

Randomized control trials on Otago exercise program (OEP) to reduce falls among elderly community dwellers in Shahroud, Iran

ABSTRACT

Background: Fall is a worldwide health problem among elderly people and a known leading cause of disabilities. Fall prevention programs have been implemented in various forms. The Otago exercise program (OEP) is one of the most recent home-base exercise training program. Objectives: This study was conducted to examine the effectiveness of OEP to reduce falls among elderly people in Shahroud, IR Iran. Materials and Methods: This randomised control trial was conducted among the elderly community dwellers in Shahroud city of the Semnan province, IR Iran, with experience of falls in the last 12 months. Subjects of the study (n = 317) were recruited from elderly senior citizens at public health centers. Block systematic random sampling was applied to categorize the subjects in experimental and control groups. The experimental group (n = 160) received OEP for six months and was compared with the control group (n = 157) who received general health training. This study was registered with the following ID, IRCT2014012016285N1. Results: The findings of the study showed that OEP improved physical performance (Berg-Balance-Score with $P > 0.025$, and Timed-Up-Go-Test with $P > 0.017$) and functional capacity (Arm-Curl-Test with $P > 0.00$ and Chair-Stand-Test with $P > 0.01$). In addition, OEP significantly reduced the incidence of falls ($P \leq 0.00$) among senior citizens in the experimental group. Discussion: The OEP as a home-based exercise is effective for the reduction of the incidence of falls among senior citizens with a history of falls. The OEP can be recommended for elderly homebound people who do not have access to facilities.

Keyword: Otago exercise; Falls; Elderly; Community