

Effect of Resistance Exercises on Sleep Quality, Functional Capacity and Insomnia among Postmenopausal Women: A Pilot Study

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ABSTRACT

Introduction: Menopause is the permanent cessation or absence of menstruation. Postmenopausal women report to experience a decline in their sleep quality, functional capacity and insomnia, which can further exacerbate their health concerns. However, evidence suggests that resistance exercises can be beneficial in improving their insomnia and sleep.

Aim: To study the effects of resistance exercises on sleep quality, functional capacity and insomnia among postmenopausal women.

Materials and Methods: Ten postmenopausal women aged 40-60 years were enrolled for this pre-test post-test quasi-experimental study by purposive sampling method and were rendered resistance protocol using Thera band for 60 minutes, three days in a week for 4 weeks. The exercises included in the protocol were diagonal flexion, concentration curl, dynamic hug, seated row, side bend and extension of hips. The primary outcome used in the study were Pittsburgh Sleep Quality Index Scale to measure sleep quality,

Insomnia Severity Index to measure insomnia and 6-minute walk test for assessing functional capacity. The outcomes were assessed at baseline and after four weeks.

Results: The data were analysed using the IBM SPSS (version 16). Non parametric statistics presented in median and interquartile range. The median age and the menopausal age of the participants were found to be 50.5 years and 45.5 years, respectively. The effect of the intervention on the outcome measures were assessed by using the Wilcoxon Signed Rank test, which showed a significant decrease in the Pittsburgh Sleep Quality Score ($Z = -2.829$, $p = 0.005$), 6-minute walk distance ($Z = -2.527$, $p = 0.012$) and insomnia severity score ($Z = -2.823$, $p = 0.005$). The effect size of the outcomes was also calculated.

Conclusion: Resistance exercises are effective in improving the quality of sleep, functional capacity and insomnia.

Keywords: Resistance exercise, Sleep quality, 6-minute walk test.