

Prediction of Risk of Falling among Institutionalized Elderly People in Iran

Abstract

Introduction and objective: Aging decline abilities and leads to increased risk of falling and subsequently poorer quality of life. The objective of this study was to identify a proper assessment for risk of falling among institutionalized elderly people. In order to accomplish this aim, two functional assessment methods, Berg scale and tinetti scale, were used and the validity indices of these methods were calculated.

Design: Prospective non - interventional methodological discriminative-validation study in order to make a comparative assessment of the discriminative validity of the two clinical assessment methods among the elderly people with/ without history of falling.

Methods: The frequency of falls within 6 months among institutionalized elderly individuals was prospectively studied. Finally, those having had two or more falls within 6 months were enrolled in the faller group and those having no falls within 6 months were enrolled in the non-faller group.

Participants: Twenty-one women and 33 men (mean age: 75.79, standard deviation [SD]: 8.47, range: 61-98) independent in their daily activities and able to walk 10 meters using / without assistive devices volunteered to participate in the study with awareness.

Measurements: Background variables included age, gender, use / nonuse of assistive devices, height, weight, number of the drugs used, and number of the diseases; independent variable was history of falling; and dependent variables were the results of the two functional assessment methods.

Results: Independent t test indicated a significant difference between the two groups of fallers and non-fallers in the mean scores on Berg Balance Scale ($p=.0001$) and Tinetti Scale ($p=.0001$). The results of logistic regression test indicated much more discriminative validity for Berg Balance Scale test than Tinetti Scale test. Studying the validity of Berg Balance Scale assessment method showed that all validity indices should be regarded as bases for clinical decision.

Key words: Elderly people /Fall(s) /Functional assessment method(s)

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