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Symposium 2.4

A Mixed-Methods Investigation of a Novel, Co-developed Music-and-Movement Intervention for People with Parkinson's

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Abstract

Introduction: Research in Parkinson's rehabilitation suggests that combining music and movement can improve both motor and non-motor symptoms for people with Parkinson's (PwP). Using an inclusive, participatory medicine approach, we co-developed a 12-week group intervention (*Songlines for Parkinson's*) offering a toolbox of music-based strategies to support symptom management and everyday functioning (Rose et al., 2025).

Methods: We used a repeated-measures, concurrent mixed-methods design across trials in the UK and Switzerland ($N = 42$). Data included kinematic measures, standardized questionnaires, and qualitative interviews. To overcome the limitations of conventional clinical assessments, which often do not capture functional mobility, we developed a new methodology—the Functional Mobility Assessment for Parkinson's (FMA-P)—integrating motion capture and pressure-sensitive gait analysis (Köchli et al., 2025). Additional tests and questionnaires assessed Parkinson's disease symptoms, perceived quality of life, imagery ability, musical engagement, and reward. Interviews explored participants' motivation, use of music, engagement with intervention tasks, and continued use of music-based strategies post-intervention.

Results: Functional mobility increased across several parameters ($p < .05$), motor impairment decreased ($p = .006$), and participants learned to apply motor and musical imagery in their daily lives ($p < .001$ for both). While qualitative data indicated perceived improvements in quality of life, these were not confirmed by standardized measures ($p > .05$). Music served as a vehicle for change, with participants identifying the most effective aspects of the intervention as: (a) the ease of integrating music-based rehabilitation into their daily lives, (b) the ability to choose their own music, which fostered a sense of agency, (c) the group setting, which promoted a sense of community, and (d) learning to use imagery, providing easily accessible internalized cues that improved both motor and non-motor symptoms.

Discussion/Conclusion: Findings demonstrate that *Songlines for Parkinson's* enhances functional mobility and symptom management while fostering agency, connection, and self-efficacy for personalizing rehabilitation strategies among participants. The FMA-P offers a promising new framework for evaluating functional mobility in PwP that corroborates qualitative findings and may help bridge the gap between clinical metrics and lived experience.

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