

An Exploration of People Living with Parkinson's Experience of Cardio-Drumming



Parkinson's Beats: A Qualitative Phenomenological Study

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Introduction

Parkinson's

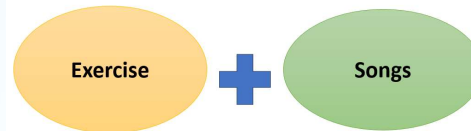
- Fastest-growing neurodegenerative condition
- > 10 million people living with Parkinson's worldwide (2023);
- > 145,000 people living with Parkinson's in the UK (2017)
- Incidence: approx. 3 in 1,000 in the UK (2018) (men > women)
- A range of motor & non-motor symptoms
- No cure; rehabilitation

Physical Activity for people with Parkinson's

- Physical activity (PA) as "the new medicine" for Parkinson's, as PA may attenuate symptom progression.
- Current PA guidelines: weekly prescribed PA programmes in a progressive manner, including strength, balance, aerobic, gait, and task-specific training.
- Current PA guidelines: focus on functional movement patterns and large amplitude movements.
- However, due to Parkinson's (apathy), maintaining motivation is difficult; Thus, PA needs to be enjoyable.

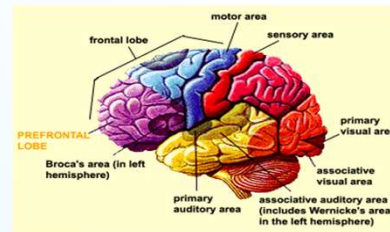
Parkinson's Beats

Cardio-Drumming: high-intensity aerobic exercise involving whole body movements



Music

- Entrainment: rhythm can effectively support the brain to coordinate movements due to time-based cues.
- Music offers rewards, enjoyment -> adherence
- Parkinson's Beats is specifically designed for People living with Parkinson's to promote large amplitude arm movements, balance through differing drumming techniques, & strength training in the legs, combined with popular songs.



Findings

Participants

- N=19 (male=7; 55-80 years old; mild – moderate Parkinson's stage)
- Focus group discussion; Ritchie & Lewis' framework analysis

Findings

- 6 Themes & 15 sub-themes

1. Physical Impact
1.1 Immediate post-class physical impact
1.2 Functional benefits
1.3 Lasting effects
2. Emotional Impact
2.1 Impact during and immediately after class
2.2 Distraction and reduced stress
2.3 Enhanced emotional wellbeing and
3. Impact on cognitive function
3.1 Mastering challenges
3.2 Frustrations
4. Social Benefits
4.1 Working with others
4.2 Additional benefits
5.1 Music
5.2 Dance
5.3 Losing self-consciousness
6. Barriers
6.1 Self-consciousness
6.2 Drumming noise
6.3 Music choice

Discussion/Conclusion

- Parkinson's Beats has demonstrated **physical, emotional, cognitive, and social benefits**.
- The cardio-drumming is a whole-body exercise, encompassing strength, flexibility, balance, and aerobic exercise, aligned with the current PA guidelines.
- **Multi-tasking during drumming** : e.g., drumming rhythmically to the music & synchronising movements with others demand both physical and cognitive resources
- **Enjoyment, being in a flow, empowerment**: enjoying well-known songs, having group support, mastery, being in the moment, self-efficacy & confident
- **Collaborating on the song choices** with participants could minimise disappointment/disagreement, as well as encourage participants to **take ownership**.
- Future studies may include physical, cognitive, and psychological assessments, and investigate both **short-term and long-term impacts**, with appropriate comparators (e.g., other types of physical activities, online vs in-person delivery, healthy controls).
- Research into the optimal dose of cardio-drumming for different stages of Parkinson's progression is also needed.
- **Best practice guidelines** for the facilitators/instructors on how to deliver a cardio-drumming exercise programme tailored for people living with Parkinson's need to be developed using evidence-based research.

Publication



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