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Impact of Different Level Aerobic Exercise and Resisted Training In Post Menopausal Women on Sleep and Psychological Health Problem: A Systematic Review and Meta: Analysis of Randomised Controlled Trials

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Abstract

Background: Postmenopause is an adaptation process during which women go through a new biological state. This process is accompanied by many biological and psychosocial changes, symptoms such as: hot flashes, vaginal dryness, mood switching, depression and sleep difficulties.

Objective: To find the effect of exercises on sleep difficulties and psychological health problems in postmenopausal women.

Methods and analysis: This review and meta-analysis aimed to evaluate the effects of exercise on sleep difficulties in postmenopausal women. Pubmed, Google Scholar, Scopus and PEDro databases were searched. This review included all articles published from 2013 to 2023. Of all the articles retrieved 13 were included. The included studies were fair and qualitative according to the PEDro scale. The Cochrane Collaboration tool of risk of bias was used to assess the risk of bias.

Results: Studies have shown that exercise is effective in improving sleep quality. The results were statistically significant (MD = -0.65, 95% CI: -1.02 to -0.27, $I^2 = 96%$, $p < 0.00001$). Statistical significance was found for quality of life (MD = -0.32, 95% CI: -0.83, 0.19, $I^2 = 71%$, $p = 0.03$). The results showed that low-intensity exercise did not reduce PSQI scores compared to the control group, while moderate and high intensity exercises had a positive effect on improving sleep quality.

Conclusion: In conclusion, various exercises like aerobic and resistance-based training, moderate intensity training, low intensity training and high intensity interval training have a significant effect on sleep and psychological health problems in the postmenopausal phase, evaluated with the PSQI questionnaire, anxiety and depression.

Keywords: Aerobic exercises, Exercises, High intensity interval training, Moderate intensity training, Postmenopausal, Resistance-based training, Sleep.