

Screening risk of falls in Parkinson's disease population living in underserved areas



Tamine Capato, Johnny A. Miranda, Venício Grabois, Francielle Santos, Fabiana Almeida, Rafael Carra, Rubens Cury, Manoel T. Jacobsen, Egberto R. Barbosa

University of São Paulo, Department of Neurology, Movement Disorders Center, São Paulo, Brazil

BACKGROUND

- ✓ The screening of falls portrays a huge challenge in Parkinson's Disease(PD);
- ✓ Digital technologies are promising tools to change research and treatment monitoring in PD;
- ✓ It is unknown which is more feasible and low coast digital system to screen fall rates of PD from underserved areas.

OBJECTIVE

To verify the feasibility of the Balance-App to assess the risk of falls in the PD population living in underserved areas.

METHODS

- ✓ Observational study, 197 paticipants with PD (H&Y 1-4);
- ✓ Age 67.2 (mean); 58% men.
- ✓ One trial clinical setting assessment in clinical setting



Figure 1: Procedures

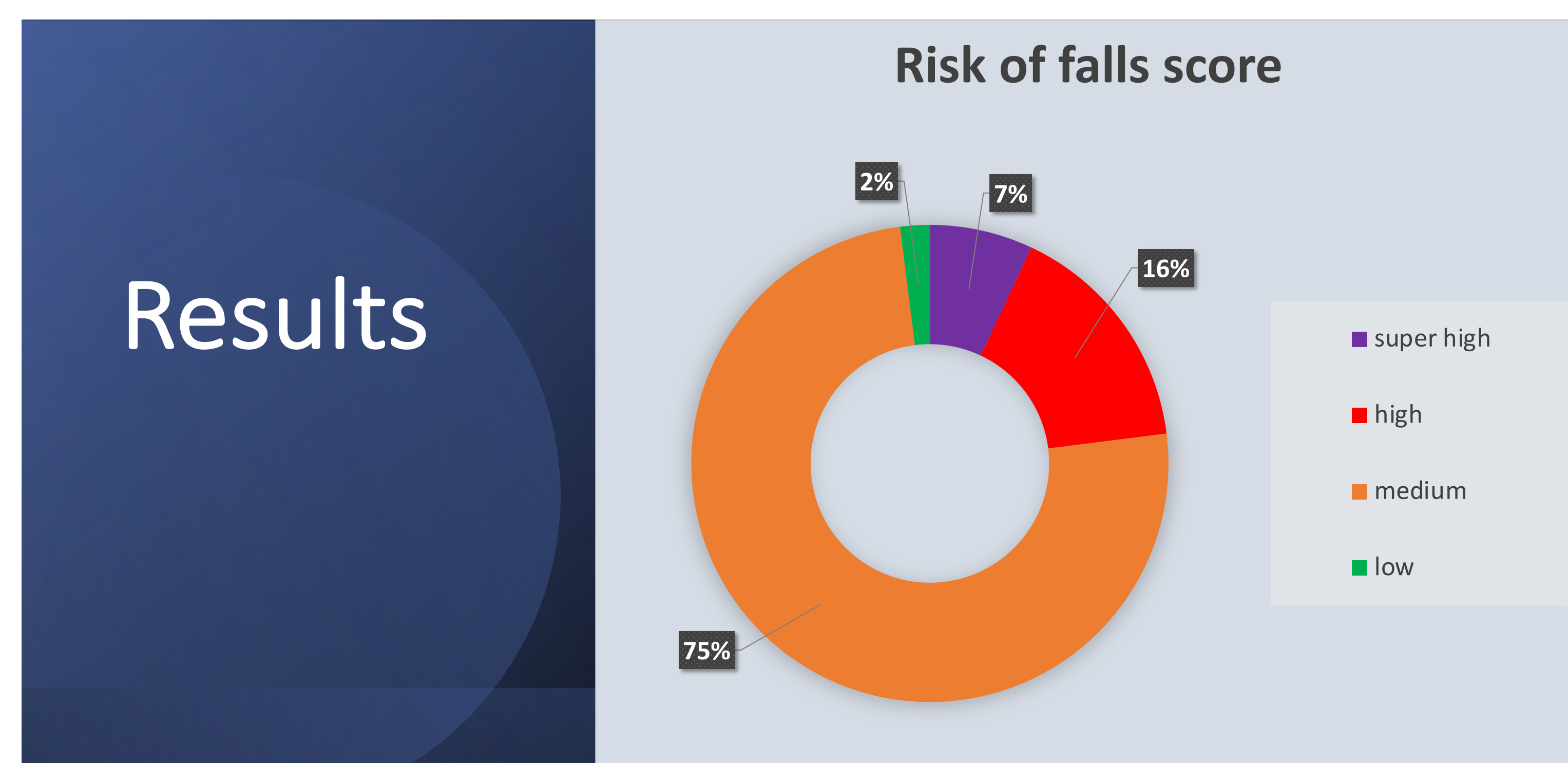
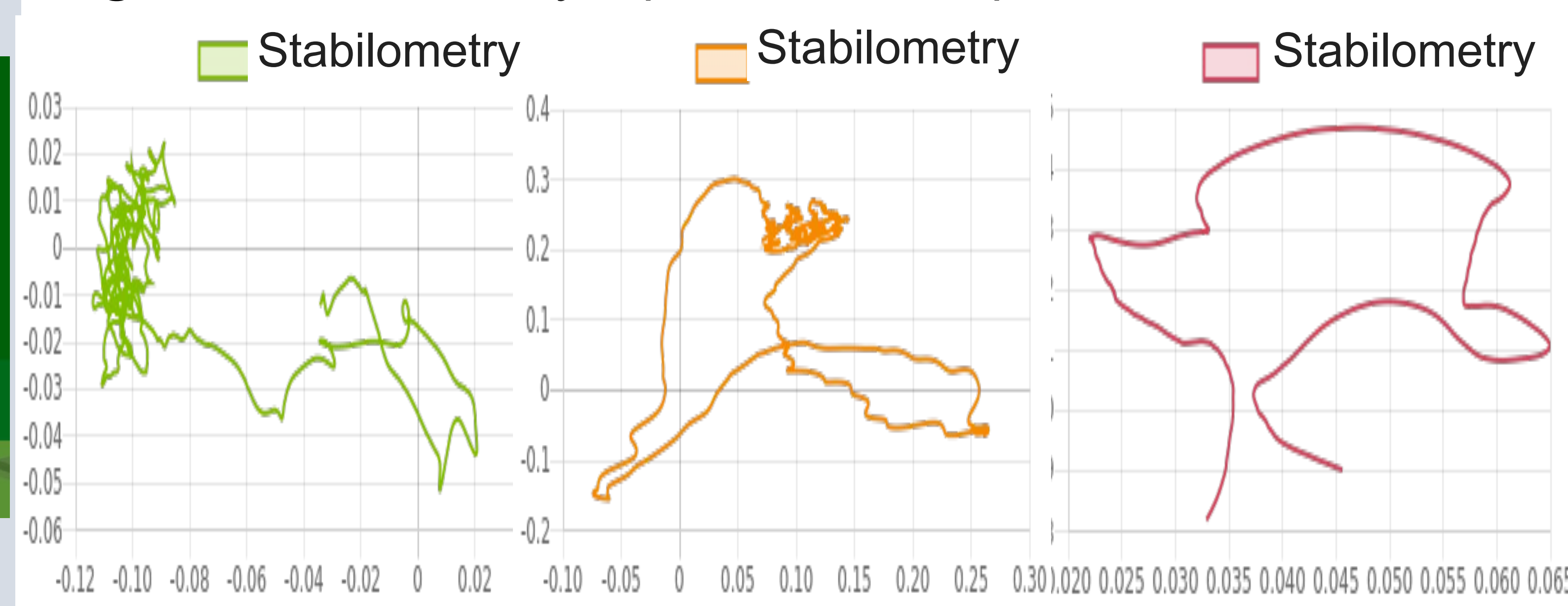


Figure 2. Stabilometry report – balance posture



- ✓ Significant difference between the H&Y severity PD stage vs App's ($p=0.005$);
- ✓ We found the risk of falls scores obtained by Balance-App was significantly correlated to MDS- UPRDS III (item-3.12) ($p=0.004$);
- ✓ Risk of falls scores also showed a significant relationship with Mini-BESTest ($p<0.001$), and TUG ($p=0.003$).

CONCLUSION

Balance-App can provide sensitive fall rates and is feasible to screen the risk of falls in the PD population. Further studies should investigate the Balance-App test-retest reliability, validity, and clinical meaningfulness in future trials