FALL RISK SIGNATURE IN BRAZILIAN OLDER WOMEN AND BALANCE ASSESSMENT USING A MOBILE TECHNOLOGY

Tahara, A.K¹.; Barbora, A.²; Barbosa, M.A.²; Nunes, G.S.²; Oliveira, C.²; Souza, M.A.³ Ferreira, I.³; Andrade, D.

¹Physiotherapist, MSc Student in Rehabilitation Sciences - UFJF/Brazil (klein.tahara@gmail.com)
²Physiotherapist, MSc, PhD - UFJF/Brazil
³Physical therapy students –UFJF/Brazil
Characteristics of high fall-risk groups and its relation with more available tools of assessment of fall risk are important aspects of effective fall prevention programs.

PURPOSE

To characterize high fall-risk group and its correlation with the YMED balance test app.
METHODS

VOLUNTEERS AND PROCEDURES

✓ Thirty-five volunteers as follow:
  High fall-risk (HFR – N= 17)
  Non fall-risk (NFR – N=18)

✓ Were submitted to the hip’s Limits of Stability (LoS) test
  On a force plate
  To evaluate ten stabilometric parameters (SP).

STATISTICS

✓ The differences between groups were assessed by Mann-Whitney test
✓ The fall-risk signatures were analyzed applying the overall profile analysis, using the concept of low and high-postural sway
RESULTS

✓ In general, HFR individuals had an opposite fall-risk signature compared to NFR.
✓ The high fall-risk signature was characterized by a lack of anterior-posterior voluntary sway and a high medium-lateral sway during LoS test.
✓ Interestingly, the YMED was able to distinguish the HFR and NFR under LoS test.

CONCLUSIONS

The innovative fall-risk signature suggest that the risk of falls are multifactorial phenomena associated with a high fear of falls and low stability and the cheap available fall-risk assessment tool is essential to prevention and early detection of fall-risk.