of nonpharmacological treatment options for these NMS.

Objectives

- To evaluate the participant satisfaction and efficacy of a Parkinson's Enrichment Program (PEP) for improving cognitive and psychiatric symptoms and quality of life (QOL) in PD individuals
- To establish a clinical comparison group for future between-group studies evaluating alternative treatment options for PD NMS

Measures

Neurocognitive	Psychiatric/QOL
Montreal Cognitive Assessment (MoCA)	Beck Depression Inventory-II (BDI-II)
Stroop Color-Word Reading Test	Dysexecutive Questionnaire (DEX)
Wechsler Memory Scale-III Digit Span (WMS-III DS)	Parkinson's Disease Questionnaire (PDQ-8)
Hopkins Verbal Learning Test (HVLT)	Patient Satisfaction Questionnaire
Delis-Kaplan Executive Function System Verbal Fluencies (DKEFS)	-----
Trailmaking Tests A & B	-----

Methods

Twenty-three independently functioning non-demented PD individuals participated in a 5 week PEP. Each four-hour weekly session included content which addressed the following components: education, exercise, recreation and socialization/support.

Prior to the PEP intervention, participants received a standardized pre-assessment, including cognitive tests and questionnaires for mood and QOL.

After the completion of the PEP, participants completed analogous post-assessment batteries to objectively measure changes in neurocognitive and psychiatric status, as well as participant satisfaction.

Figure 1.1: Participant Inclusion Criteria

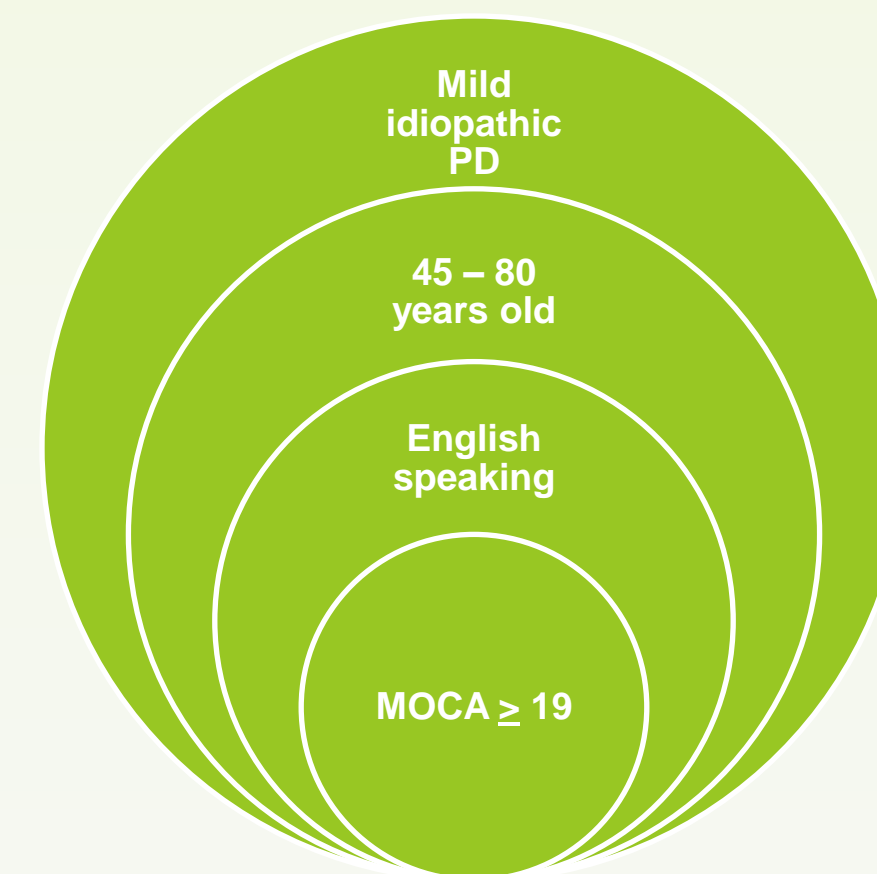
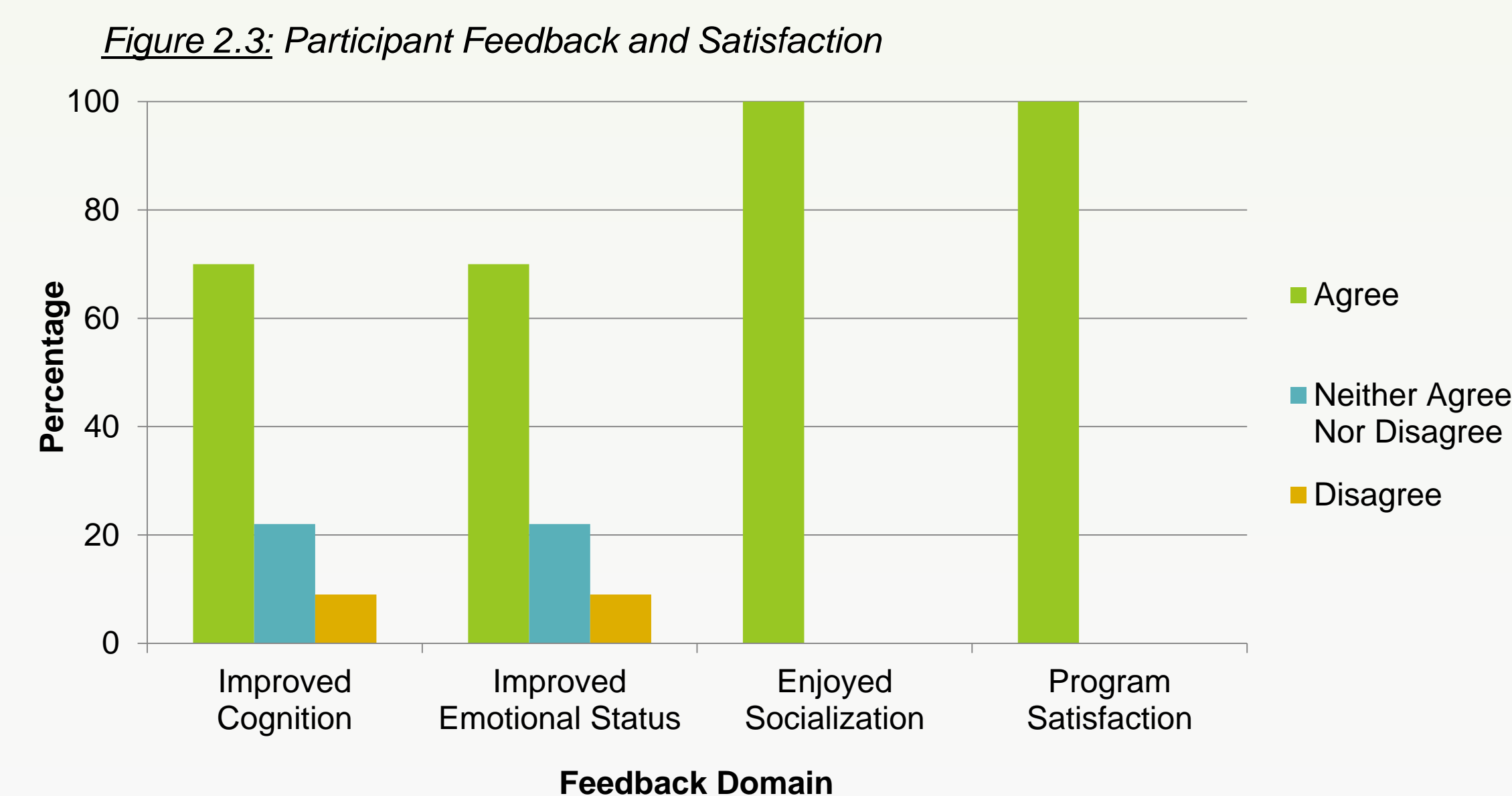
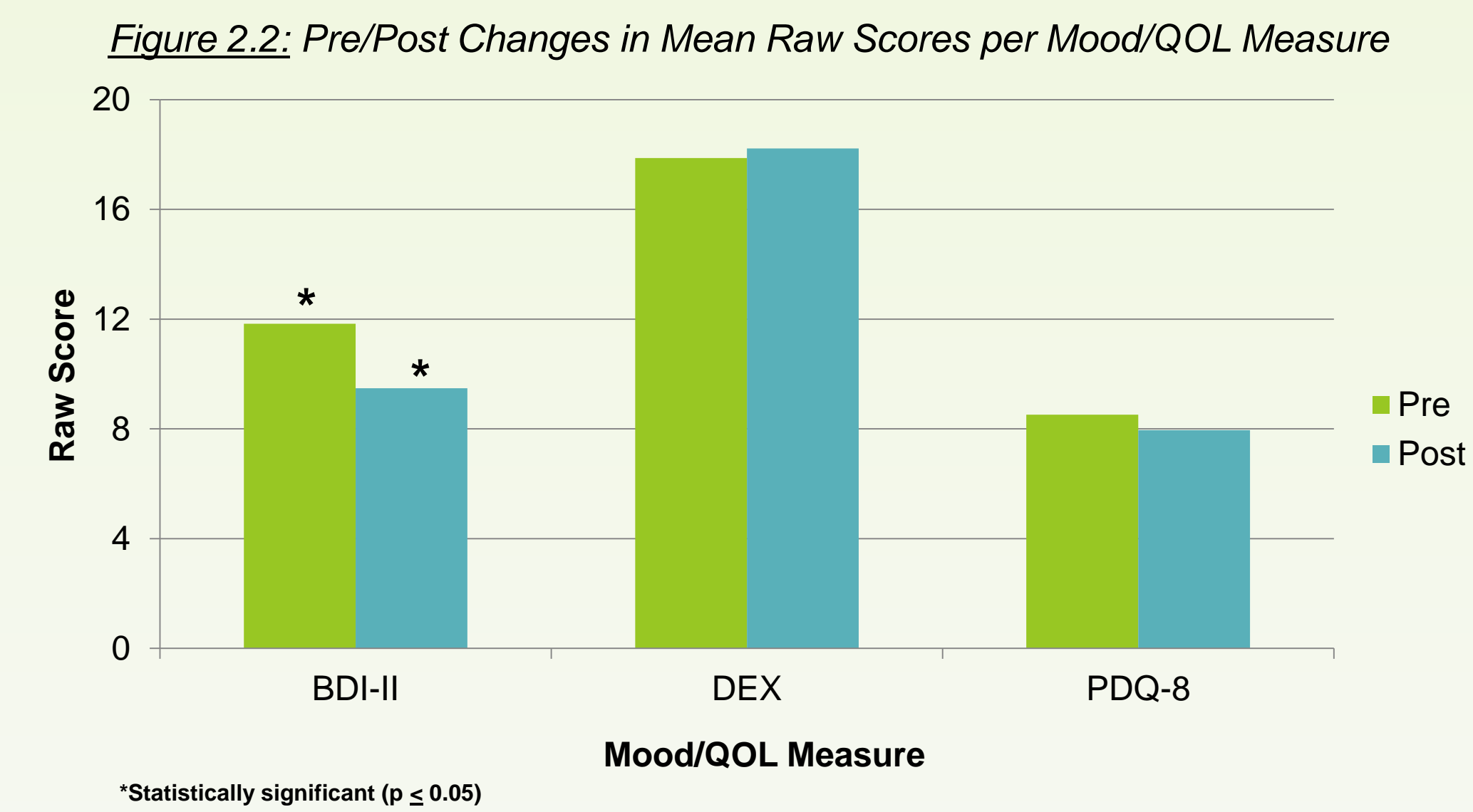
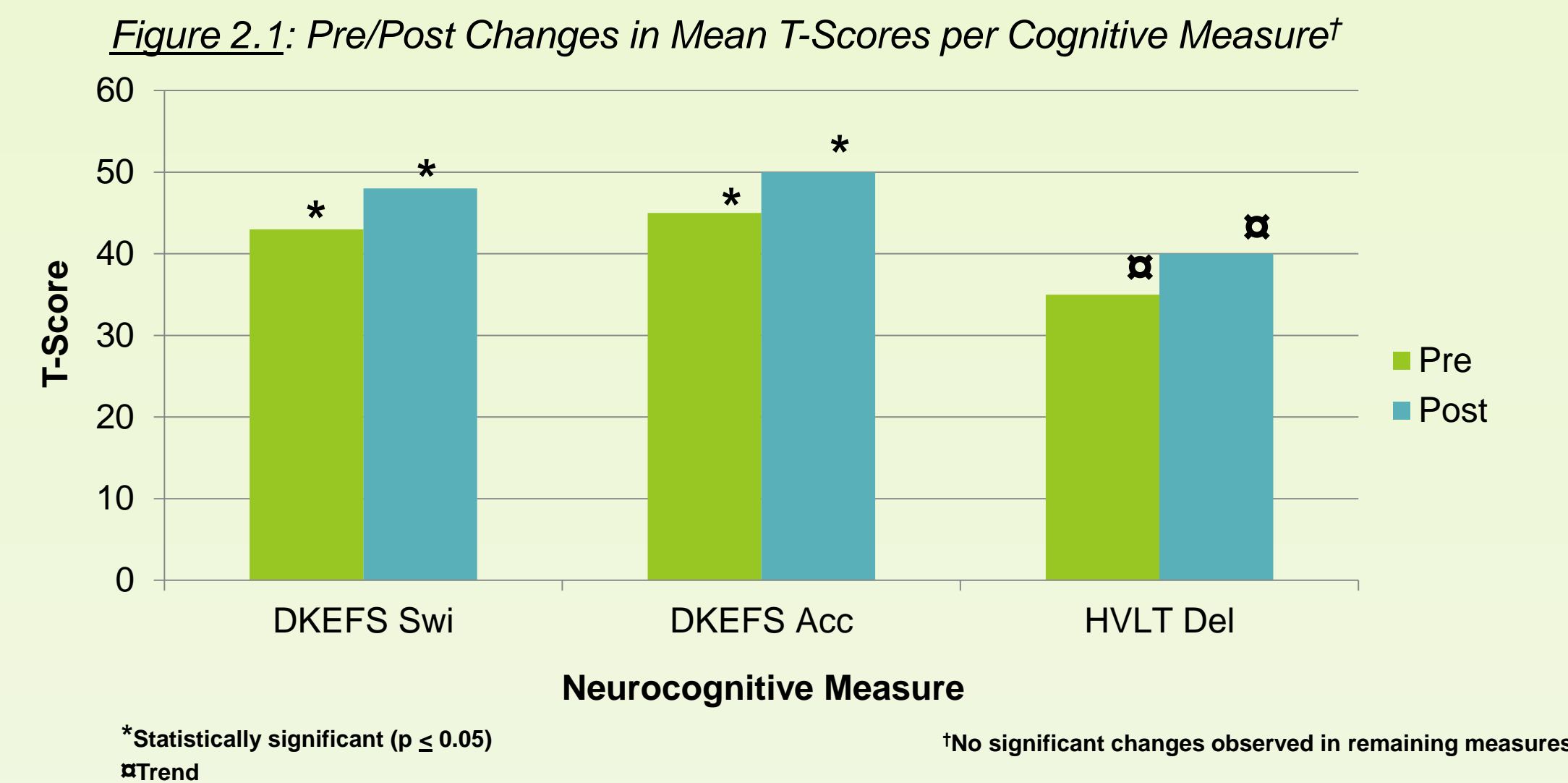


Figure 1.2: Participant Demographics (n=23)

Variable	Mean (SD)	Variable	Frequencies
Age (yrs)	69.2 (6.9)	Sex	52% Male 48% Female
Education (yrs)	16.6 (2.0)	Race	87% Caucasian 9% Asian American 4% Hispanic
Time Since Dx (yrs)	6.2 (4.9)	Handedness	92% Right 4% Left 4% Ambidextrous

Results



Discussion

•Significant improvements were observed in DKEFS Switching and Accuracy (executive functioning), with a positive trend in HVLT delayed recall (memory). Significant improvements were also observed for BDI-II (self-reported symptoms of depression).

•Although results of a PD QOL questionnaire did not reach the threshold for statistical significance, qualitative directional improvements were noted for several subscores.

•After the PEP, 70% of participants reported both improved cognition and emotional status.

•100% of participants reported enjoyment from socialization with other PD participants and satisfaction with the program overall.

•Validity concerns include small sample size (n=23) and practice effects due to the brief test-retest period.

Conclusion

Positive participant feedback suggests that further expansion of this program for treatment of NMS may be beneficial for PD patients.

Future research will continue to evaluate PEPs to augment sample size and strengthen internal validity, as well as compare the efficacy of PEPs to a best medical therapy group and a cognitive rehabilitation intervention for PD.