Introduction

- Postmenopausal women are more likely to have sleep disturbances.
- It could be caused by normal physiological changes associated with aging, postmenopausal related symptoms, stress, nervousness, and mood symptoms.
- Sleep deficiency can affect work, driving, social functioning, and lead to issues with focusing, learning, and reacting, negatively impacting quality of life.
- This could include feeling fatigued throughout the day and lead to them having a less healthy lifestyle, which could cause an increased risk of cancer.

Objective

Since exercise has been found to significantly improve sleep problems, identifying which aspects of sleep disturbances have the strongest relationship with exercise will allow us to improve postmenopausal women’s lifestyle behaviors and decrease their risk of cancer.

Methods

- Women were recruited from MD Anderson Cancer Center employees and the general population.
- Women were be screened for being 50-69 years old, postmenopausal woman, self-reported height and weight indicating a BMI ≥18.5 and <25 kg/m² from Project TONE’s recruiting criteria.
- Participants completed survey on physical activity (Godin Leisure Time Exercise Questionnaire) and sleep (Pittsburgh Sleep Quality Index- PSQI).
- Descriptive statistics for each sleep component of the PSQI were examined.
- The PSQI Global score was used to present the distribution of all the sleep components.
- Godin total minutes of moderate and vigorous exercise were assessed and used for this analysis.
- The correlations between Godin total minutes of moderate and vigorous exercise and the PSQI components and global score were analyzed to examine relationships between exercise and sleep.

Results

- 22 postmenopausal women were included in this analysis from Project Tone (an intervention for women with normal BMI but high body fat).
- PSQI Component 4 Sleep efficiency had the highest mean (1.64), median (2.50), and standard deviation (1.465) (Figure 1).
- Component 5 Sleep disturbance has the next highest mean (1.23), median (1.00), and standard deviation (0.612) (Figure 2).
- The baseline data PSQI Global score was from the range of 1-12 and the mean (6.80), median (6.00) (Figure 3).
- Most participants reported completing 0 and 120 minutes of moderate and vigorous exercise (Figure 4).
- PSQI Component 1 Subjective Sleep quality had the largest negative Pearson Correlation of -0.397, sig. (2-tailed) 0.075.
- PSQI Global score had the highest overall Pearson Correlation -0.536, sig. (2-tailed) 0.015 (Table 1).

Conclusions

- PSQI 4 Sleep efficiency was the sleep disturbance that affected the study participants the most.
- PSQI Component 1 Subjective Sleep quality and PSQI Component 4 Sleep efficiency had the largest negative Pearson Correlations.
- PSQI Global score had the largest overall negative Pearson Correlation that is significant at the 0.05 level (2-tailed).
- Based on these results, there isn’t a strong correlation between the sleep disturbances and exercise, but there is a moderate correlation between the PSQI Global score and exercise.

References


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