Abstract

Background: The consequences of falls are a major cause of autonomy and independence loss among the elderly. In this context, the Berg Balance Scale (BBS) has been widely used to detect the risk of falls in elderly. Objective: To evaluate the predictive value of the BBS for fall risk in physically active and inactive elderly subjects. Methods: The sample included 188 older adults with a mean age of 66 (±9) years. Of these, 91 participated in a regular physical activity program and 96 did not. We analyzed the cut-off scores of 45, 47, 49, 51 and 53 in both groups regarding the sensitivity (S), specificity (Sp), positive predictive value (PPV) and negative predictive value (NPV) of the test, including the positive likelihood ratio (PLR) and negative likelihood ratio (RVN) for diagnosing the risk of falls. Results: The mean BBS score was 54.7 in physically active subjects and 50.8 in inactive subjects, which was statistically significant (\(\chi^2=0.001\)). The best cut-off was a score of 49 for physically inactive subjects, with a sensitivity of 91% and a specificity of 92%. On the other hand, the BBS had low sensitivity (from 0 to 15%) and high specificity (between 83% and 100%) for physically active subjects at the cut-off points analyzed. Conclusion: The scale did not achieve sufficient sensitivity to individual differences among physically active older people with higher levels of functional balance ability.

Keywords

Aged, postural balance, falls, physical activity, sensitivity, specificity.