

Screening for falls risk in the older person with haemophilia – a pilot study

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Background

Falls and fall-related injuries are a common and serious problem for older people. Persons with haemophilia (PWH) who have not benefited from prophylaxis treatment using clotting factor concentrates during childhood show signs of haemophilic arthritis in young adulthood, suggesting they may be at risk of falls earlier than unaffected people and before the onset of age-related co-morbidities. To date, no prospective study has been published on PWH that permits selection of a specific test of balance and risk of falls, nor is there adequate validation of cut-off scores for any of the tests for identification of future falls in people with haemophilia.

Aims

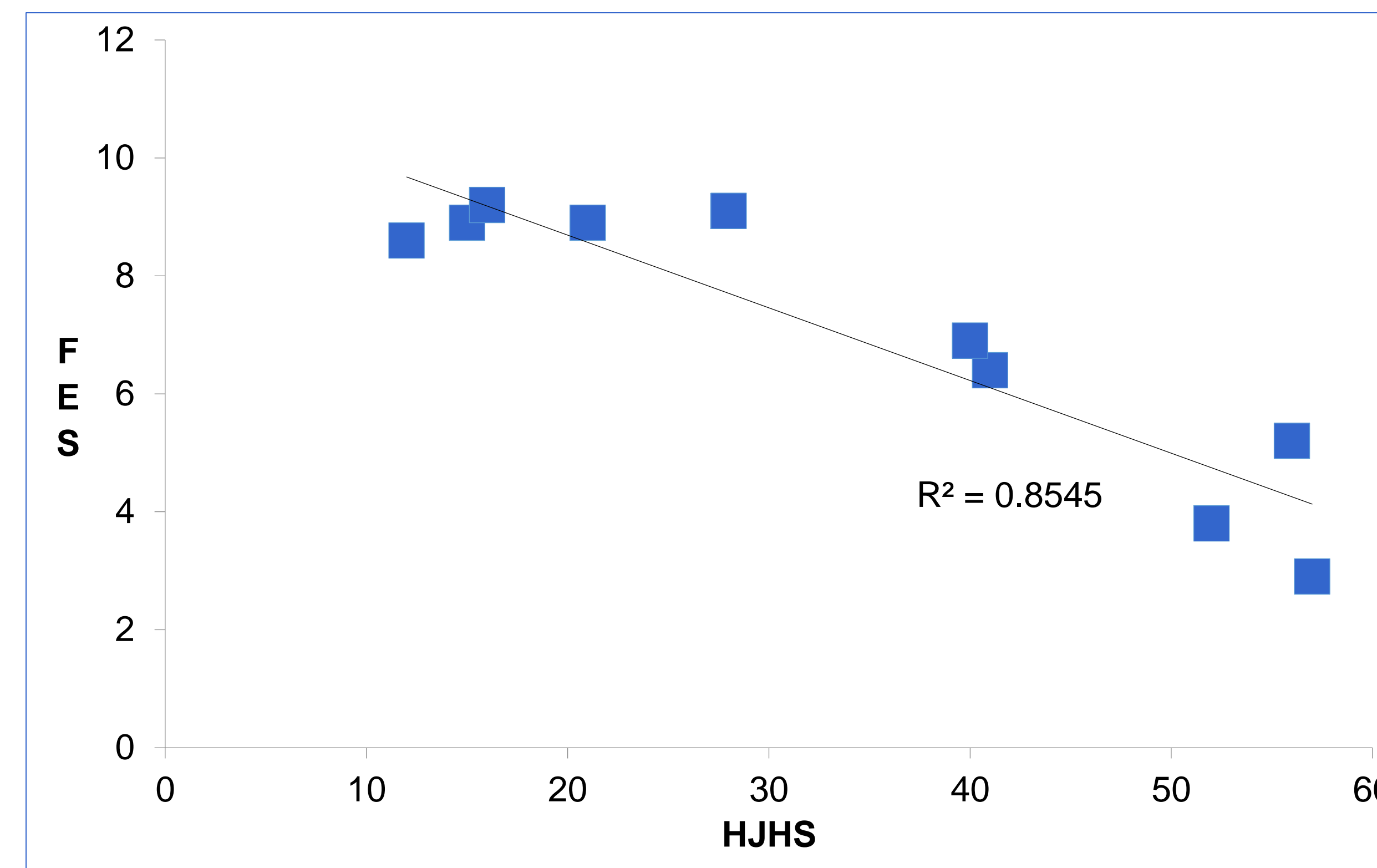
Our aim was firstly to see whether an association exists between Haemophilia Joint Health Score (HJHS) and a history of falls and secondly, to see whether objective tests of balance and gait are associated with a history of falls.

Methodology and method

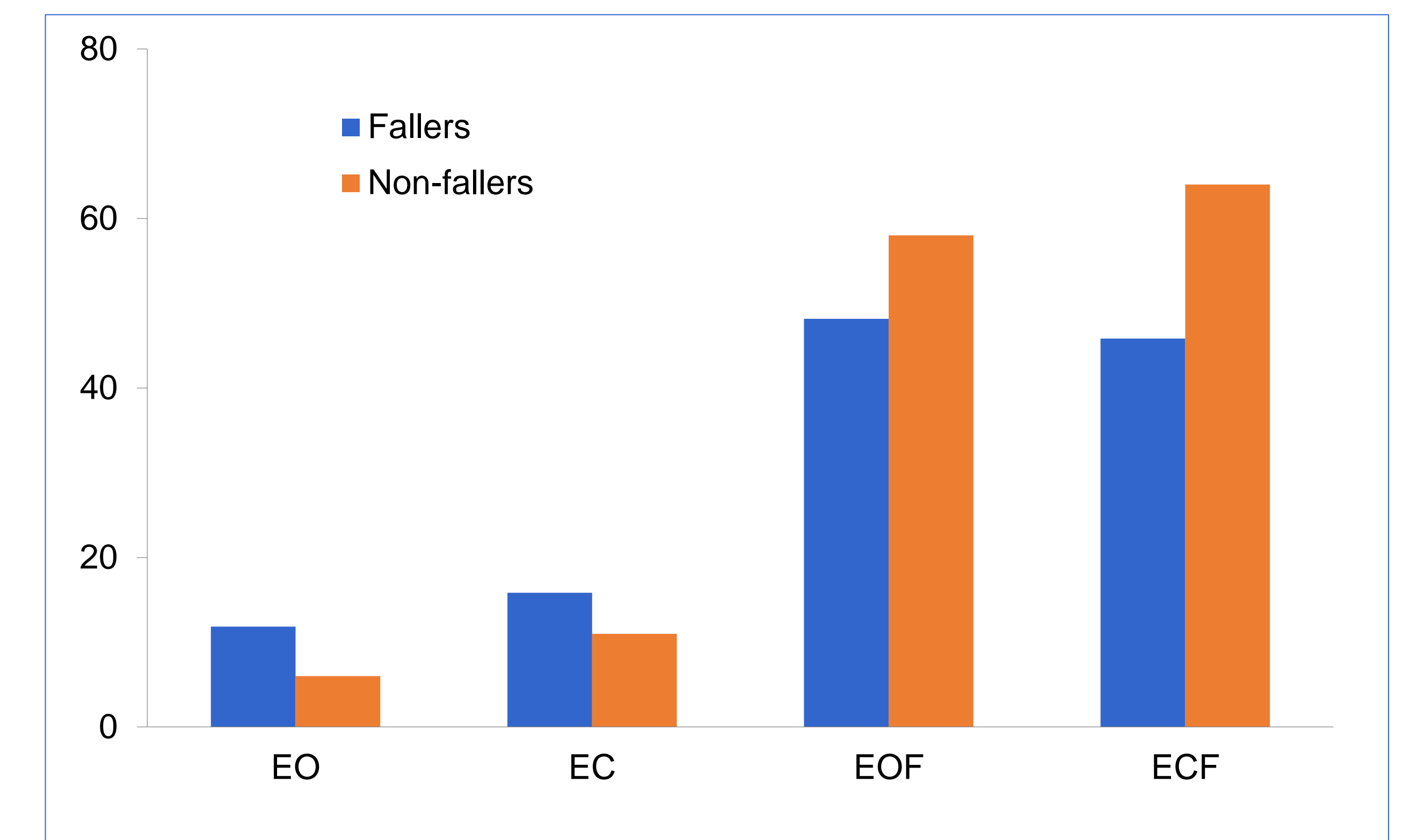
In a pilot study of ten people with severe haemophilia we evaluated the risk of falling with the Falls Efficacy Scale (FES) together with balance in the clinical setting using the Berg Balance Scale (BBS), Timed up and Go (TUG) and 2-Minute Walk Test (2MWT), and in the laboratory setting by recording the pressure patterns under the feet (postural sway) with the MatScan Pressure Mat (Tekscan), when the individual sensory inputs required for balance were challenged; i.e. eyes open (EO), eyes closed (EC), eyes open standing on 75mm high density foam (EOF) and eyes closed standing on the foam (ECF). Data was collected for 60s for the four different trials.

Key Findings

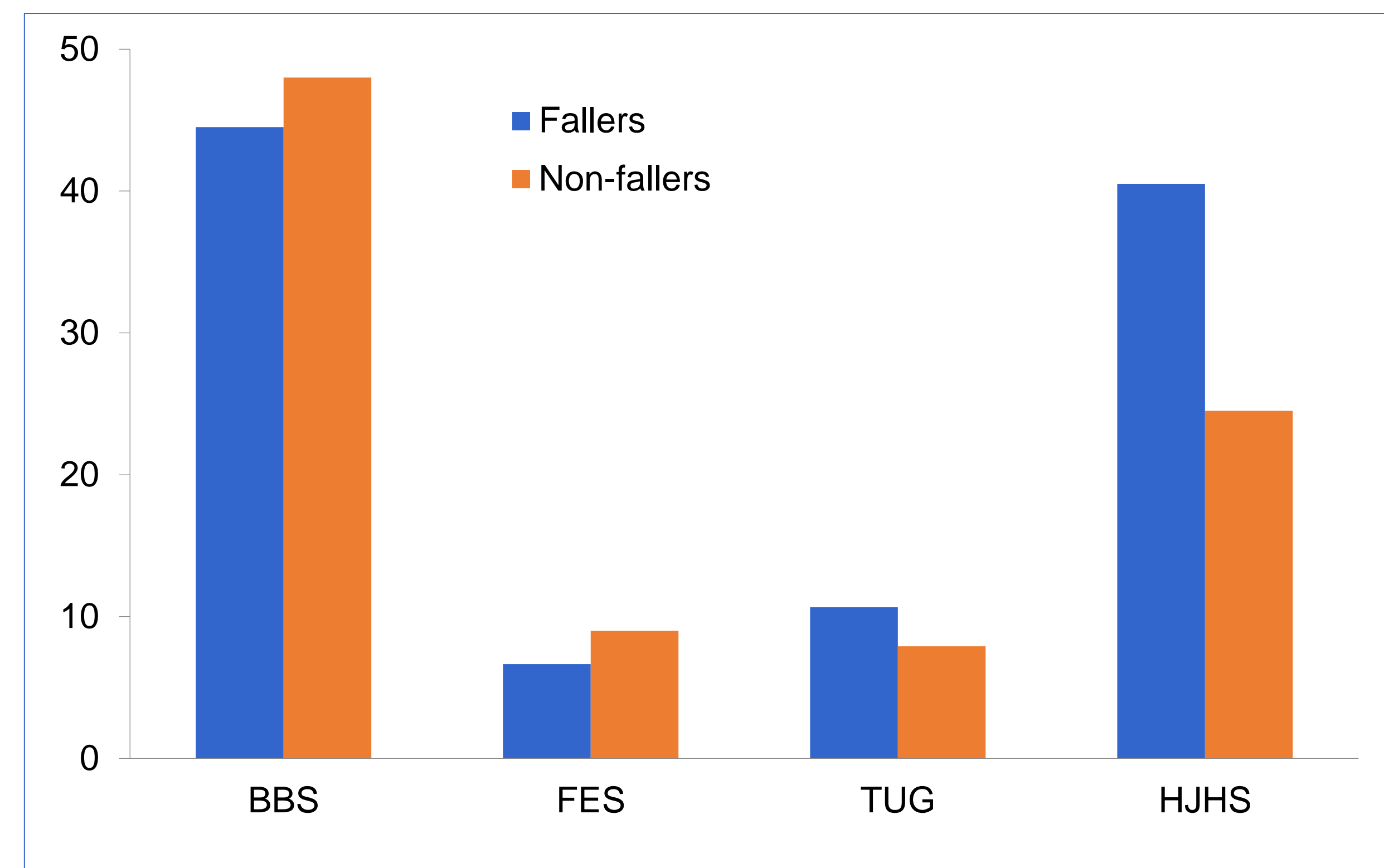
- Screening for falls risk in the older PWH should be more sophisticated than simply asking “Did you fall in the last year?”
- HJHS is strongly correlated with the Falls Efficacy Scale; but current at risk cut-offs for the Falls Efficacy Scale and Berg Balance Scale do not identify PWH at risk of falls
- As balance is challenged; postural sway in fallers is markedly reduced compared to non-fallers, indicating a possible mechanism for their falls risk
- TUG and 2MWT correlates with postural sway and may be suited to identify and monitor falls risk in PWH



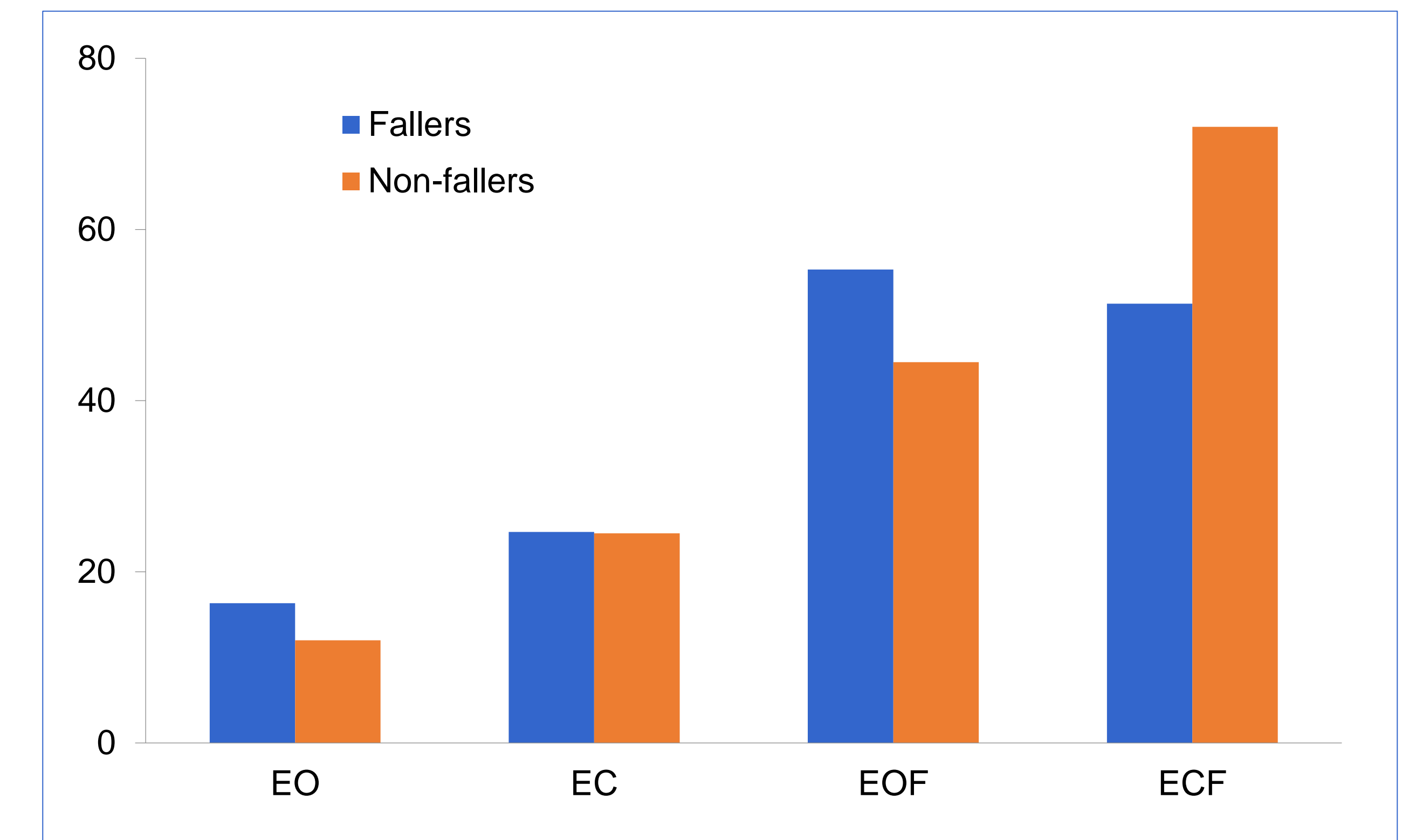
Association between HJHS and Falls Efficacy Scale



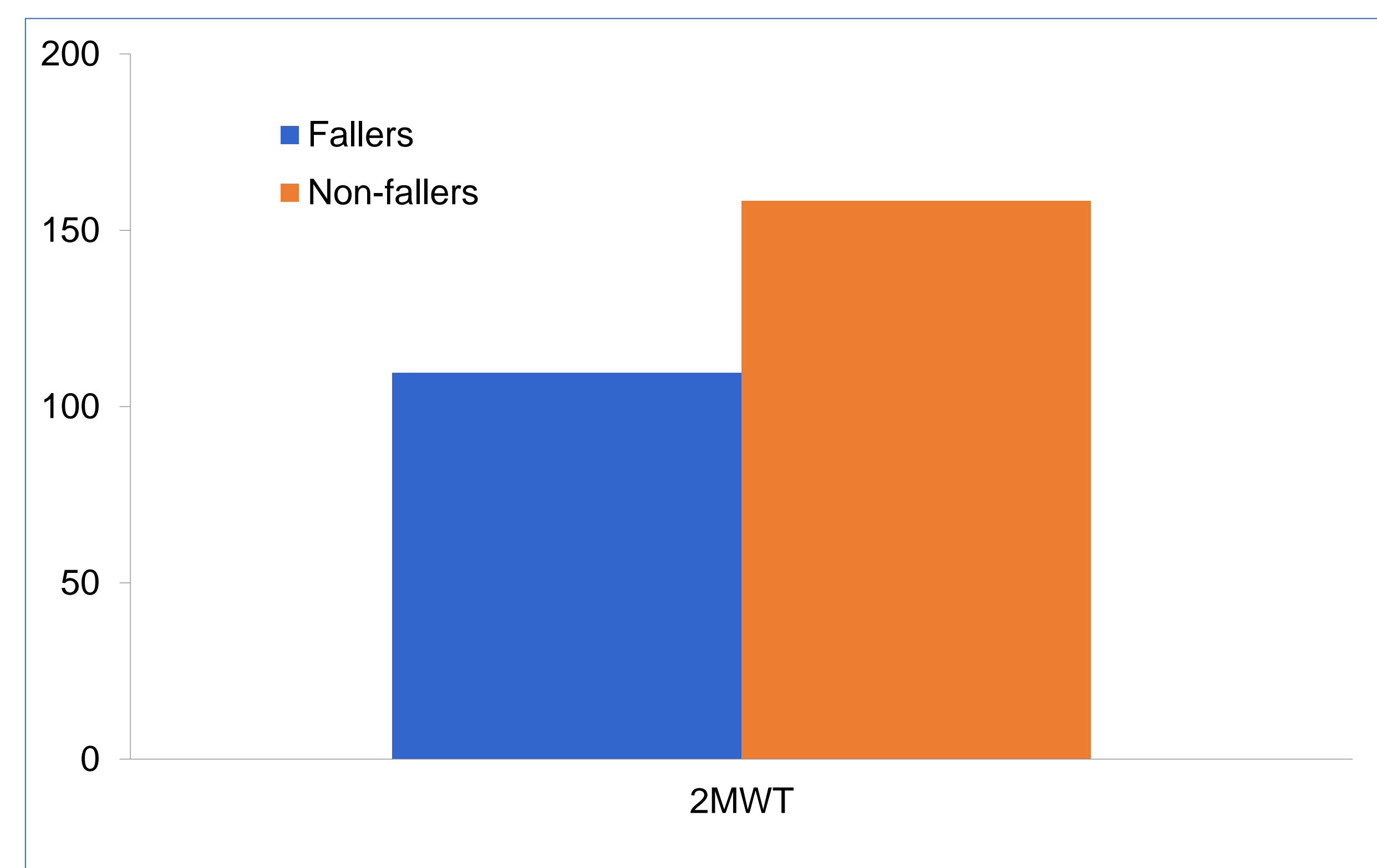
Centre of pressure motion (mm) – lateral direction



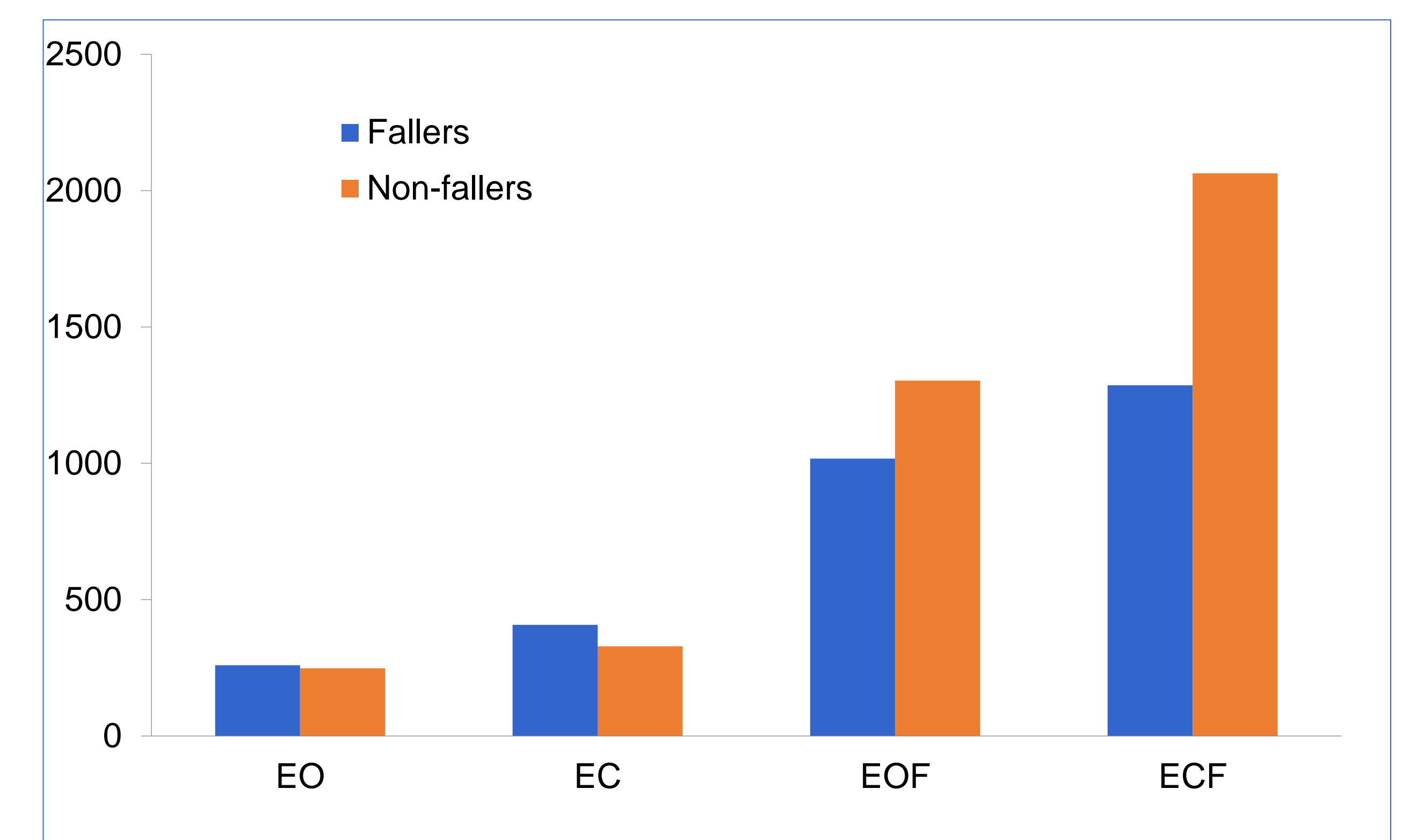
Falls and balance outcomes



Centre of pressure motion (mm) – anterior-posterior direction



Distance walked in two minutes (m)



Centre of pressure motion (mm) – total path