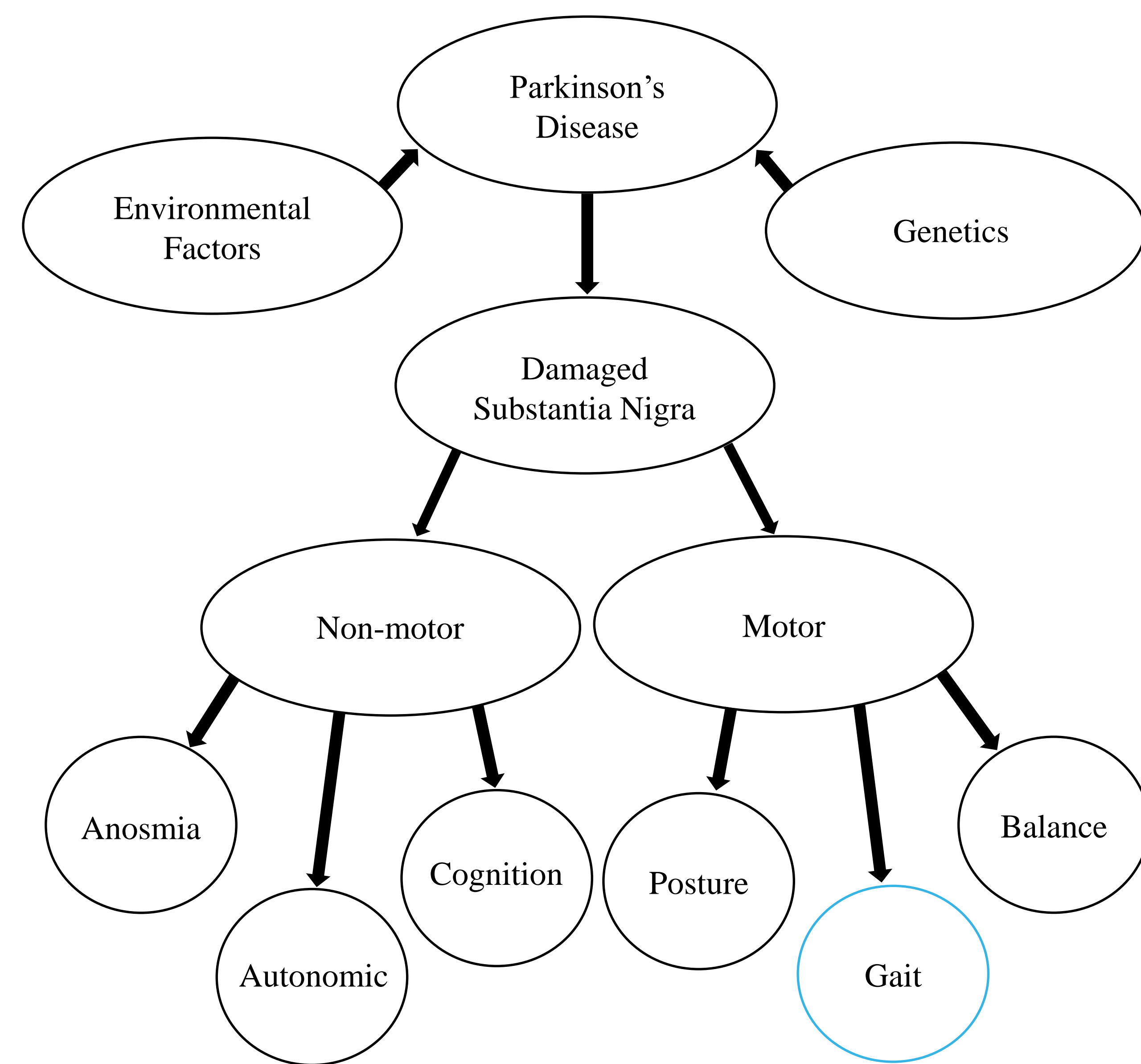


Background



Study Aims

- The purpose of this study is to identify types of exercise that independently improve motor and gait function in patients with Parkinson's disease.
- Further, this project explores how these exercises influence non-motor symptoms of Parkinson's disease, like cognition.

Methods

- A search of peer-reviewed research articles using PubMed with the MeSH keywords "Gait," "Exercise," "Parkinson Disease/Rehabilitation," and "Parkinson Disease/Therapy."
- Patient Inclusion Criteria: Mild to moderate symptoms of Parkinson's disease based on the Hoehn and Yahr Scale (stage 1-3); Patients aged 40+; Exercise interventions with a duration of at least one month

Results

N = 25 peer-reviewed research papers

Type of Exercise	Motor/Gait Improvement	Non-Motor Improvement
Aerobic	†	†
Aquatic Tai-Chi	*	†
Dance	*	†
HIIT	†	†
Nordic Walking	†	ND
Physiotherapy	†	†
Pilates	†	†
Physical Therapy	†	†
Resistance Training	†	ND
Stretching	†	ND
Tai-Chi	*	†
Treadmill	†	†
Walking with Music	†	ND
Yoga	*	†

*, $p < 0.05$; †, $p = 0.05 - 0.1$; , ND, no difference; HIIT, High Intensity Interval Training

Discussion

All types of exercise in the study showed positive improvement in gait function and its parameters in patients with Parkinson's disease. Statistically significant improvement occurred with Tai-Chi, dancing, and yoga.

The Parkinson's Foundation recommends a patient's exercise program include four components: aerobic activity, strength training, balance, agility and multitasking movements, and flexibility activities. Interestingly, the Parkinson's Foundation names Tai-Chi, dancing, and yoga specifically as examples of balance, agility, and multitasking movements.

Secondary to increases in motor function, modest improvement in non-motor functions, such as cognition, resulted from most all exercise types.

Conclusions

Tai-Chi, dancing, and yoga each independently improve the gait of patients with Parkinson's disease. A combination of exercises may be optimal for achieving improved gait in Parkinson's disease.

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References



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