

The effect of age, depression and sex on fear of falling; a comparison between individuals with stroke to individuals without a disability

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Introduction: Fear of falling (FOF) is an independent predictor of physical function, participation, and stroke recovery 3 months post discharge. Factors such as age, sex and depression have been reported to modify the degree of fear in the general population. It is not known what factors affect FOF after stroke.

Objectives: To determine the effect of age, depression and sex on fear of falling over a one year period of time in a cohort of individuals with stroke and individuals without a disability.

Methods: The FOF of 98 individuals with a first-ever stroke and 110 healthy individuals was assessed using the SAFFE at 4-times during the year (1-month post discharge from rehabilitation, 3, 6, 12 months intervals). Subjects were grouped based by age (<60, 61-70, 71-80, >80 years) and using the cut-off score of >16 on the CES-D at baseline, subjects were defined as experiencing versus not experiencing depressive symptoms. For each group a three-way ANOVA was performed to assess the within factor of fear of falling, between the age groups, sex and depression factors.

Results: The mean SAFFE scores of the stroke group was significant lower than those of the healthy group for all assessments ($t=-10.0-4.5$, $p=0.000$). The frequency of depressive symptoms during the year ranged from 36-27% in the stroke group and 5.5-10% in the healthy group. For the stroke group the three-way ANOVA produced a significant main effect for FOF at the 4 points in time ($F=5.1$, $p=0.004$). No interaction effect was found for age, depression or sex. For the healthy group the three-way ANOVA produced a significant main effect for FOF ($F=4.1$, $p=0.009$) in addition to a significant interaction effect for FOF and age ($F=2.2$, $p=0.022$), FOF and depression ($F=4.7$, $p=0.004$) and FOF, age and depression ($F=4.0$, $p=0.010$).

Conclusion: In the healthy group, age and depression affect FOF. These factors are not important among individuals during the first year post-stroke.

Contribution to occupational therapy: Given the importance of FOF for participation in daily activities, clinicians are encouraged to target FOF in younger as well as older adults and those with and without depressive symptoms.