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Examining the Efficacy of Yoga Nidra on Sleep Quality with Persons with Parkinson's Disease (PwPD)

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Background

- Non-motor sleep issues in the Parkinson's Disease (PD) population are correlated with decreased quality of life (QOL) and well-being (Suzuki, 2020).
- Poor sleep management in this population of community dwellers impacts all aspects of daily life and increases caretaker burden.
- PwPD frequently report a lack of support in addressing sleep issues and resort to experimenting with over-the-counter sleep aids (Ornelas et al., 2023).
- PwPD need a nonpharmacological and holistic approach that is safe and effective (Ornelas et al., 2023).
- The efficacy of Yoga Nidra as a nonpharmacological intervention is reported for the general population and some sub populations (Pandi-Perumal et al., 2022).
- Yoga Nidra is a form of profound relaxation in which the individual experiences a state of deep rest (Hébert & Nazari, 2020).
- There is a lack of knowledge on the efficacy of Yoga Nidra in improving sleep quality among PwPD.

Research Question (RQ)

RQ 1: Is Yoga Nidra beneficial for PwPD to improve sleep quality and management?
 RQ 2: Would 3x/week, of 1-hour sessions improve quality of sleep with PwPD?
 Hypothesis: Persons with PD will better manage sleep and have a better quality of sleep with Yoga Nidra.

Theoretical Framework

Occupational Adaptation was utilized as a framework to guide the occupation of sleep to gain control and promote independence in desired functional tasks (Schkade & Schultz, 1992).

Methodology

A Mixed Methods Pilot Study

- Quantitative: Parkinson's Disease Sleep Scale (PDSS) (Chaudhuri et al., 2002)
- Qualitative: semi structured interviews and sleep logs

Participants

- N= 5 community-dwelling adults ages 50-85 years with PD diagnosis (1 female, 4 males).

Study protocol

The study spanned 5 weeks, which proceeded as follows:

- Week 1: Participants received orientation to study, initiated sleep logs, completed PDSS, and participated in semi structured interview.
- Week 2-4: Participants completed Yoga Nidra for one-hour 3x/week and continued weekly sleep logs.
- Week 5: Participants turned in sleep log, completed PDSS, participated in semi structured interview, and received gift card.

Data Analysis

- Quantitative: Analyzed pre and post PDSS
- Qualitative: Analyzed pre and post semi-structured interviews and sleep log (5 weeks). Used open coding, memoing, fracturing the data. Examined emerging themes and trends (Dillaway et al., 2017). Established reliability of qualitative data by using member checking, peer review, and study audit.

Results

Qualitative

The following themes emerged from semi structured interviews and sleep logs:

Use of sleep aids

- Decreased use of items to fall asleep

Hallucinations

- Decreased false perceptions during sleep

Quality of Life (QOL)

- Increased sense of life satisfaction

Quantitative

The following emerged from PDSS analysis:

Significant improvement inferring less sleep disturbances

RQ 1

- Participants report higher QOL in semi structured interviews.
 - Due to small sample size and fidelity of practice, results are not conclusive.

RQ 2

- Further research required to accurately answer this question.
 - Dosage effective for 2 participants who had significantly improved sleep quality scores.

Discussion

Overall, participants reported improvement in sleep quality and sleep hygiene protocols and would like to continue this practice

- Hawthorne Effect
- Press for mastery in occupation of sleep

Strengths

- Provided PwPD a nonpharmacological, holistic intervention to increase sleep quality
- Enhanced overall knowledge of Yoga Nidra as an intervention to PwPD at capstone site.
- Increased confidence in the legitimacy of Yoga Nidra within PwPD population
- Replicable study design for a longer duration

Limitations

- Small sample size limited quantitative analysis to descriptive measures only
- Limited duration of intervention
- Participant commitment to frequency and maintenance of sleep logs
- Uneven male/female participation
- Homogeneity of participants –stages of disease

Implications for OT practice and research

- For more conclusive information
 - Replicate with a larger sample size
 - Use of technology for more objective and reliable data on sleep quality and management.
- Based on perceived benefits of a body-mind exercise it has the potential to be used as an ancillary intervention with certified OT – yoga therapists.

References

