Chapter 7
Laughter Yoga for Parkinson's Disease:
A Mind-Body Nursing Intervention to Support Home Care

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ABSTRACT

Parkinson's disease (PD) is a progressive neurodegenerative disorder impairing motor function, profoundly affecting patients and their caregivers. PD is characterized by motor impairments as well as various health-related quality of life, including well-being, anxiety, apathy, cognitive deficits, sleep disturbances, depression, and autonomic dysfunction. Studies indicate that mind-body interventions can complement PD medications and enhance patients' quality of life. Among mind-body interventions, Laughter Yoga (LY) has gained popularity, with evidence suggesting its potential for management of PD symptoms. LY has been shown to reduce stress, pain, tension, depression, anxiety, and sleep problems. The benefits of LY may inform evidence-based nursing interventions to enhance the psychological well-being of individuals with PD and their caregivers. Nurses should receive training in LY or refer patients and caregivers to LY sessions during secondary care. Future research should investigate the use and effectiveness of LY as a nursing intervention for PD patients and their caregivers.

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INTRODUCTION

Parkinson's disease (PD) is a chronic, progressive, neurodegenerative syndrome characterized by the degeneration of dopaminergic neurons in the substantia nigra (Kouli, Torsney, Kuan, 2018). This neurodegeneration characterized by the presence of abnormal protein mass and reduced levels of dopamine, a crucial neurotransmitter responsible for regulating smooth and coordinated motor functions (Tolosa, Garrido, Scholz, Poewe, 2021; Kalia and Lang, 2015). Therefore, individuals with PD experience a range of motor symptoms, including rigidity, tremors, bradykinesia, and postural weakness (Tolosa, Garrido, Scholz, Poewe, 2021; German PD's Guidelines Committee, 2024). PD negatively affects health-related quality of life factors such as well-being, anxiety, apathy, cognitive impairment, sleep disorders, depression and autonomic dysfunction, as well as problems related to motor impairment (Tosin, Goetz, and Stebbins, 2024; Angelopoulou et al., 2024). The literature reports that pharmacological treatments for PD are inadequate for some motor and non-motor symptoms (Höglinger et al., 2024; Church, 2021; Muleiro Alvarez et al., 2024; Zhang et al., 2024). In this regard, studies have emphasized that mind-body health interventions in PD can improve the quality of life (Yang et al., 2022; Blard et al., 2024; Harris, O'Bryan, and Latella, 2024). Among mind-body health interventions, Laughter Yoga (LY) has become increasingly popular, with some studies suggesting that it is useful for PD symptom management (Memarian, Sanatkaran, and Bahari, 2017; Bressington et al., 2019; Kumar, Singh, and Sharma, 2024, Meier et al., 2021).

LY is an extended form of intentional laughter that incorporates deep breathing and concludes with meditation and relaxation. There are three primary principles for achieving positive health outcomes: laugh with or without a reason, laugh regularly to boost happy hormones and laugh to oxygenate the body and brain (Cheung and Leung, 2020). LY is a non-invasive and non-pharmacological technique. It involves yoga breathing exercises and laughter practices (Kuru Alici and Arikan Dönmez, 2020). Research supports numerous psychological and physiological impacts on body systems. The findings on the health benefits of LY can be summarized as follows: laughter activates and relaxes muscles, increases respiratory rate, enhances circulation and boosts oxygen levels, reduces stress hormones (e.g., adrenaline, noradrenaline, cortisol), (elevates beta endorphin levels and relieves pain, enhances mental functioning (Ozturk and Tezel, 2021; Kuru Alici and Arikan Dönmez, 2020; Heo et al., 2016; Cheung and Leung, 2020). Furthermore, it can enhance neurotransmitter activity, including dopamine, leading to better memory, focus, concentration, and interpersonal interactions (Ozturk and Tezel, 2021). The positive effects of LY may be important in developing evidence-based nursing interventions that can increase the psychological and physiological well-being of individuals with PD and caregivers. Additionally, involving family caregivers in LY sessions may support