

COMPARING THE EFFECTIVENESS OF OTAGO EXERCISE WITH REACTIVE BALANCE TRAINING VERSUS OTAGO EXERCISE AMONG THE ELDERLY POPULATION TO PREVENT FALLS

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ABSTRACT

BACKGROUND OF THE STUDY

A fall is defined as an incident that results in a person coming to rest accidentally on the ground or floor or other lower level. Recent evidence has suggested that a multi- component exercise regimen focusing on flexibility, strength, balance, and endurance can effectively improve balance, mobility, and physical performance as well as reduce the incidence of falls and fall-related injuries in community-dwelling older adults. The Otago Exercise Program encompassed all the aforementioned aspects and was developed for community-dwelling older adults aged more than 65 years old. Perturbation-based Balance Training is a task-specific intervention that aims to improve reactive balance control (i.e., rapid reactions to instability) after destabilizing perturbations in a safe and controlled environment. Hence, the aim of the study is to compare Otago Exercise with Reactive Balance Training and Otago Exercise only for fall prevention among the elderly population.

MATERIALS AND METHODOLOGY

The study was conducted as a comparative study for a total period of four weeks, which includes 12 sessions. In this study, Group A included 15 community-dwelling older adults who were trained using Otago Exercise with Reactive Balance Training and Group B included 15 community-dwelling older adults who were trained using Otago exercise only. The pre and post-test values of the Berg Balance Scale, Timed Up-and-go test, and 30-second sit-to-stand test were taken for analysis.

RESULT

P-value for Group A is < 0.0001 and of Group B is < 0.0001 . However, based on the mean difference value of Group A and Group B it was shown that Group A is effective and highly statistically significant.

CONCLUSION

This study concludes that Otago Exercise with Reactive Balance Training is more effective in preventing falls compared to Otago Exercise only.

KEYWORDS: *Elderly falls, Otago Exercise, Reactive balance, Perturbation-based Balance Training, Berg Balance Scale, Timed Up and Go test, 30-second sit-to-stand test.*